Safety Data Sheets

Jobsite

Safety Data Sheet Index

Aervoe 200 Clear Marking Paint - Aerosol

AERVOE® Material Safety Data Sheet

TO: MSDS USERS

Please find below the material safety data sheet as per your request.

The information presented in these forms is believed to be correct and sufficient to meet the requirements of OSHA Hazard Communication standard (29 CFR 1910.1200) concerning worker's right to know. In order for the information contained in the MSDS to be most helpful we recommend that these forms be made available to all those who handle or may otherwise be exposed to the product.

This MSDS covers the following Aervoe aerosol product.

PRODUCT NAME: 200 CLEAR MARKING PAINT

SECTION I - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: Aervoe Industries Inc.
INFORMATION PHONE: 775-782-0100
DATE REVISED: 10-28-02

ADDRESS: 1198 Mark Circle, Gardnerville, NV 89410
EMERGENCY PHONE: 1-800-424-9300
REASON REVISED: Updated

SECTION II - HAZARDOUS INGREDIENTS / SARA III INFORMATION

OCCUPATIONAL EXPOSURE LIMITS

HAZARDOUS COMPONENTS	WEIGHT PERCENT	OSHA PEL	ACGIH TLV	OTHER	LD50 SPECIES & ROUTE	LC50 SPECIES & ROUTE
Acetone (CAS 67-64-1)	30 - 60	1000 ppm	500 ppm		5800 mg / kg (Rat-Oral)	21000ppm / 8 hr (Rat-Inha)
Hydrocarbon Propellant (CAS 68476-86-8)	10 - 30	1000 ppm	1000 ppm		N/A	N/A
*Xylene (CAS 1330-20-7)	7 - 13	100 ppm	100 ppm		4300 mg / kg (Rat-Oral)	6700 ppm; 4 hr (Rat-Inha)
Propylene Glycol Methyl Ether Acetate (CAS 108-65-6)	1 - 5	N/A	N/A		N/A	N/A
Ethyl Acetate (CAS 141-78-6)	1 - 5	400 ppm	400 ppm		N/A	N/A

*Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.

NOTE: N/A applies to not available or not applicable

SECTION III - PHYSICAL / CHEMICAL CHARACTERISTICS

BOILING POINT: N/A
SPECIFIC GRAVITY (H20=1): 0.8
COEFFICIENT OF WATER/OIL DIST
ODOR THRESHOLD: N/A
VAPOR DENSITY: Heavier than air
SOLUBILITY IN WATER: Negligible
EVAPORATION RATE: Faster than n-Butyl Acetate
APPEARANCE AND ODOR: Clear liquid with ketone odor
FREEZING POINT: N/A **pH:** N/A

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: < 0° F (-18° C) **METHOD USED:** Estimated **FLAMMABLE LIMITS IN AIR BY VOLUME - LOWER:** 1.1% **UPPER:**
EXTINGUISHING MEDIA: Foam, CO_2, Dry Chemical
SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be used to cool containers exposed to heat or fire to prevent pressure t up. Self-contained breathing apparatus should be used if product is involved in fire.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers may rupture due to pressure build up from extreme heat or fire.
FLAMMABILITY: Yes - Flammable aerosol under conditions of sparks, flame, or excessive heat.
SENSITIVITY TO IMPACT: Do not puncture
SENSITIVITY TO STATIC DISCHARGE: Primarily vapors

SECTION V - REACTIVITY DATA

STABILITY: Stable
CONDITIONS TO AVOID: High temperatures
INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizing agents
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Carbon Monoxide and Carbon Dioxide
HAZARDOUS POLYMERIZATION: Will not occur

SECTION VI - HEALTH HAZARD DATA

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: May cause dizziness or nausea.
SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE: SKIN - May cause irritation or burning sensation. EYES - Primary irritation.
SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: May cause irritation or burning sensation.
INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: N/A
HEALTH HAZARDS (ACUTE AND CHRONIC): INHALATION - Anesthetic. Irritation of the respiratory tract, or nervous system depre (characterized by headache, dizziness, nausea or possible unconsciousness). SKIN OR EYE CONTACT - Primary irritation. Prolonged or rep contact to skin may cause dermatitis - exercise due care.
CARCINOGENICITY: None known **NTP?** No **IARC MONOGRAPHS?** No **OSHA REGULATED?**
TERATOGENICITY: N/A **MUTAGENICITY:** N/A **TOXICOLOGICALLY SYNERGISTIC PRODUCT:** N/A
MEDICAL CONDITION GENERALLY AGGRAVATED BY EXPOSURE: None known
EMERGENCY AND FIRST AID PROCEDURES: INHALATION - Remove from exposure and restore breathing, seek medical attention. SPLASH - (SKIN) Wash affected area with soap and water, remove contaminated clothing, seek medical attention if any irritation persist SPLASH - (EYES) Flush immediately with water for 15 minutes, seek medical attention if any irritation persists.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition - Flames, sparks, static electricity & electrical. Ventilate area, avoid run off into sewer by diking, and soak up with inert absorbent using non-sparking type tool **WASTE DISPOSAL METHOD:** Dispose of in accordance with local, state and federal regulations. Do not incinerate closed containers.
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Do not store above 120° F (49° C). Do not store or use near heat, s or flame.
OTHER PRECAUTIONS: Do not get in eyes. Do not breathe vapors. Avoid skin contact. Do not take internally. Smoking while using product must be strictly prohibited. In addition to all other hazards and precautions - dust from sanding the dry paint films should be trea as a nuisance dust with an **OSHA PEL (TWA) of 15 mg / cubic meter.**

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION: In areas with poor ventilation, use a NIOSH approved Organic Vapor Cartridge Respirator. For concen tions above the exposure limit, use a positive air supplied respirator.
VENTILATION: All application areas should be adequately ventilated in order to keep the items in SECTION II below their exposure limi
PROTECTIVE GLOVES: Chemical resistant gloves such as Neoprene or Nitrile.
EYE PROTECTION: Safety glasses with side shields are recommended to prevent eye contact.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Chemical resistant apron (rubber) is recommended to prevent skin contact. Eye fountain and safety shower.
WORK / HYGIENIC PRACTICES: Avoid prolonged or repeated contact. Do not breathe vapors. Wash contaminated clothing prior to re

SECTION IX - DISCLAIMER

THE INFORMATION CONTAINED HEREIN IS BELIEVED TO BE ACCURATE BUT IS NOT WARRANTED TO BE SO. NOTHING CONTAINED HEREIN CONSTITUTES A SPECIFICATION NOR IS IT INTENDED TO WARRANT SUITABILITY FOR THE INTENDED

1301 E. 9th Street, #700
Cleveland OH 44114
(800) 726-9626

Barnes Distribution

Material Safety Data Sheet

MSDS Form No. : MSDS25520
Item No. : C25520, C25520-1

**** MATERIAL SAFETY DATA SHEET ****

CLEAR INVERTED TIP MARKING PAINT

Part # MSDS25520

**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****

MSDS Name: CLEAR INVERTED TIP MARKING PAINT
Product CAS: (none)
Product Code:
Synonyms: 25520; 25520-1; 75994; C25520; C25520-1; CLEAR INVERTED TIP MARKING PAINT
Company Identification:
Name: Seymour of Sycamore, Inc.
Address: 917 Crosby Ave.
Address:
City: Sycamore State: IL Zip: 60178
For information, call: (800) 435-4482
Emergency Number: 815-895-9101
Emergency Agency:
Number:
MSDS Creation Date: 1/1/2003
Supersedes Date: 4/1/2000
Miscellaneous:
CAS #: N/A
CHEMICAL NAME: N/A
BRIEF DESCRIPTION: N/A

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

Chemical Name	CAS	MIN	MAX
ACETONE	67-64-1	23.1	23.1
GLYCOL ETHER EP	2807-30-9	2.3	2.3
METHYL PROPYL KETONE	107-87-9	3	3

PROPANE	74-98-6	15.7	15.7
TOLUOL	108-88-3	7.7	7.7
VM&P NAPHTHA	64742-89-8	1.5	1.5
XYLENE	1330-20-7	3.4	3.4
ETHYL BENZENE	100-41-4	0	0
TRIMETHYLBENZENE	25551-13-7	0	0

Miscellaneous:
EXPOSURE LIMITS:

	ACGIH		OSHA		COMPANY	
	TLV-TWA	TLV-STEL	PEL-TWA	PEL-CEILING	TLV-TWA	SKIN
ACETONE	750 PPM	1000 PPM	750 PPM	1000 PPM	N.E.	YES
PROPANE	1000 PPM	N.E.	1000 PPM	N.E.	N.E.	NO
TOLUOL	50 PPM	N.E.	100 PPM	150 PPM	N.E.	YES
N-BUTANE	800 PPM	N.E.	800 PPM	N.E.	N.E.	NO
XYLENE	100 PPM	150 PPM	100 PPM	150 PPM	N.E.	YES
VM&P NAPHTHA	300PPM	400 PPM	300 PPM	400 PPM	N.E.	YES
METHYL PROPYL KETONE	200 PPM	250 PPM	200 PPM	250 PPM	N.E.	NO
GLYCOL ETHER EP	25 PPM	N.E.	25 PPM	N.E.	N.E.	YES
VM&P NAPHTHA 66	300PPM	400 PPM	300 PPM	400 PPM	N.E.	YES

Lbs of VOC per Gallon Coating (minus water): 0
Coating Density (lbs/gal): 0
Solvent Density (lbs/gal): 0
Percent Solvent (volume): 0
Percent Solids (volume): 0
Percent Water (volume): 0

**** SECTION 3 - HAZARDS IDENTIFICATION ****

NFPA: Health: Fire: Reactivity: Other:
HMIS: Health: 1 Fire: 3 Reactivity: 3 Special Protection:

Miscellaneous:
EMERGENCY OVERVIEW: MAY CAUSE FLASH FIRE OR EXPLOSION.

POTENTIAL HEALTH EFFECTS
Target Organs:

Eye:
A PRIMARY ROUTE OF ENTRY. LIQUID, AEROSOLS AND VAPORS OF THIS PRODUCT ARE IRRITATING AND CAN CAUSE PAIN, TEARING, REDDENING AND SWELLING ACCOMPANIED BY A STINGING SENSATION AND/OR A FEELING LIKE THAT OF FINE DUST IN THE EYES.

Skin:
A PRIMARY ROUTE OF ENTRY. CAUSES SKIN IRRITATION. ALLERGIC REACTIONS ARE POSSIBLE. MAY CAUSE SKIN SENSITIZATION, AN ALLERGIC REACTION, WHICH BECOMES EVIDENT ON REEXPOSURE TO THIS MATERIAL. PROLONGED OR REPEATED CONTACT CAN RESULT IN DEFATTING AND DRYING OF THE SKIN WHICH MAY RESULT IN SKIN IRRITATION AND DERMATITIS (RASH).

Ingestion:
A PRIMARY ROUTE OF ENTRY. THIS MATERIAL MAY BE HARMFUL OR FATAL IF SWALLOWED. IRRITATING TO
MOUTH, THROAT AND STOMACH.

Inhalation:
A PRIMARY ROUTE OF ENTRY. HEADACHES, DIZZINESS, NAUSEA, DECREASED BLOOD PRESSURE, CHANGES IN
HEART RATE AND CYANOSIS MAY RESULT FROM OVER-EXPOSURE TO VAPOR OR SKIN EXPOSURE. PROLONGED
INHALATION MAY BE HARMFUL. CHRONIC HAZARDS: POSSIBLE REPRODUCTIVE HAZARD.

Miscellaneous:

**** SECTION 4 - FIRST AID MEASURES ****

Eye:
IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER. GET MEDICAL ATTENTION, IF IRRITATION PERSISTS.

Skin:
WASH WITH SOAP AND WATER. GET MEDICAL ATTENTION IF IRRITATION DEVELOPS OR PERSISTS. REMOVE
CONTAMINATED CLOTHING. WASH SKIN WITH SOAP AND WATER. GET MEDICAL ATTENTION.

Ingestion:
IF SWALLOWED, DO NOT INDUCE VOMITING. GIVE VICTIM A GLASS OF WATER OR MILK. CALL A PHYSICIAN
OR POISON CONTROL CENTER IMMEDIATELY. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

Inhalation:
REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHI IS
DIFFICULT, GIVE OXYGEN. GET IMMEDIATE MEDICAL ATTENTION. RESCUERS SHOULD PUT ON

PROTECTIVE GEAR. REMOVE FROM AREA OF EXPOSURE. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION.
IF BREATHING IS DIFFICULT, GIVE OXYGEN. KEEP VICTIM WARM. GET IMMEDIATE MEDICAL ATTENTION.

Notes to Physician:

**** SECTION 5 - FIRE FIGHTING MEASURES ****

Unusual Fire and Explosion Hazards:
VAPORS MAY FORM EXPLOSIVE MIXTURE WITH AIR.

Special Fire Fighting Procedures:
CONTAINERS CAN BUILD UP PRESSURE IF EXPOSED TO HEAT (FIRE). AS IN ANY FIRE, WEAR SELF-CONTAINED BREATHING APPARATUS PRESSURE-DEMAND (MSHA/NIOSH APPROVED OR EQUIVALENT) AND FULL
PROTECTIVE GEAR.

Extinguishing Media:
WATER FOG, DRY CHEMICAL, CO2, ALCOHOL FOAM, FOAM.

Flash Point:
-4 F

Flammable Limits:
Lower Limit:
EXPLOSIVE LIMIT (LEL): 0.9%
Upper Limit:
EXPLOSIVE LIMIT (UEL): 12.8%

AutoIgnition Temperature:

General Information:
FLAMMABLE LIMITS: NO DATA

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

Disposal:
DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. DO NOT PUNCTURE,
INCINERATE OR COMPACT.

Spills/Leaks:
ABSORB SPILL WITH INERT MATERIAL (E.G. DRY SAND OR EARTH), THEN PLACE IN A CHEMICAL WASTE CONTA
NER.

**** SECTION 7 - HANDLING and STORAGE ****

Handling:
WASH THOROUGHLY AFTER HANDLING.

Storage:
KEEP AWAY FROM HEAT, SPARKS AND FLAME.

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

Engineering Controls:
LOCAL EXHAUST: LOCAL EXHAUST VENTILATION MAY BE NECESSARY TO CONTROL ANY AIR CONTAMINANTS TO
WITHIN THEIR TLVS DURING THE USE OF THIS PRODUCT.
MECHANICAL (GENERAL): NO CORRESPONDING DATA IN MSDS PROVIDED BY MANUFACTURER.
SPECIAL VENTILATION: NO CORRESPONDING DATA IN MSDS PROVIDED BY MANUFACTURER.
OTHER VENTILATION: NO CORRESPONDING DATA IN MSDS PROVIDED BY MANUFACTURER.

Eyes:
WEAR SAFETY GLASSES WITH SIDE SHIELDS (OR GOGGLES) AND A FACE SHIELD.

Skin:
PROTECTIVE GLOVES: WHERE CONTACT IS LIKELY, WEAR CHEMICAL RESISTANT GLOVES.

Clothing:
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: WHERE CONTACT IS LIKELY, WEAR CHEMICAL RESISTANT
GLOVES, A CHEMICAL SUIT, RUBBER BOOTS, AND CHEMICAL SAFETY GOGGLES PLUS A FACE SHIELD.

Respirators:
(SPECIFY TYPE): A NIOSH/MSHA APPROVED AIR PURIFYING RESPIRATOR WITH AN ORGANIC VAPOR CARTRIDGE
OR CANISTER MAY BE PERMISSIBLE UNDER CERTAIN CIRCUMSTANCES WHERE AIRBORNE CONCENTRATIONS ARE
EXPECTED TO EXCEED EXPOSURE LIMITS. PROTECTION PROVIDED BY AIR PURIFYING RESPIRATORS IS
LIMITED. USE A POSITIVE PRESSURE AIR SUPPLIED RESPIRATOR IF THERE IS ANY POTENTIAL FOR AN
UNCONTROLLED RELEASE, EXPOSURE LEVELS ARE NOT KNOW, OR ANY OTHER CIRCUMSTANCES WHERE AIR
PURIFYING RESPIRATORS MAY NOT PROVIDE ADEQUATE PROTECTION.

**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Appearance/Odor:
AROMATIC ODOR WITH LIQUID APPEARANCE

pH: NA
Vapor Pressure: (MM HG): 40 PSI
Vapor Density: (AIR = 1): IS HEAVIER THAN AIR
Evaporation Rate: IS FASTER THAN ETHER
Viscosity:
Boiling Point: -44 TO 308 F
Freezing/Melting Point:
Decomposition Temperature:
Solubility: IN WATER: SLIGHT
Specific Gravity: .8067
Molecular Formula: N/A
Molecular Weight:
Miscellaneous:
% VOLATILE / VOLUME: 44%; 3.89 LBS/GAL OR 466 GRAMS/LITER

**** SECTION 10 - STABILITY AND REACTIVITY ****

Chemical Stability:
STABLE: YES

Conditions to Avoid:
DO NOT STORE ABOVE 120 DEGREES F. KEEP AWAY FROM SPARKS, PILOT LIGHTS, AND OPEN FLAMES.

Incompatibilities with Other Materials:
INFORMATION

Hazardous Decomposition Products:
MAY PRODUCE HAZARDOUS FUMES WHEN HEATED TO DECOMPOSITION. FUMES MAY CONTAIN CARBON DIOXIDE
AND/OR CARBON MONOXIDE.

Hazardous Polymerization:
MAY OCCUR: NO

**** SECTION 11 - TOXICOLOGICAL INFORMATION ****

Toxicological Information:

**** SECTION 12 - ECOLOGICAL INFORMATION ****

Ecological Information:
THIS PRODUCT DOES NOT CONTAIN CHLORINATED SOLVENTS OR LEAD.

**** SECTION 13 - OTHER PRECAUTIONS ****

Other Precautions:
NO CORRESPONDING DATA IN MSDS PROVIDED BY MANUFACTURER.

Work/Hygienic Practices:
NO INFORMATION

**** SECTION 14 - TRANSPORT INFORMATION ****

Transportation Information:
CATEGORY: ORM-D

DOT PROPER SHIPPING NAME: CONSUMER COMMODITY ORM-D

Label Information:

**** SECTION 15 - REGULATORY INFORMATION ****

Regulatory Information:
U.S. FEDERAL REGULATIONS: AS FOLLOWS -

OSHA: HAZARDOUS BY DEFINITION OF HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200).

CERCLA - SARA HAZARD CATEGORY:
THIS PRODUCT HAS BEEN REVIEWED ACCORDING TO THE EPA 'HAZARD CATEGORIES' PROMULGATED UNDER
0SECTIONS 311 AND 312 OF THE SUPERFUND AMENDMENT AND REAUTHORIZATION ACT OF 1986 (SARA TITLE
1III) AND IS CONSIDERED, UNDER APPLICABLE DEFINITIONS, TO MEET THE FOLLOWING CATEGORIES:

IMMEDIATE HEALTH HAZARD
CHRONIC HEALTH HAZARD
FIRE HAZARD
PRESSURIZED GAS HAZARD

SARA SECTION 313:
THIS PRODUCT CONTAINS THE FOLLOWING SUBSTANCES SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION
313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART
372:

TOLUOL
XYLENE
GLYCOL ETHER EP
ETHYL BENZENE
TRIMETHYLBENZENE CAS# 25551-13-7, 0.00%

CALIFORNIA PROPOSITION 65: WARNING: THE CHEMICAL NOTED BELOW AND CONTAINED IN THIS PRODUCT
ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER OR BIRTH DEFECTS AND OTHER REPRODUCTIVE
HARM: TOLUOL

INTERNATIONAL REGULATIONS: AS FOLLOWS -

CANADIAN WHMIS: THIS MSDS HAS BEEN PREPARED IN COMPLIANCE WITH CONTROLLED PRODUCT REGULATIONS
EXCEPT FOR USE OF THE 16 HEADINGS.

CANADIAN WHMIS CLASS: NO INFORMATION AVAILABLE.

**** SECTION 16 - ADDITIONAL INFORMATION ****

Additional Information:
IDENTIFICATION NUMBER: PART #25520

THIS INFORMATION CONTAINED ON THIS MSDS HAS BEEN CHECKED AND SHOULD BE ACCURATE. HOWEVER, IT
IS THE RESPONSIBILITY OF THE USER TO COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.

1 Identification of substance

· **Product details**

· **Trade name: Clear Resin Cure J11W**

· **Article number:** 83-69115

· **Application of the substance / the preparation**

· **Manufacturer/Supplier:**
Dayton Superior
4226 Kansas Avenue
Kansas City, KS 66106
Tel.: (866) 329-8724

Emergency Telephone Number: Use only in the event of an emergency involving a spill, leak, fire, exposure, or accident involving chemicals. Within the U.S., Canada, or the U.S. Virgin Islands, call ChemTrec at (800) 424-9300, 24 hours a day. Or, outside these areas, call (703) 527-3887. Collect calls are accepted.

· **Information department:** Environmental, Health, and Safety department.

2 Composition/Data on components

· **Chemical characterization**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

8052-41-3	Stoddard solvent	≤ 10%
61790-12-3	Distilled Tall Oil Fatty Acids	≤ 2.5%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

· **Hazard description:** Not applicable.
· **Information pertaining to particular dangers for man and environment:**
The product has to be labelled due to internationally acknowledged calculation procedures using the latest valid versions.
· **Classification system:**
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
· **NFPA ratings (scale 0 - 4)**

Health = 0
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = *0
Fire = 0
Reactivity = 0

4 First aid measures

· **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.

(Contd. on page 2)

(Contd. of page 1)

· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact:** Rinse opened eye for several minutes under running water.
· **After swallowing:** Seek medical treatment.

5 Fire fighting measures

· **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **Protective equipment:**
Because fire may produce thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.

6 Accidental release measures

· **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
· **Measures for environmental protection:**
Dilute with plenty of water.
Inform respective authorities in case of seepage into water course or sewage system.
· **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.

7 Handling and storage

· **Handling:**
· **Information for safe handling:**
Wear appropriate personal protective clothing to prevent eye and skin contact. Avoid breathing vapors or mists of this product. Use with adequate ventilation. Do not take internally.
· **Information about protection against explosions and fires:** No special measures required.

· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** None.

8 Exposure controls and personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Components with limit values that require monitoring at the workplace:**	
8052-41-3 Stoddard solvent	
PEL	2900 mg/m³, 500 ppm
REL	Short-term value: C 1800* mg/m³ Long-term value: 350 mg/m³ *15-min
TLV	525 mg/m³, 100 ppm

· **Additional information:** The lists that were valid during the creation were used as basis.

(Contd. on page 3)

(Contd. of page 2)

· ***Personal protective equipment:***
· ***General protective and hygienic measures:***
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
· ***Breathing equipment:***
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
· ***Protection of hands:***

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
· ***Material of gloves***
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
· ***Penetration time of glove material***
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· ***Eye protection:*** *Wear appropriate eye protection to prevent eye contact.*

9 Physical and chemical properties

· ***General Information***	
Form:	*Liquid*
Color:	*White*
Odor:	*Solvent-like*
· ***Change in condition***	
Melting point/Melting range:	*Undetermined.*
Boiling point/Boiling range:	*100°C (212°F)*
· ***Flash point:***	*Not applicable.*
· ***Ignition temperature:***	*230.0°C (446°F)*
· ***Auto igniting:***	*Product is not selfigniting.*
· ***Danger of explosion:***	*Product does not present an explosion hazard.*
· ***Explosion limits:***	
Lower:	*1.1 Vol %*
Upper:	*6.0 Vol %*
· ***Vapor pressure at 20°C (68°F):***	*23.0 hPa (17 mm Hg)*
· ***Density at 20°C (68°F):***	*0.986 g/cm³*
· ***Solubility in / Miscibility with***	
Water:	*Fully miscible.*
· ***Solvent content:***	
Organic solvents:	*0.8 %*
Water:	*71.1 %*

(Contd. on page 4)

(Contd. of page 3)

· **Solids content:**	20.1 %
· **Volatile Organic Compounds:**	Contains less than 300 g/L.

10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Dangerous reactions** No dangerous reactions known.
· **Dangerous products of decomposition:** No dangerous decomposition products known.

11 Toxicological information

· **Acute toxicity:**
· **Primary irritant effect:**
· **on the skin:** No irritant effect known.
· **on the eye:** No irritating effect known.
· **Sensitization:** Sensitization possible through skin contact.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant
Carcinogenic.

12 Ecological information

· **General notes:**
Water hazard class 3 (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Water hazard class 1 (Self-assessment): slightly hazardous for water

13 Disposal considerations

· **Product:**
· **Recommendation:**
Must not be disposed of as normal garbage. Do not allow product to reach sewage system.
It is the generator's responsibility to determine if the waste meets applicable definitions of hazardous waste. State and local regulations may differ from federal disposal regulations. Dispose of waste material according to local, state, federal, and provincial environmental regulations.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to Federal, State, and Local regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **DOT regulations:**	Not Regulated
· **Hazard class:**	N/A
· **Limited Quantity Exemption:**	No Limited Quantity exemption applies for this shipping class.
· **U.S. Domestic Ground Shipments:**	Same as listed for Standard Shipments above.

(Contd. on page 5)

(Contd. of page 4)

· U.S. Domestic Ground Non-Bulk (119 gal or less per container) Shipments:	Same as listed for Standard Shipments above.
· Emergency Response Guide (ERG) Number:	Not determine
· Land transport ADR/RID (cross-border):	Not Regulated
· ADR/RID class:	N/A
· Maritime transport IMDG:	Not Regulated
· IMDG Class:	N/A
· Marine pollutant:	No
· Air transport ICAO-TI and IATA-DGR:	Not Regulated
· ICAO/IATA Class:	N/A

15 Regulations

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

This product may contain 1 or more toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR part 372. If so, the chemicals are listed below.

111-42-2	2,2'-iminodiethanol	≤0.01%

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to the State of California (Prop. 65) to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **IARC (International Agency for Research on Cancer)**

111-42-2	2,2'-iminodiethanol	3
7631-86-9	silicon dioxide, chemically prepared	3

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

(Contd. on page 6)

(Contd. of page 5)

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **Product related hazard informations:**
The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:** T Toxic

· **Hazard-determining components of labelling:**
Stoddard solvent
Distilled Tall Oil Fatty Acids

· **Risk phrases:**
45 May cause cancer.
43 May cause sensitisation by skin contact.

· **Safety phrases:**
13 Keep away from food, drink and animal feedingstuffs.
20 When using do not eat or drink.
24 Avoid contact with skin.
29 Do not empty into drains.
37/39 Wear suitable gloves and eye/face protection.
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

· **National regulations:**

· **Water hazard class:** Water hazard class 3 (Self-assessment): extremely hazardous for water.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing MSDS:** Environmental, Health & Safety Department
· **Contact:** Environmental, Health & Safety Manager

MATERIAL SAFETY DATA SHEET

Conoco Gasoline, Unleaded, Conventional (All Grades)

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Conoco Gasoline, Unleaded, Conventional (All Grades)

Synonyms:
Conoco - MSDS #GASC0001
Conoco Gasoline, Low Sulfur Unleaded
Conoco Gasoline, Mid-Grade Unleaded
Conoco Gasoline, Premium Unleaded
Conoco Gasoline, Regular Unleaded
Conoco Gasoline, Super Unleaded

Intended Use: Fuel

Responsible Party:
ConocoPhillips
P.O. Box 2197
Houston, TX
77252

For Additional MSDSs 800-762-0942

Technical Information: 918-661-8327

The intended use of this product is indicated above. If any additional use is known, please contact us at the Technical Information number listed.

EMERGENCY OVERVIEW

24 Hour Emergency Telephone Numbers:
Spill, Leak, Fire or Accident
Call CHEMTREC
North America: (800)424-9300
Others: (703)527-3887 (collect)

California Poison Control System: (800) 356-3129

Health Hazards/Precautionary Measures: May be harmful or fatal if swallowed. Aspiration hazard. Possible cancer hazard based on animal data. Vapor harmful. Causes skin irritation. Use ventilation adequate to keep exposure below recommended limits, if any. Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Do not taste or swallow. Wash thoroughly after handling.

Physical Hazards/Precautionary Measures: Extremely flammable liquid and vapor. Vapor can cause flash fire. Keep away from heat, sparks, flames, static electricity or other sources of ignition.

Appearance: Clear to amber
Physical form: Liquid
Odor: Gasoline

NFPA Hazard Class:

Health: 1 (Slight)
Flammability: 3 (High)
Reactivity: 0 (Least)

HMIS Hazard Class

Health: 2* (Moderate)
Flammability: 3 (High)
Physical Hazard: 0 (Least)

*Indicates possible chronic health effects.

2. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	% WEIGHT	EXPOSURE GUIDELINE		
		Limits	Agency	Type
Gasoline CAS# None	88-100	300 ppm 500 ppm	ACGIH ACGIH	TWA STEL
Xylenes CAS# 1330-20-7	1-14	100 ppm 150 ppm 100 ppm 900 ppm	ACGIH ACGIH OSHA NIOSH	TWA STEL TWA IDLH
Toluene CAS# 108-88-3	1-9	50 ppm 200 ppm 300 ppm 500 ppm 500 ppm	ACGIH OSHA OSHA NIOSH OSHA. 10 min. peak; once per 8-hr shift	TWA-SKIN TWA CEIL IDLH
1,2,4-Trimethyl Benzene CAS# 95-63-6	1-5	25 ppm (Mixed Isomers)	ACGIH	TWA
Benzene CAS# 71-43-2	0.4-5	0.5 ppm 2.5 ppm 1 ppm 5 ppm 500 ppm	ACGIH ACGIH OSHA OSHA NIOSH	TWA-SKIN STEL-SKIN TWA STEL IDLH
Ethyl Benzene CAS# 100-41-4	1-5	100 ppm 125 ppm 100 ppm 800 ppm	ACGIH ACGIH OSHA NIOSH	TWA STEL TWA IDLH
n-Hexane CAS# 110-54-3	0-4	50 ppm 500 ppm 1100 ppm	ACGIH OSHA NIOSH	TWA-SKIN TWA IDLH
Cyclohexane CAS# 110-82-7	0-2	100 ppm 300 ppm 1300 ppm	ACGIH OSHA NIOSH	TWA TWA IDLH

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

1%=10,000 PPM.

Contains benzene. If exposure concentrations exceed the 0.5 ppm action level, OSHA requirements for personal protective equipment, exposure monitoring, and training may apply (29CFR1910.1028). Also see Section 4.

3. HAZARDS IDENTIFICATION

Potential Health Effects:

Eye: Contact may cause mild eye irritation including stinging, watering, and redness.

Skin: Skin irritant. Contact may cause redness, itching, burning, and skin damage. Prolonged or repeated contact can worsen irritation by causing drying and cracking of the skin, leading to dermatitis (inflammation). Not acutely toxic by skin absorption, but prolonged or repeated skin contact may be harmful (see Section 11).

Inhalation (Breathing): Low to moderate degree of toxicity by inhalation.

Ingestion (Swallowing): Low degree of toxicity by ingestion. ASPIRATION HAZARD - This material can enter lungs during swallowing or vomiting and cause lung inflammation and damage.

Signs and Symptoms: Effects of overexposure may include nausea, vomiting, flushing, transient excitation followed by signs of nervous system depression (e.g., headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue), blurred vision, tremors, respiratory failure, unconsciousness, convulsions and death.

Cancer: Possible cancer hazard (see Sections 11 and 15).

Target Organs: Inadequate evidence available for this material. See Section 11 for target-organ toxicity information of individual components, if any.

Developmental: No harm to the fetus was observed in laboratory animal studies.

Other Comments: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage (sometimes referred to as Solvent or Painters' Syndrome). Intentional misuse by deliberately concentrating and inhaling this material may be harmful or fatal.

Pre-Existing Medical Conditions: Conditions aggravated by exposure may include skin disorders and respiratory (asthma-like) disorders.

Exposure to high concentrations of this material may increase the sensitivity of the heart to certain drugs. Persons with pre-existing heart disorders may be more susceptible to this effect (see Section 4 - Note to Physicians).

4. FIRST AID MEASURES

Eye: If irritation or redness develops, move victim away from exposure and into fresh air. Flush eyes with clean water. If symptoms persist, seek medical attention.

Skin: Remove contaminated shoes and clothing, and flush affected area(s) with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. If skin surface is not damaged, cleanse affected area(s) thoroughly by washing with mild soap and water. If irritation or redness develops, seek medical attention.

Inhalation (Breathing): If respiratory symptoms or other symptoms of exposure develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek immediate medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

Ingestion (Swallowing): Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. If victim is drowsy or unconscious and vomiting, place on the left side with the head down. If possible, do not leave victim unattended and observe closely for adequacy of breathing. Seek medical attention.

Note To Physicians: Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to high concentrations of hydrocarbon solvents (e.g., in enclosed spaces or with deliberate abuse). The use of other drugs with less arrhythmogenic potential should be considered. If sympathomimetic drugs are administered, observe for the development of cardiac arrhythmias.

Federal regulations (29 CFR 1910.1028) specify medical surveillance programs for certain exposures to benzene above the action level or PEL (specified in Section (i)(1)(i) of the Standard). In addition, employees exposed in an emergency situation shall, as described in Section (i)(4)(i),

provide a urine sample at the end of the shift for measurement of urine phenol.

5. FIRE FIGHTING MEASURES

Flammable Properties:

Flash Point: -49°F/-45°C
OSHA Flammability Class: Flammable Liquid
LEL%: 1.4 / UEL%: 7.6
Autoignition Temperature: 833°F/444°C

Unusual Fire & Explosion Hazards: This material is extremely flammable and can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe). Vapors may travel considerable distances to a source of ignition where they can ignite, flash back, or explode. May create vapor/air explosion hazard indoors, in confined spaces, outdoors, or in sewers. Vapors are heavier than air and can accumulate in low areas. If container is not properly cooled, it can rupture in the heat of a fire.

Extinguishing Media: Dry chemical, carbon dioxide, or foam is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Water may be ineffective for extinguishment, unless used under favorable conditions by experienced fire fighters.

Fire Fighting Instructions: For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area, keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Move undamaged containers from immediate hazard area if it can be done with minimal risk.

Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done with minimal risk. Avoid spreading burning liquid with water used for cooling purposes.

6. ACCIDENTAL RELEASE MEASURES

Extremely flammable. Keep all sources of ignition and hot metal surfaces away from spill/release. The use of explosion-proof equipment is recommended.

Stay upwind and away from spill/release. Notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8).

Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Dike far ahead of spill for later recovery or disposal. Use foam on spills to minimize vapors (see Section 5). Spilled material may be absorbed into an appropriate absorbent material.

Notify fire authorities and appropriate federal, state, and local agencies. Immediate cleanup of any spill is recommended. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, notify the National Response Center (phone number 800-424-8802).

7. HANDLING AND STORAGE

Handling: Open container slowly to relieve any pressure. Bond and ground all equipment when transferring from one vessel to another. Can accumulate static charge by flow or agitation. Can be ignited by static discharge. The use of explosion-proof equipment is recommended and may be required (see appropriate fire codes). Refer to NFPA-704 and/or API RP 2003 for specific bonding/grounding requirements.

Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Sections 2 and 8).

Wash thoroughly after handling. Do not wear contaminated clothing or shoes. Keep contaminated clothing away from sources of ignition such as sparks or open flames. Use good personal hygiene practices.

High pressure injection of hydrocarbon fuels, hydraulic oils or greases under the skin may have serious consequences even though no symptoms or injury may be apparent. This can happen accidentally when using high pressure equipment such as high pressure grease guns, fuel injection apparatus or from pinhole leaks in tubing of high pressure hydraulic oil equipment.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1 and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

Storage: Keep container(s) tightly closed. Use and store this material in cool, dry, well-ventilated areas away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Post area "No Smoking or Open Flame." Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage. Outdoor or detached storage is preferred. Indoor storage should meet OSHA standards and appropriate fire codes.

Portable Containers:
Static electricity may ignite gasoline vapors when filling portable containers. To avoid static buildup do not use a nozzle lock open device. Use only approved containers for the storage of gasoline. Place the container on the ground before filling. Keep the nozzle in contact with the container during filling.

Do not fill any portable container in or on a vehicle or marine craft.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits (see Section 2), additional engineering controls may be required. Where explosive mixtures may be present, electrical systems safe for such locations must be used (see appropriate electrical codes).

Personal Protective Equipment (PPE):

Respiratory: A NIOSH certified air purifying respirator with an organic vapor cartridge may be used under conditions where airborne concentrations are expected to exceed exposure limits (see Section 2).

Protection provided by air purifying respirators is limited (see manufacturer's respirator selection guide). Use a NIOSH approved self-contained breathing apparatus (SCBA) or equivalent operated in a pressure demand or other positive pressure mode if there is potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin: The use of gloves impervious to the specific material handled is advised to prevent skin contact, possible irritation, and skin damage. Examples of approved materials are nitrile, or Viton® (see glove manufacturer literature for information on permeability).

Depending on conditions of use, apron and/or arm covers may be necessary.

Eye/Face: Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended. Depending on conditions of use, a face shield may be necessary.

Other Protective Equipment: A source of clean water should be available in the work area for flushing eyes and skin. Impervious clothing should be worn as needed.

Suggestions for the use of specific protective materials are based on readily available published data. Users should check with specific manufacturers to confirm the performance of their products.

9. PHYSICAL AND CHEMICAL PROPERTIES

Note: Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm).
Appearance: Clear to amber
Physical State: Liquid
Odor: Gasoline
pH: Not applicable
Vapor Pressure (mm Hg): 350-760 @ 100°F
Vapor Density (air=1): >1
Boiling Point/Range: 80-440°F / 26-227°C
Freezing/Melting Point: No Data
Solubility in Water: Negligible
Specific Gravity: 0.72-0.75 @ 60°F
Percent Volatile: 100 vol.%
Evaporation Rate (nBuAc=1): >1
Bulk Density: 6.17 lbs/gal
Flash Point: -49°F / -45°C
Flammable/Explosive Limits (%): LEL: 1.4 / UEL: 7.6

10. STABILITY AND REACTIVITY

Stability: Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure. Extremely flammable liquid and vapor. Vapor can cause flash fire.

Conditions To Avoid: Avoid all possible sources of ignition (see Sections 5 and 7).

Materials to Avoid (Incompatible Materials): Contact with strong oxidizing agents such as chlorine, dichromates, or permanganates can cause fire or explosion.

Hazardous Decomposition Products: The use of hydrocarbon fuel in an area without adequate ventilation may result in hazardous levels of combustion products (e.g., oxides of carbon, sulfur and nitrogen, benzene and other hydrocarbons) and/or dangerously low oxygen levels. See Section 11 for additional information on hazards of engine exhaust, if any.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Gasoline (CAS# None)

Carcinogenicity: Two year inhalation studies of wholly vaporized unleaded gasoline produced increased incidences of kidney tumors in male rats and liver tumors in female mice. Follow-up studies suggest that occurrence of the kidney tumors may be linked to alpha-2-u-globulin nephropathy, and most likely unique to the male rat. Epidemiology data collected from a study of more than 18,000 petroleum marketing and distribution workers showed no increased risk of leukemia, multiple myeloma, or kidney cancer from gasoline exposure. Unleaded gasoline has been identified as a possible carcinogen by IARC.

Because solvent extracts of gasoline exhaust particulates caused skin cancer in laboratory animals, IARC has categorized gasoline engine exhaust as a possible human cancer hazard.

Target Organ(s): A two year inhalation study of wholly vaporized unleaded gasoline produced nephropathy in male rats, characterized by the accumulation of alpha-2-u- globulin in epithelial cells of the proximal tubules, and necrosis and hyperplasia of surrounding cells. Follow-up studies have demonstrated that these changes are unique to the male rat.
Although prolonged exposure to n-hexane, a component of gasoline, has resulted in adverse male reproductive effects in experimental animal studies, no adverse male reproductive effects were found in studies conducted with gasoline.

Developmental: No evidence of developmental toxicity was found in pregnant laboratory animals (rats and mice) exposed to up to 9,000 ppm vapor of unleaded gasoline via inhalation.

Xylenes (CAS# 1330-20-7)

Target Organ(s): A six week inhalation study with xylene produced hearing loss in rats.

Developmental: Both mixed xylenes and the individual isomers produced limited evidence of developmental toxicity in laboratory animals. Inhalation and oral administration of xylene resulted in decreased fetal weight, increased incidences of delayed ossification, skeletal variations and resorptions.

Toluene (CAS# 108-88-3)

Target Organ(s): Epidemiology studies suggest that chronic occupational overexposure to toluene may damage color vision. Subchronic and chronic inhalation studies with toluene produced kidney and liver damage, hearing loss and central nervous system (brain) damage in laboratory animals. Intentional misuse by deliberate inhalation of high concentrations of toluene has been shown to cause liver, kidney, and central nervous system damage, including hearing loss and visual disturbances.

Developmental: Exposure to toluene during pregnancy has demonstrated limited evidence of developmental toxicity in laboratory animals. The effects seen include decreased fetal body weight and increased skeletal variations in both inhalation and oral studies.

Benzene (CAS# 71-43-2)

Carcinogenicity: Benzene is an animal carcinogen and is known to produce acute myelogenous leukemia (a form of cancer) in humans. Benzene has been identified as a human carcinogen by NTP, IARC and OSHA.

Target Organ(s): Prolonged or repeated exposures to benzene vapors has been linked to bone marrow toxicity which can result in blood disorders such as leukopenia, thrombocytopenia, and aplastic anemia. All of these diseases can be fatal.

Developmental: Exposure to benzene during pregnancy demonstrated limited evidence of developmental toxicity in laboratory animals. The effects seen include decreased body weight and increased skeletal variations in rodents. Alterations in hematopoeisis have been observed in the fetuses and offspring of pregnant mice.

Mutagenicity: Benzene exposure has resulted in chromosomal aberrations in human lymphocytes and animal bone marrow cells, and DNA damage in mammalian cells in vitro.

Ethyl Benzene (CAS# 100-41-4)

Carcinogenicity: Rats and mice exposed to 0, 75, 250, or 750 ppm ethyl benzene in a two year inhalation study demonstrated limited evidence of kidney, liver, and lung cancer. Ethyl benzene has been listed as a possible human carcinogen by IARC. Ethyl benzene has not been listed as a carcinogen by NTP, or OSHA.

Target Organ(s): In rats and mice exposed to 0, 75, 250, or 750 ppm ethyl benzene in a two year inhalation study there was mild damage to the kidney (tubular hyperplasia), liver (eosinophilio foci, hypertrophy, necrosis), thyroid (hyperplasia) and pituitary (hyperplasia).

n-Hexane (CAS# 110-54-3)

Target Organ(s): Excessive exposure to n-hexane can result in peripheral neuropathies. The initial symptoms are symmetrical sensory numbness and paresthesias of distal portions of the extremities. Motor weakness is typically observed in muscles of the toes and fingers but may also involve muscles of the arms, thighs and forearms. The onset of these symptoms may be delayed for several months to a year after the beginning of exposure. The neurotoxic properties of n-hexane are potentiated by exposure to methyl ethyl ketone and methyl isobutyl ketone.

Prolonged exposure to high concentrations of n-hexane (>1,000 ppm) has resulted in decreased sperm count and degenerative changes in the testes of rats but not those of mice.

Acute Data:
Gasoline:
Dermal LD50>5 ml/kg (Rabbit)
LC50> 4500 ppm (Rat)
Oral LD50= 18.75 ml/kg. (Rat)

1, 2, 4-Trimethyl Benzene:
Dermal LD50 = No data available
LC50 = 18 gm/m3/4hr (Rat)
Oral LD50 = 3-6 g/kg (Rat)

Benzene:
Dermal LD50> 9400 mg/kg (Rabbit), (Guinea Pig)
LC50= 9980 ppm (Mouse); 10000 ppm/7hr. (Rat)
Oral LD50= 4700 mg/kg (Mouse); 930 mg/kg (Rat); 5700 mg/kg (Mammal)

Cyclohexane:
Dermal LD50=>2g/kg (Rabbit)
LC50>4,044 ppm (4-hr., Rat)
Oral LD50> 2g/kg (Rat)

Ethyl Benzene:
Dermal LD50= 17800 mg/kg (Rabbit)
LC50=4000 ppm/4 hr.; 13367 ppm (Rat)
Oral LD50=3500 mg/kg (Rat)

n-Hexane:
Dermal LD50 = >2,000 mg/kg (Rabbit)
LC50>3,367 ppm (4-hr., Rat)
Oral LD50>5,000 mg/kg (Rat)

Toluene:
Dermal LD50 = 14 g/kg (Rabbit)
LC50 = 8,000 ppm (4-hr., Rat)
Oral LD50 = 2.5 - 7.9 g/kg (Rat)

Xylene:
Dermal LD50 >3.16 ml/kg (Rabbit)
LC50= 5000 ppm/4 hr. (Rat)
Oral LD50 = 4300 mg/kg (Rat)

12. ECOLOGICAL INFORMATION

Spilling of gasoline can result in environmental damage.

Gasoline floats on water and evaporates rapidly from water or soil surfaces. However, spilled gasoline may penetrate soil and could contaminate groundwater.

Gasoline is biodegradable but in situations of low oxygen, such as in soil below grade or in groundwater, may persist for many years.

Gasoline does not readily dissolve in water but will be adsorbed to soils. Gasoline in the environment can be toxic to plants and animals.

13. DISPOSAL CONSIDERATIONS

This material, if discarded as produced, would be a RCRA "characteristic" hazardous waste due to the characteristic(s) of ignitability (D001) and benzene (D018). If the spilled or released material impacts soil, water, or other media, characteristic testing of the contaminated materials may be required prior to their disposal. Further, this material, once it becomes a waste, is subject to the land disposal restrictions in 40 CFR 268.40 and may require treatment prior to disposal to meet specific standards. Consult state and local regulations to determine whether they are more stringent than the federal requirements.

Container contents should be completely used and containers should be emptied prior to discard. Container rinsate could be considered a RCRA hazardous waste and must be disposed of with care and in full compliance with federal, state and local regulations. Larger empty containers, such as drums, should be returned to the distributor or to a drum reconditioner. To assure proper disposal of smaller empty containers, consult with state and local regulations and disposal authorities.

14. TRANSPORT INFORMATION

DOT Shipping Description:	Gasoline,3,UN1203,II
Non-Bulk Package Label:	Flammable
Bulk Package Placard/Marking:	Flammable/1203
Hazardous Substance/RQ	None
Packaging References	49 CFR 173.150, 173.202, 173.242
Emergency Response Guide:	128

15. REGULATORY INFORMATION

EPA SARA 311/312 (Title III Hazard Categories):

Acute Health:	Yes
Chronic Health:	Yes
Fire Hazard:	Yes
Pressure Hazard:	No
Reactive Hazard:	No

SARA 313 and 40 CFR 372:
This material contains the following chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372:

Component	CAS Number	Weight %
Xylenes	1330-20-7	1-14
Toluene	108-88-3	1-9
1,2,4-Trimethyl Benzene	95-63-6	1-5
Benzene	71-43-2	0.4-5
Ethyl Benzene	100-41-4	1-5

n-Hexane	110-54-3	0-4
Cyclohexane	110-82-7	0-2

California Proposition 65:

Warning: This material contains the following chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm, and are subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5):

Component	Effect
Benzene	Cancer, Developmental and Reproductive Toxicant
Toluene	Developmental Toxicant
Unleaded Gasoline (wholly vaporized)	Cancer

Carcinogen Identification:

Unleaded gasoline has been identified as a carcinogen by IARC. For carcinogenicity information on individual components, see Section 11.

EPA (CERCLA) Reportable Quantity:

--None--

Canada - Domestic Substances List: Listed

WHMIS Class:

B2-Flammable Liquid
D2B-Materials causing other toxic effects - Toxic Material

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

Issue Date: 05/14/03
Previous Issue Date: 02/13/03
Revised Sections: 1, 5, 16
MSDS Number: 731678
Status: Final

Disclaimer of Expressed and Implied Warranties:

The information presented in this Material Safety Data Sheet is based on data believed to be accurate as of the date this Material Safety Data Sheet was prepared. **HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE.** No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.

Diesel No. 2 Test Fuel

Version 1.9 Revision Date 2013-11-06

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product information

Trade name : Diesel No. 2 Test Fuel
Material : 1114380, 1114379, 1111796, 1111792, 1111793, 1111721, 1108397, 1097307, 1096433, 1083233, 1096612, 1084817, 1097324, 1097322, 1097310, 1089768, 1079939, 1097309, 1090864, 1077073, 1077061, 1090863, 1069145, 1100027, 1099634, 1090866, 1099603, 1090314, 1097785, 1087561, 1092489, 1076410, 1102501, 1097387, 1090432, 1090433, 1100452, 1097386, 1078955, 1100842, 1077075, 1097308, 1100531, 1069147, 1090862, 1078060, 1077077, 1068920, 1078988, 1017963, 1017962, 1036152, 1024299, 1024300, 1017964, 1024301, 1017977, 1024303, 1017981, 1017980, 1017965, 1017978, 1017967, 1017966, 1017979, 1024297, 1024293, 1029744, 1024292, 1017982, 1024294, 1024296, 1024302, 1024304, 1024309, 1024308, 1024307, 1024306, 1024295, 1024305, 1024298, 1029490, 1104964, 1104939, 1104952, 1104938, 1104941, 1104963, 1104956, 1104955, 1104953

Company : Chevron Phillips Chemical Company LP
Specialty Chemicals
10001 Six Pines Drive
The Woodlands, TX 77380

Emergency telephone:

Health:
866.442.9628 (North America)
1.832.813.4984 (International)
Transport:
North America: CHEMTREC 800.424.9300 or 703.527.3887
Asia: +800 CHEMCALL (+800 2436 2255)
EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600

Responsible Department : Product Safety and Toxicology Group
E-mail address : MSDS@CPChem.com
Website : www.CPChem.com

SECTION 2: Hazards identification

Emergency Overview

Danger

Form: Liquid **Physical state**: Liquid **Color**: Pale yellow to brown (if undyed), red to purple (dyed) **Odor**: Mild

OSHA Hazards	:	Combustible Liquid, Moderate skin irritant, Mild eye irritant, Aspiration hazard, Carcinogen, Harmful by ingestion.

GHS Classification

: Flammable liquids, Category 3
Acute toxicity, Category 4, Inhalation
Skin irritation, Category 2
Carcinogenicity, Category 2
Specific target organ systemic toxicity - repeated exposure, Category 2, Liver, hematopoietic system
Aspiration hazard, Category 1
Acute aquatic toxicity, Category 2
Chronic aquatic toxicity, Category 2

GHS-Labeling

Symbol(s) :

Signal Word : Danger

Hazard Statements : H226: Flammable liquid and vapor.
H304: May be fatal if swallowed and enters airways.
H332: Harmful if inhaled.
H315: Causes skin irritation.
H351: Suspected of causing cancer.
H373: May cause damage to organs through prolonged or repeated exposure.
H411: Toxic to aquatic life with long lasting effects.

Precautionary Statements : **Prevention:**
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233: Keep container tightly closed.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge.
P260: Do not breathe dust/fume/gas/mist/vapor/spray.
P264: Wash skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P273: Avoid release to the environment.
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P303 + P361 + P353: IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with

water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313: IF exposed or concerned: Get medical advice/ attention.
P321: Specific treatment (see supplemental first aid instructions on this label).
P331: Do NOT induce vomiting.
P332 + P313: If skin irritation occurs: Get medical advice/ attention.
P337 + P313: If eye irritation persists: Get medical advice/ attention.
P362: Take off contaminated clothing and wash before reuse.
P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P391: Collect spillage.
Storage:
P403 + P235: Store in a well-ventilated place. Keep cool.
P405: Store locked up.
Disposal:
P501: Dispose of contents/ container to an approved waste disposal plant.

Carcinogenicity:

IARC	Group 2B: Possibly carcinogenic to humans	
	Naphthalene	91-20-3
NTP	Reasonably anticipated to be a human carcinogen	
	Naphthalene	91-20-3
ACGIH	Confirmed animal carcinogen with unknown relevance to humans	
	Diesel fuel	68476-34-6

SECTION 3: Composition/information on ingredients

Synonyms	:	Diesel 0.05 LS Emiss Cert Test Fuel- Cummins Diesel CEC (RF-73-T-90) Diesel Reference Fuels, Diesel Cert Fuel, Oil Classification Diesel Diesel 2007 Emission Certification Fuel Diesel Euro-II Cert Fuel Diesel Euro-IV Cert Fuel Diesel 0.05 LS Emiss Cert Test Fuel- ITE PC-10 Diesel Test Fuel Locomotive Diesel Certification Fuel Diesel Euro-III Cert Fuel Diesel Special Test Fuel Diesel CEC (RF-03-A-84) Ultra High Cetane Check Fuel (ASTM) Diesel Diesel 2004 Tier 2 Fuel 0.05% Sulfur Diesel Fuel - JASO No Sulfur (less than 3 PPM) Diesel Test Fuel Diesel Caterpillar F173 Diesel Caterpillar 1E2973
Molecular formula	:	UVCB

Component	CAS-No.	Weight %
Diesel fuel	68476-34-6	100
Naphthalene	91-20-3	0 - 1

SECTION 4: First aid measures

General advice	:	Move out of dangerous area. Show this material safety data sheet to the doctor in attendance. Do not leave the victim unattended.
If inhaled	:	Keep respiratory tract clear. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	:	If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.
In case of eye contact	:	Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	:	Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. Take victim immediately to hospital.

SECTION 5: Firefighting measures

Flash point	:	> 47 °C (> 117 °F) minimum
Autoignition temperature	:	No data available
Suitable extinguishing media	:	Dry chemical. Carbon dioxide (CO2). Alcohol-resistant foam.
Unsuitable extinguishing media	:	High volume water jet.
Specific hazards during fire fighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Special protective equipment for fire-fighters	:	Wear self contained breathing apparatus for fire fighting if necessary.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.
Fire and explosion protection	:	Do not spray on an open flame or any other incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).

Keep away from open flames, hot surfaces and sources of ignition.

Hazardous decomposition products : Hydrocarbons. Carbon oxides.

SECTION 6: Accidental release measures

Personal precautions : Use personal protective equipment. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precautions : Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7: Handling and storage

Handling

Advice on safe handling : Avoid formation of aerosol. Do not breathe vapors/dust. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Only add small quantities of acids and bases to water, never the opposite. Always use stirring. Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Do not spray on an open flame or any other incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Keep away from open flames, hot surfaces and sources of ignition.

Storage

Requirements for storage areas and containers : No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

SECTION 8: Exposure controls/personal protection

Ingredients with workplace control parameters

US

Ingredients	Basis	Value	Control parameters	Note
Diesel fuel	ACGIH	TWA	100 mg/m3	A3, Skin, varies, Inhalable fraction and vapor

Naphthalene	ACGIH	TWA	10 ppm,	A4, Skin,
	ACGIH	STEL	15 ppm,	A4, Skin,
	OSHA Z-1	TWA	10 ppm, 50 mg/m3	(b),
	OSHA Z-1-A	TWA	10 ppm, 50 mg/m3	
	OSHA Z-1-A	STEL	15 ppm, 75 mg/m3	

(b) The value in mg/m3 is approximate.
A3 Confirmed animal carcinogen with unknown relevance to humans
A4 Not classifiable as a human carcinogen
Skin Danger of cutaneous absorption
varies varies

Immediately Dangerous to Life or Health Concentrations (IDLH)

Substance name	CAS-No.	Control parameters	Update
Naphthalene	91-20-3	Immediately Dangerous to Life or Health Concentration Value 250 parts per million	1995-03-01

Engineering measures

Adequate ventilation and/or engineering controls when product is heateed in processing. Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Personal protective equipment

Respiratory protection : Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as:. Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Air-Purifying Respirator for Organic Vapors. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.

Hand protection : The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection : Eye wash bottle with pure water. Tightly fitting safety goggles.

Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place. Wear as appropriate:. Flame retardant antistatic protective clothing. Skin should be washed after contact. Workers should wear antistatic footwear.

Hygiene measures : When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Form	:	Liquid
Physical state	:	Liquid
Color	:	Pale yellow to brown (if undyed), red to purple (dyed)
Odor	:	Mild

Safety data

Flash point	:	> 47 °C (> 117 °F) minimum
Lower explosion limit	:	No data available
Upper explosion limit	:	No data available
Oxidizing properties	:	no
Autoignition temperature	:	No data available
Molecular formula	:	UVCB
Molecular Weight	:	Not applicable
pH	:	Not applicable
Pour point	:	No data available
Boiling point/boiling range	:	191 - 343 °C (376 - 649 °F)
Vapor pressure	:	No data available
Relative density	:	0.87, 16 °C(61 °F)
Density	:	0.75 - 0.90 g/cm3
Water solubility	:	Negligible
Partition coefficient: n-octanol/water	:	No data available
Viscosity, kinematic	:	2.55 cSt at 40 °C (104 °F)
Relative vapor density	:	No data available
Evaporation rate	:	No data available
Percent volatile	:	> 99 %

SECTION 10: Stability and reactivity

Chemical stability	:	This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Possibility of hazardous reactions

Conditions to avoid	:	Heat, flames and sparks.
Materials to avoid	:	May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Other data	:	No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

Acute oral toxicity

Diesel fuel	:	LD50: > 5,000 mg/kg Species: rat Sex: male and female Method: OECD Test Guideline 401
Naphthalene		LD50: 2,300 mg/kg Species: rat Sex: male and female

Acute inhalation toxicity

Diesel fuel	:	: 4.1 mg/l Exposure time: 4 h Species: rat Sex: male and female Test atmosphere: dust/mist Method: OECD Test Guideline 403 Test substance: yes
Naphthalene		LC50: >0.38 mg/m3Exposure time: 4 h

Acute dermal toxicity

Diesel fuel	:	LD50 Dermal: > 4,300 mg/kg Species: rabbit Sex: male and female Test substance: yes
Naphthalene		LD50: > 2,000 mg/kg Species: rabbit

Skin irritation

Diesel fuel	:	Irritating to skin.
Naphthalene		No skin irritation

Eye irritation

Diesel fuel	:	No eye irritation
Naphthalene		No eye irritation.

Sensitization

Diesel fuel	:	Did not cause sensitization on laboratory animals.
Naphthalene		Classification: Did not cause sensitization on laboratory animals.

Repeated dose toxicity

Diesel fuel	:	Species: rat, Male and female Sex: Male and female Application Route: Dermal Dose: 0, 30, 125, 500 mg/kg Exposure time: 13 wks Number of exposures: daily, 5 days/week NOEL: 30 mg/kg Method: OECD Guideline 411 Target Organs: Thymus, Liver Information given is based on data obtained from similar substances. Species: rat, Male and female Sex: Male and female Application Route: inhalation (dust/mist/fume) Dose: 0, 0.35, 0.88, 1.71 mg/l Exposure time: 13 wks Number of exposures: Twice/wk NOEL: > 1.71 mg/l Method: OECD Guideline 413

Carcinogenicity

Diesel fuel	:	Species: mouse Sex: male Dose: 0, 25 ul Exposure time: lifetime Number of exposures: 3 times/wk Remarks: Moderate dermal carcinogen
Naphthalene		Species: mouse Sex: male Dose: 10, 30 ppm Exposure time: 105 weeks Number of exposures: 6 hours/day, 5 days/week Test substance: yes Print Date: No information available. Remarks: No evidence of carcinogenicity

Species: mouse
Sex: female
Dose: 10, 30 ppm
Exposure time: 105 weeks
Number of exposures: 6 hours/day, 5 days/week
Test substance: yes
Print Date: No information available.
Remarks: increased incidence of alveolar/bronchiolar adenomas

Species: rat
Sex: male and female
Dose: 10, 30, 60 ppm
Exposure time: 105 weeks
Number of exposures: 6 hours/day, 5 days/week
Test substance: yes
Print Date: No information available.
Remarks: nose respiratory epithelial adenoma, increased incidence of olfactory neuroblastomas

Reproductive toxicity

Diesel fuel : This information is not available.

Developmental Toxicity

Diesel fuel : Species: rat
Application Route: Inhalation
Dose: 0, 86.9, 408.8 ppm
Number of exposures: 6 h/d
Test period: GD 6-15
Method: OECD Guideline 414
NOAEL Teratogenicity: 408.8 ppm
NOAEL Maternal: 408.8 ppm
Information given is based on data obtained from similar substances.

Species: rat
Application Route: Dermal
Dose: 30, 125, 500, 1000 mg/kg
Exposure time: daily
Test period: GD 0-20
Method: OECD Guideline 414
NOAEL Teratogenicity: 125 mg/kg
Information given is based on data obtained from similar substances.

Naphthalene

Species: rabbit
Application Route: oral gavage
Dose: 40, 200, 400 mg/kg
Test period: 29 d, GD 6-18
NOAEL Teratogenicity: 400 mg/kg

Diesel No. 2 Test Fuel
Aspiration toxicity : May be fatal if swallowed and enters airways.

CMR effects

Diesel fuel	:	Carcinogenicity: Animal experiments showed a statistically significant number of tumors. Mutagenicity: In vitro tests showed mutagenic effects Teratogenicity: Animal testing did not show any effects on fetal development.
Diesel No. 2 Test Fuel **Further information**	:	Solvents may degrease the skin.

SECTION 12: Ecological information

Toxicity to fish

Diesel fuel	:	LL50: 21 mg/l Exposure time: 96 h Species: Oncorhynchus mykiss (rainbow trout) semi-static test Method: OECD Test Guideline 203
Naphthalene		LC50: 3.2 mg/l Exposure time: 96 h Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other aquatic invertebrates

Diesel fuel	:	EC50: 68 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea) Method: OECD Test Guideline 202
Naphthalene		LC50: 2.16 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea)

Toxicity to algae

Diesel fuel	:	EbC50: 10 mg/l Exposure time: 72 h Species: Raphidocellus subcapitata (algae) Analytical monitoring: no Method: OECD Test Guideline 201
Naphthalene		EC50: 2.96 mg/l Exposure time: 48 h Species: Selenastrum capricornutum (algae)

Biodegradability

Diesel fuel	:	aerobic Result: Not readily biodegradable. 57.5 % Testing period: 28 d Method: OECD Test Guideline 301F

Results of PBT assessment

Diesel fuel	:	Non-classified PBT substance, Non-classified vPvB substance
Additional ecological information	:	Toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

The information in this MSDS pertains only to the product as shipped.

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

Product	:	The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the MSDS and the bill of lading.

US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)
UN1202, DIESEL FUEL, 3, III

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)
UN1202, DIESEL FUEL, 3, III, (> 47 °C), MARINE POLLUTANT, (NAPHTHALENE)

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)
UN1202, DIESEL FUEL, 3, III

ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))
UN1202, DIESEL FUEL, 3, III, (D/E), ENVIRONMENTALLY HAZARDOUS, (NAPHTHALENE)

RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))
UN1202, DIESEL FUEL, 3, III, ENVIRONMENTALLY HAZARDOUS, (NAPHTHALENE)

ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)
UN1202, DIESEL FUEL, 3, III, ENVIRONMENTALLY HAZARDOUS, (NAPHTHALENE)

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information

National legislation

SARA 311/312 Hazards	:	Fire Hazard Acute Health Hazard Chronic Health Hazard
CERCLA Reportable Quantity	:	Calculated RQ exceeds reasonably attainable upper limit. Naphthalene
SARA 302 Reportable Quantity	:	This material does not contain any components with a SARA 302 RQ.
SARA 302 Threshold Planning Quantity	:	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 304 Reportable Quantity	:	This material does not contain any components with a section 304 EHS RQ.
SARA 313 Ingredients	:	The following components are subject to reporting levels established by SARA Title III, Section 313:
	:	Naphthalene - 91-20-3

Clean Air Act

Ozone-Depletion Potential	:	This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):
: Naphthalene - 91-20-3

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

US State Regulations

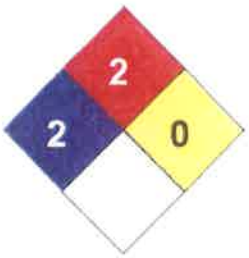
Pennsylvania Right To Know	:	Diesel fuel - 68476-34-6 Naphthalene - 91-20-3
New Jersey Right To Know	:	Diesel fuel - 68476-34-6 Naphthalene - 91-20-3
California Prop. 65 Ingredients	:	WARNING! This product contains a chemical known in the State of California to cause cancer.

Notification status

Europe REACH	:	This mixture contains only ingredients which have been registered according to Regulation (EU) No. 1907/2006 (REACH).
United States of America TSCA	:	On TSCA Inventory
Canada DSL	:	All components of this product are on the Canadian DSL.
Australia AICS	:	On the inventory, or in compliance with the inventory
New Zealand NZIoC	:	On the inventory, or in compliance with the inventory
Japan ENCS	:	On the inventory, or in compliance with the inventory
Korea KECI	:	On the inventory, or in compliance with the inventory
Philippines PICCS	:	On the inventory, or in compliance with the inventory
China IECSC	:	On the inventory, or in compliance with the inventory

SECTION 16: Other information

NFPA Classification : Health Hazard: 2
Fire Hazard: 2
Reactivity Hazard: 0



Further information

Legacy MSDS Number : CPC00523

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this MSDS pertains only to the product as shipped.

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Key or legend to abbreviations and acronyms used in the safety data sheet			
ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50	Lethal Concentration 50%		

1301 E. 9th Street, #700
Cleveland OH 44114
(800) 726-9626

Barnes Distribution

Material Safety Data Sheet

MSDS Form No. : MSDS24854
Item No. : C24854, C24854-1, 24854

**** MATERIAL SAFETY DATA SHEET ****

GREEN INVERTED TIP MARKING PAINT

Part # MSDS24854

**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****

MSDS Name: GREEN INVERTED TIP MARKING PAINT
Product CAS: (none)
Product Code:
Synonyms: 24854; 24854-1; 75968; C24854; C24854-1; GREEN INVERTED TIP MARKING PAINT
Company Identification:
Name: Seymour of Sycamore, Inc.
Address: 917 Crosby Ave.
Address:
City: Sycamore State: IL Zip: 60178
For information, call: (800) 435-4482
Emergency Number: 815-895-9101
Emergency Agency:
Number:
MSDS Creation Date: 1/1/2003
Supersedes Date: 1/1/2000
Miscellaneous:
CAS #: N/A
CHEMICAL NAME: N/A
BRIEF DESCRIPTION: N/A

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

Chemical Name	CAS	MIN	MAX
ETHYL BENZENE	100-41-4	5	5
HEXANE	110-54-3	5	5
ETHANOL	67-56-1	5	5

N-BUTANE	106-97-8	15	15
PROPANE	74-98-6	20	20
TITANIUM DIOXIDE	13463-67-7	5	5
TOLUOL	108-88-3	10	10
VM&P NAPHTHA	64742-89-8	5	5
XYLENE	1330-20-7	10	10

Miscellaneous:
EXPOSURE LIMITS:

	ACGIH		OSHA		COMPANY	
	TLV-TWA	TLV-STEL	PEL-TWA	PEL-CEILING	TLV-TWA	SKIN
PROPANE	1000 PPM	N.E.	1000 PPM	N.E.	N.E.	NO
TOLUOL	50 PPM	N.E.	100 PPM	150 PPM	N.E.	YES
N-BUTANE	800 PPM	N.E.	800 PPM	N.E.	N.E.	NO
HEXANE	50 PPM	510 PPM	50 PPM	510 PPM	N.E.	YES
XYLENE	100 PPM	150 PPM	100 PPM	150 PPM	N.E.	YES
ETHYL BENZENE	100PPM	125PPM	100 PPM	125 PPM	N.E.	NO
TITANIUM DIOXIDE	5MG/M3	N.E.	5MG/M3	N.E.	N.E.	NO
VM&P NAPHTHA	300PPM	400 PPM	300 PPM	400 PPM	N.E.	YES
METHANOL	200 PPM	250 PPM	200 PPM	250 PPM	N.E.	YES

Lbs of VOC per Gallon Coating (minus water): 0
Coating Density (lbs/gal): 0
Solvent Density (lbs/gal): 0
Percent Solvent (volume): 0
Percent Solids (volume): 0
Percent Water (volume): 0

**** SECTION 3 - HAZARDS IDENTIFICATION ****

NFPA: Health: Fire: Reactivity: Other:
HMIS: Health: 1 Fire: 3 Reactivity: 3 Special Protection:

Miscellaneous:
EMERGENCY OVERVIEW: MAY CAUSE FLASH FIRE OR EXPLOSION.

POTENTIAL HEALTH EFFECTS
Target Organs:

Eye:
A PRIMARY ROUTE OF ENTRY. LIQUID, AEROSOLS AND VAPORS OF THIS PRODUCT ARE IRRITATING AND CAN CAUSE PAIN, TEARING, REDDENING AND SWELLING ACCOMPANIED BY A STINGING SENSATION AND/OR A FEELING LIKE THAT OF FINE DUST IN THE EYES.

Skin:

A PRIMARY ROUTE OF ENTRY. CAUSES SKIN IRRITATION. ALLERGIC REACTIONS ARE POSSIBLE. MAY CAUSE SKIN SENSITIZATION, AN ALLERGIC REACTION, WHICH BECOMES EVIDENT ON REEXPOSURE TO THIS MATERIAL. PROLONGED OR REPEATED CONTACT CAN RESULT IN DEFATTING AND DRYING OF THE SKIN WHICH MAY RESULT IN SKIN IRRITATION AND DERMATITIS (RASH).

Ingestion:
A PRIMARY ROUTE OF ENTRY. THIS MATERIAL MAY BE HARMFUL OR FATAL IF SWALLOWED. IRRITATING TO MOUTH, THROAT AND STOMACH.

Inhalation:
A PRIMARY ROUTE OF ENTRY. HEADACHES, DIZZINESS, NAUSEA, DECREASED BLOOD PRESSURE, CHANGES IN HEART RATE AND CYANOSIS MAY RESULT FROM OVER-EXPOSURE TO VAPOR OR SKIN EXPOSURE. PROLONGED INHALATION MAY BE HARMFUL.

CHRONIC HAZARDS: POSSIBLE REPRODUCTIVE HAZARD.

Miscellaneous:

**** SECTION 4 - FIRST AID MEASURES ****

Eye:
IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER. GET MEDICAL ATTENTION, IF IRRITATION PERSISTS.

Skin:
WASH WITH SOAP AND WATER. GET MEDICAL ATTENTION IF IRRITATION DEVELOPS OR PERSISTS. REMOVE CONTAMINATED CLOTHING. WASH SKIN WITH SOAP AND WATER. GET MEDICAL ATTENTION.

Ingestion:
IF SWALLOWED, DO NOT INDUCE VOMITING. GIVE VICTIM A GLASS OF WATER OR MILK. CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

Inhalation:
REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. GET IMMEDIATE MEDICAL ATTENTION. RESCUERS SHOULD PUT ON APPROPRIATE PROTECTIVE GEAR. REMOVE FROM AREA OF EXPOSURE. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. KEEP VICTIM WARM. GET IMMEDIATE MEDICAL ATTENTION.

Notes to Physician:

**** SECTION 5 - FIRE FIGHTING MEASURES ****

Unusual Fire and Explosion Hazards:
VAPORS MAY FORM EXPLOSIVE MIXTURE WITH AIR.

Special Fire Fighting Procedures:
CONTAINERS CAN BUILD UP PRESSURE IF EXPOSED TO HEAT (FIRE). AS IN ANY FIRE, WEAR SELF-CONTAINED BREATHING APPARATUS PRESSURE-DEMAND (MSHA/NIOSH APPROVED OR EQUIVALENT) AND FULL
PROTECTIVE GEAR.

Extinguishing Media:
WATER FOG, DRY CHEMICAL, CO2, ALCOHOL FOAM, FOAM.

Flash Point:
-9 F

Flammable Limits:
Lower Limit:
EXPLOSIVE LIMIT (LEL): 0.9%
Upper Limit:
EXPLOSIVE LIMIT (UEL): 36.0%

AutoIgnition Temperature:

General Information:
FLAMMABLE LIMITS: NO DATA

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

Disposal:
DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. DO NOT PUNCTURE,
INCINERATE OR COMPACT.

Spills/Leaks:
ABSORB SPILL WITH INERT MATERIAL (E.G. DRY SAND OR EARTH), THEN PLACE IN A CHEMICAL WASTE CONTA
NER.

**** SECTION 7 - HANDLING and STORAGE ****

Handling:
WASH THOROUGHLY AFTER HANDLING.

Storage:
KEEP AWAY FROM HEAT, SPARKS AND FLAME.

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

Engineering Controls:
LOCAL EXHAUST: LOCAL EXHAUST VENTILATION MAY BE NECESSARY TO CONTROL ANY AIR CONTAMINANTS TO
WITHIN THEIR TLVS DURING THE USE OF THIS PRODUCT.

Eyes:
WEAR SAFETY GLASSES WITH SIDE SHIELDS (OR GOGGLES) AND A FACE SHIELD.

Skin:
PROTECTIVE GLOVES: WHERE CONTACT IS LIKELY, WEAR CHEMICAL RESISTANT GLOVES.

Clothing:
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: WHERE CONTACT IS LIKELY, WEAR CHEMICAL RESISTANT
GLOVES, A CHEMICAL SUIT, RUBBER BOOTS, AND CHEMICAL SAFETY GOGGLES PLUS A FACE SHIELD.

Respirators:
(SPECIFY TYPE): A NIOSH/MSHA APPROVED AIR PURIFYING RESPIRATOR WITH AN ORGANIC VAPOR CARTRIDGE
OR CANISTER MAY BE PERMISSIBLE UNDER CERTAIN CIRCUMSTANCES WHERE AIRBORNE CONCENTRATIONS ARE
EXPECTED TO EXCEED EXPOSURE LIMITS. PROTECTION PROVIDED BY AIR PURIFYING RESPIRATORS IS
LIMITED. USE A POSITIVE PRESSURE AIR SUPPLIED RESPIRATOR IF THERE IS ANY POTENTIAL FOR AN
UNCONTROLLED RELEASE, EXPOSURE LEVELS ARE NOT KNOW, OR ANY OTHER CIRCUMSTANCES WHERE AIR
PURIFYING RESPIRATORS MAY NOT PROVIDE ADEQUATE PROTECTION.

**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Appearance/Odor:
AROMATIC ODOR WITH LIQUID APPEARANCE

pH: NA
Vapor Pressure: (MM HG.): 40 PSI
Vapor Density: (AIR = 1): IS HEAVIER THAN AIR
Evaporation Rate: IS FASTER THAN ETHER
Viscosity:
Boiling Point: -44 TO 286 F

Freezing/Melting Point:
Decomposition Temperature:
Solubility: IN WATER: SLIGHT
Specific Gravity: .8322
Molecular Formula: N/A
Molecular Weight:
Miscellaneous:
% VOLATILE / VOLUME: NO DATA

**** SECTION 10 - STABILITY AND REACTIVITY ****

Chemical Stability:
STABLE: YES

Conditions to Avoid:
DO NOT STORE ABOVE 120 DEGREES F. KEEP AWAY FROM SPARKS, PILOT LIGHTS, AND OPEN FLAMES.

Incompatibilities with Other Materials:
NO INFORMATION

Hazardous Decomposition Products:
MAY PRODUCT HAZARDOUS FUMES WHEN HEATED TO DECOMPOSITION. FUMES MAY CONTAIN CARBON DIOXIDE
AND/OR CARBON MONOXIDE.

Hazardous Polymerization:
MAY OCCUR: NO

**** SECTION 11 - TOXICOLOGICAL INFORMATION ****

Toxicological Information:

**** SECTION 12 - ECOLOGICAL INFORMATION ****

Ecological Information:
ECOLOGICAL INFORMATION: THIS PRODUCT DOES NOT CONTAIN CHLORINATED SOLVENTS OR LEAD.

**** SECTION 13 - OTHER PRECAUTIONS ****

Other Precautions:

Work/Hygienic Practices:

NO INFORMATION

**** SECTION 14 - TRANSPORT INFORMATION ****

Transportation Information:
CATEGORY: ORM-D

DOT PROPER SHIPPING NAME: CONSUMER COMMODITY ORM-D

Label Information:

**** SECTION 15 - REGULATORY INFORMATION ****

Regulatory Information:
U.S. FEDERAL REGULATIONS: AS FOLLOWS -

OSHA: HAZARDOUS BY DEFINITION OF HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200).

CERCLA - SARA HAZARD CATEGORY: THIS PRODUCT HAS BEEN REVIEWED ACCORDING TO THE EPA 'HAZARD
CATEGORIES' PROMULGATED UNDER SECTIONS 311 AND 312 OF THE SUPERFUND AMENDMENT AND 0REAUTHORIZATION ACT OF 1986 (SARA TITLE III) AND IS CONSIDERED, UNDER APPLICABLE DEFINITIONS,
)O MEET THE FOLLOWING CATEGORIES:

IMMEDIATE HEALTH HAZARD
CHRONIC HEALTH HAZARD
FIRE HAZARD
PRESSURIZED GAS HAZARD

SARA SECTION 313: THIS PRODUCT CONTAINS THE FOLLOWING SUBSTANCES SUBJECT TO THE REPORTING
REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF
1986 AND 40 CFR PART 372:

TOLUOL
XYLENE
ETHYL BENZENE
METHANOL

CALIFORNIA PROPOSITION 65: WARNING: THE CHEMICAL NOTED BELOW AND CONTAINED IN THIS PRODUCT
ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER OR BIRTH DEFECTS AND OTHER REPRODUCTIVE
HARM: TOLUOL

ITERNATIONAL REGULATIONS: AS FOLLOWS -

**CANADIAN WHMIS: THIS MSDS HAS BEEN PREPARED IN COMPLIANCE WITH CONTROLLED PRODUCT REGULATIONS
EXCEPT FOR USE OF THE 16 HEADINGS.**

CANADIAN WHMIS CLASS: NO INFORMATION AVAILABLE.

**** SECTION 16 - ADDITIONAL INFORMATION ****

**Additional Information:
IDENTIFICATION NUMBER: PART #24854**

**THIS INFORMATION CONTAINED ON THIS MSDS HAS BEEN CHECKED AND SHOULD BE ACCURATE. HOWEVER, IT
IS THE RESPONSIBILITY OF THE USER TO COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND REGULAT
ONS.**

1 Identification of the substance/mixture and of the company/undertaking

· **Product identifier**

· **Trade name: Hilti HIT-HY 200-A**
· **Container size:** 330 ml, 500 ml
· **Relevant identified uses of the substance or mixture and uses advised against**
· **Sector of** Use Building and construction work
· **Application of the substance / the preparation** Adhesive anchoring system for rebar and anchor fastenings in concrete.

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Hilti, Inc.
5400 South 122nd East Ave.
US-Tulsa, OK 74146
Phone: (800) 879-8000
Fax: (800) 879-7000
Español: (800) 879-5000

· **Information department:**
anchor hse@hilti.com
see section 16
· **Emergency telephone number:**
Chem-Trec
Tel.: 1 800 424 9300

2 Hazards identification

· **Classification of the substance or mixture**

GHS07

H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Xi; Sensitising

R43: May cause sensitization by skin contact.

O; Oxidizing

R7: May cause fire.
· **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
· **Classification system:**
The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.

· Label elements
· **GHS label elements** The product is classified and labelled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS07

· Signal word Warning

· **Hazard-determining components of labelling:**
methacrylic acid, monoester with propane-1,2-diol
dibenzoyl peroxide
· **Hazard statements**
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
Precautionary statements
P262 Do not get in eyes, on skin, or on clothing.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.

(Contd. on page 2)

(Contd. of page 1)

· **Classification system**
NFPA ratings (scale 0-4)

Health = 2
Fire = 1
Reactivity = 1

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

· **Additional information:**

Hilti HIT

· **Information pertaining to particular dangers for man and environment: A**
H317 May cause an allergic skin reaction.

· **Information pertaining to particular dangers for man and environment: B**
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.

3 Composition information on ingredients

· **Chemical characterization: Mixtures**
· **Description:**
2-Component-Foilpack, contains:
Component A: Urethane methacrylate resin, inorganic filler
Component B: Dibenzoylperoxide, phlegmatized

Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**		
27813-02-1	methacrylic acid, monoester with propane-1,2-diol Xi R36; Xi R43 Skin Irrit. 2, H319; Skin Sens. 1, H317	5-10%
94-36-0	dibenzoyl peroxide Xi R36; Xi R43; E R3; O R7 Org. Perox. B, H241; Eye Irrit. 2, H319; Skin Sens. 1, H317	10-15%

· **Dangerous components A:**		
27813-02-1	methacrylic acid, monoester with propane-1,2-diol	Xi R36; Xi R43 Skin Irrit. 2, H319; Skin Sens. 1, H317

· **Dangerous components B:**		
94-36-0	dibenzoyl peroxide	Xi R36; Xi R43; E R3; O R7 Org. Perox. B, H241; Eye Irrit. 2, H319; Skin Sens. 1, H317

· **Non Dangerous components:**		
14808-60-7	Quartz (SiO2)	25-50%
1344-28-1	aluminium oxide	2,5-10%
7631-86-9	silicon dioxide, chemically prepared	<2,5%

SVHC None
· **Additional information** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

· Description of first aid measures
· **General information** Immediately remove any clothing soiled by the product.
· **After inhalation** Take affected persons into fresh air and keep quiet.
· **After skin contact** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact**
Rinse opened eye for several minutes under running water. Then consult a doctor.
Protect unharmed eye.
· **After swallowing**
Rinse out mouth and then drink plenty of water.
Seek immediate medical advice.

(Contd. on page 3)

(Contd. of page 2)

· **Information for doctor**
· **Most important symptoms and effects, both acute and delayed** Allergic reactions
· **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Firefighting measures

· **Extinguishing media**
· **Suitable extinguishing agents** CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **For safety reasons unsuitable extinguishing agents** Water with full jet.
· **Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Nitrogen oxides (NOx)
Carbon monoxide (CO)
Carbondioxide (CO2)
In certain fire conditions, traces of other toxic gases cannot be excluded.
· **Advice for firefighters**
· **Protective equipment:** Wear self-contained respiatory protective device.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
· **Environmental precautions:** Do not allow to penetrate the ground/soil.
· **Methods and material for containment and cleaning up:**
Pick up mechanically.
Clean the affected area carefully; suitable cleaners are:
organic solvent
Ensure adequate ventilation.
Dispose contaminated material as waste according to item 13.
· **Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Handling**
· **Precautions for safe handling**
Check the expiry date: see imprint on manifold (month/year). Do not use expired mortar!
The usual precautionary measures for handling chemicals should be followed.
· **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect from heat.

· **Conditions for safe storage, including any incompatibilities**
· **Storage**
· **Requirements to be met by storerooms and receptacles:** Keep in a cool, dry and dark place; 41 °F / 5 °C to 77 °F / 25 °C.
· **Information about storage in one common storage facility:** Store away from foodstuffs.
· **Further information about storage conditions:** Protect from heat and direct sunlight.

· **Storage class**
As per VCI (1991) storage classification concept.
I I
· **Specific end use(s)** Adhesive anchoring system for rebar and anchor fastenings in concrete.

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
The product has a pasty consistency. Exposure limit values for respirable dusts ar not relevant for this product.
· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment**
· **General protective and hygienic measures**
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Do not eat, drink, smoke or sniff while working.

(Contd. on page 4)

(Contd. of page 3)

· **Breathing equipment:** Not required.
· **Protection of hands:**
Protective gloves.
EN 374 / EN 388
Avoid direct contact with the chemical/ the product/ the preparation by organizational measures.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
· **Material of gloves** Nitrile rubber, NBR
· **Penetration time of glove material**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Not suitable are gloves made of the following materials:**
Natural rubber, NR
Leather gloves
Strong gloves
· **Eye protection:**
Tightly sealed goggles.
EN 166 / EN 170
· **Body protection:** Protective work clothing.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Pasty
Color:	Component A: grey Component B: white
· **Odor:**	Ester-like
· **Odour threshold:**	Not determined
· **pH-value:**	Componente A: not applicable Componente B: ~ 7
· **Change in condition**	
Melting point/Melting range:	Not determined.
Boiling point/Boiling range:	undetermined
· **Flash point:**	Component A: > 109 °C (DIN 53213) Component B: not applicable
· **Flammability (solid, gaseous)**	Not determined
· **Ignition temperature:**	355°C (671 °F)
Decomposition temperature:	Component A: not relevant Component B: SADT 65°C UN test H4
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	Not determined
Upper:	Not determined
· **Vapor pressure at 20°C (68 °F):**	< 0.1 hPa (< 0 mm Hg) (HPMA)
· **Density at 20°C (68 °F):**	1.8 g/cm³ (15.021 lbs/gal) (DIN 51757)
· **Relative density**	Not determined
· **Vapour density**	Not determined
· **Evaporation rate**	Not determined
· **Solubility in / Miscibility with**	
Water:	Not miscible or difficult to mix
· **Partition coefficient (n-octanol/water):**	Not determined
· **Viscosity:**	
dynamic at 20°C (68 °F):	50 Pa.s (DIN 53788)
kinematic at 20°C (68 °F):	> 20 s (DIN 53211/4)
· **Solvent content:**	
Water:	Component B: ~ 20%
· **Other information**	No further relevant information available.

10 Stability and reactivity

· **Reactivity**
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
To avoid thermal decomposition do not overheat.
No decomposition if used and stored according to specifications.

(Contd. on page 5)

(Contd. of page 4)

· **Possibility of hazardous reactions** No dangerous reactions known
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** No dangerous decomposition products known

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**
· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** Irritating effect.
· **Sensitization:** Sensitization possible through skin contact.
· **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
14808-60-7	Quartz (SiO2)	1
94-36-0	dibenzoyl peroxide	3
7631-86-9	silicon dioxide, chemically prepared	3
· **NTP (National Toxicology Program)**		
14808-60-7	Quartz (SiO2)	K

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **According to the formulation contains the following heavy metals and compounds from the EU guideline NO. 2006/11/EC:** None
· **General notes:** The product does not contain organically bounded halogens (AOX-free).
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation**
After curing, the product can be disposed of with household waste.
Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations.

· **European waste catalogue:**	
08 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 04 00	wastes from MFSU of adhesives and sealants (including waterproofing products)
08 04 09*	waste adhesives and sealants containing organic solvents or other dangerous substances
20 00 00	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01 00	separately collected fractions (except 15 01)
20 01 27*	paint, inks, adhesives and resins containing dangerous substances

· **Uncleaned packagings:**
· **Recommendation:**
Disposal must be made according to official regulations.
Empty packs: May be disposed via the local Green Dot collecting system or EAK waste material code 150102 (plastic packaging materials)

14 Transport information

· **UN-Number**
DOT, ADR, ADN, IMDG, IATA Void

(Contd. on page 6)

(Contd. of page 5)

· UN proper shipping name	
· DOT, ADN, IMDG, IATA	Void
· ADR	Void
· Transport hazard class(es)	
· DOT, ADR, ADN, IMDG, IATA	
· Class	Void
· Packing group	
DOT, ADR, IMDG, IATA	Void
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications. available oxygen content < 1 %
· UN "Model Regulation":	-
· HS-Code:	3214 10 10: Glaziers' putty, grafting putty, resin cements, caulking compounds and other mastics

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Sara**

· **Section 355 (Extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

1344-28-1	aluminium oxide
94-36-0	dibenzoyl peroxide

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

· **Proposition 65:**

· **Chemicals known to cause cancer:**
None of the ingredients are listed.

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**
None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

14808-60-7	Quartz (SiO2)	A2
1344-28-1	aluminium oxide	A4
94-36-0	dibenzoyl peroxide	A4

· **MAK (German Maximum Workplace Concentration)**

14808-60-7	Quartz (SiO2)	1
1344-28-1	aluminium oxide	2

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

14808-60-7	Quartz (SiO2)

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

· **National regulations** The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

· **Information about limitation of use:** Employment restrictions concerning young persons must be observed.
· **Chemical safety assessment:** not required.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship

· **Relevant phrases**
H241 Heating may cause a fire or explosion.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.

R3 Extreme risk of explosion by shock, friction, fire or other sources of ignition.
R36 Irritating to eyes.

(Contd. on page 7)

(Contd. of page 6)

R43 May cause sensitization by skin contact.
R7 May cause fire.

· **Department issuing MSDS:**
Hilti Entwicklungsgesellschaft mbH
Hiltistrasse 6
D-86916 Kaufering
Tel.: +49 8191 906310
Fax: +49 8191 90176310
e-mail: anchor.hse@hilti.com
· **Contact:** Mechthild Krauter
· **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organization
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
NFPA: National Fire Protection Association (USA)
· *** Data compared to the previous version altered.**

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	Industrail Choice Aerosol - Solvent Based Inverted Marking Paint	Revision Date:	08/31/2004
Identification Number:	1634838, 1668838, 1675838, 201516, 203022, 203024, 203025, 203026, 203029, 203030		
Product Use/Class:	Industrial Choice - Precission Line Marking Paint/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Cziczo, Ray		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Liquified Petroleum Gas	68476-86-8	30.0	1000 PPM	N.E.	1000 PPM	N.E.
Acetone	67-64-1	25.0	500 PPM	750 PPM	750 PPM	N.E.
Aliphatic Hydrocarbon	64742-89-8	15.0	300 PPM	N.E.	300 PPM	N.E.
Xylene	1330-20-7	15.0	100 PPM	150 PPM	100 PPM	N.E.
Toluene	108-88-3	15.0	50 PPM	150 PPM	200 PPM	300 PPM
Titanium Dioxide	13463-67-7	15.0	10 mg/m3	N.E.	10 mg/m3	N.E.
Naphtha	8032-32-4	10.0	300 PPM	N.E.	N.E.	N.E.
Ethylbenzene	100-41-4	5.0	100 PPM	125 PPM	100 PPM	N.E.
Magnesium Silicate	14807-96-6	5.0	10 mg/m3	N.E.	15 mg/m3	N.E.
meta-Xylene	108-38-3	5.0	100 PPM	150 PPM	100 PPM	N.E.
ortho-Xylene	95-47-6	5.0	100 PPM	150 PPM	100 PPM	N.E.
para-Xylene	106-42-3	5.0	100PPM	150PPM	100 PPM	N.E.
Pigment Black 7	1333-86-4	5.0	3.5 mg/m3	N.E.	3.5 mg/m3	N.E.
Pigment Green 7	1328-53-6	5.0	N.E.	N.E.	N.E.	N.E.
Pigment Yellow 73	13515-40-7	5.0	2 mg/m3	N.E.	2 mg/m3	N.E.
Pigment Yellow 194	82199-12-0	1.0	N.E.	N.E.	N.E.	N.E.
Pigment Red 122	980-26-7	1.0	15mg/m3	N.E.	5mg/m3	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Contents Under Pressure. Vapors may cause flash fire or explosion. Extremely flammable liquid and vapor. Harmful if swallowed.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). May cause central nervous system disorder (e,g.,narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. Overexposure to toluene in laboratory animals has been associated with liver abnormalities, kidney, lung and spleen damage. Effects in humans have included liver and cardiac abnormalities.
Contains carbon black. Chronic inflammation, lung fibrosis, and lung tumors have been observed in some rats experimentally exposed for long periods of time to excessive concentrations of carbon black and several insoluble fine dust particles. Tumors have not been observed in other animal species (i.e., mouse and hampster) under similar circumstances and study conditions. Epidemiological studies of North American workers show no evidence of clinically significant adverse health effects due to occupational exposure to carbon black.
Carbon black is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC and is proposed to be listed as A4- "not classified as a human carcinogen" by the American Conference of Govermental Industrial Hygienists. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of carbon black in the formula.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Hold eyelids apart and flush with plenty of water for at least 15 minutes. Get medical attention.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F
(Setaflash)

LOWER EXPLOSIVE LIMIT: 1.0 %
UPPER EXPLOSIVE LIMIT : 12.8 %

Extinguishing Media: Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: Vapors can travel to a source of ignition and flash back. Vapors may form explosive mixtures with air. Closed containers may explode when exposed to extreme heat. Water spray may be ineffective. FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Perforation of the pressurized container may cause bursting of the can. Isolate from heat, electrical equipment, sparks and open flame. Keep containers tightly closed.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Wash thoroughly after handling. Wash hands before eating. Use only in a well-ventilated area. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing vapor or mist.

Storage: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Prevent build -up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Boiling Range:	130 - 410 F	Vapor Density:	Heavier than air
Odor:	Solvent Like	Odor Threshold:	ND
Appearance:	Liquid	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight		
Freeze Point:	ND	Specific Gravity:	

Vapor Pressure: PH: NE
Physical State: Liquid

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid all possible sources of ignition. Avoid temperatures above 120 ° F.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Product LD50: ND

Product LC50: ND

Chemical Name	LD50	LC50
Liquified Petroleum Gas	N.D.	N.D.
Acetone	N.D.	N.D.
Aliphatic Hydrocarbon	N.D.	N.D.
Xylene	N.D.	N.D.
Toluene	N.D.	N.D.
Titanium Dioxide	>7500 mg/kg (ORAL, RAT)	N.D.
Naphtha	>5000 mg/kg (ORAL, RAT)	N.D.
Ethylbenzene	3500 mg/kg (ORAL, RAT)	N.D.
Magnesium Silicate	N.D.	TCLo:11mg/m3 inh.
meta-Xylene	5000 mg/kg (ORAL, RAT)	N.D.
ortho-Xylene	5G/KG ORAL RAT	6125 PPM/12HR RAT
para-Xylene	5G/KG RAT ORAL	4550 PPM/4HR RAT
Pigment Black 7	>8000 mg/kg (ORAL, RAT)	N.D.
Pigment Green 7	>5000 mg/kg (ORAL, RAT)	N.D.
Pigment Yellow 73	N.D.	N.D.
Pigment Yellow 194	N.D.	N.D.
Pigment Red 122	N.D.	N.D.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Aerosol	Packing Group:	—
DOT Technical Name:	—	Hazard Subclass:	1
DOT Hazard Class:	2	Resp. Guide Page:	126
DOT UN/NA Number:	UN 1950		

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Xylene	1330-20-7
Toluene	108-88-3
Ethylbenzene	100-41-4
meta-Xylene	108-38-3
ortho-Xylene	95-47-6
para-Xylene	106-42-3
Pigment Green 7	1328-53-6

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None known

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Calcium Carbonate	1317-65-3
Modified Alkyd	PROPRIETARY
Modified Alkyd	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Calcium Carbonate	1317-65-3
Modified Alkyd	PROPRIETARY
Modified Alkyd	PROPRIETARY
Water	7732-18-5
Barium Sulfate	7727-43-7

California Proposition 65:

Warning: The following ingredients present in the product are known to the state of California to cause Cancer:

Chemical Name	CAS Number
Ethylbenzene	100-41-4
Microcrystalline Silica	14808-60-7
Formaldehyde	50-00-0
Cadmium Compounds	NOT SPECIFIED
Acetaldehyde	75-07-0
Nickel Compounds	NOT SPECIFIED
Benzene	71-43-2
Arsenic Compounds	NOT SPECIFIED
Lead Compounds	NOT SPECIFIED

Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards.

Chemical Name	CAS Number
Toluene	108-88-3
Cadmium Compounds	NOT SPECIFIED
Mercury Compounds	NOT SPECIFIED
Benzene	71-43-2
Arsenic Compounds	NOT SPECIFIED
Lead Compounds	NOT SPECIFIED

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:
Health: 2* Flammability: 4 Reactivity: 0 Personal Protection: X

VOLATILE ORGANIC COMPOUNDS, g/l: NA

REASON FOR REVISION:

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.

MATERIAL SAFETY DATA SHEET

03621
06 00

DATE OF PREPARATION
Dec 26, 2012

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
03621
PRODUCT NAME
KRYLON® Industrial QUIK-MARK™ Solvent-Based Inverted Marking Paint (APWA), Blue
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
KRYLON PRODUCTS GROUP
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 247-3266 www.kpg-industrial.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
13	74-98-6	**Propane**		
		ACGIH TLV	1000 PPM	760 mm
		OSHA PEL	1000 PPM	
12	106-97-8	**Butane**		
		ACGIH TLV	1000 PPM	760 mm
		OSHA PEL	800 PPM	
7	64742-89-8	**V. M. & P. Naphtha**		
		ACGIH TLV	300 PPM	12 mm
		OSHA PEL	300 PPM	
		OSHA PEL	400 PPM STEL	
11	108-88-3	**Toluene**		
		ACGIH TLV	20 PPM	22 mm
		OSHA PEL	100 ppm (Skin)	
		OSHA PEL	150 ppm (Skin) STEL	
0.1	100-41-4	**Ethylbenzene**		
		ACGIH TLV	20 PPM	7.1 mm
		OSHA PEL	100 PPM	
		OSHA PEL	125 PPM STEL	
22	67-64-1	**Acetone**		
		ACGIH TLV	500 PPM	180 mm
		ACGIH TLV	750 PPM STEL	
		OSHA PEL	1000 PPM	
23	471-34-1	**Calcium Carbonate**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	
2	13463-67-7	**Titanium Dioxide**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or spray mist.

HMIS Codes	
Health	2*
Flammability	3
Reactivity	0

EFFECTS OF OVEREXPOSURE

EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.
Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:

- the liver
- the urinary system
- the cardiovascular system
- the reproductive system

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.
Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	EXTINGUISHING MEDIA
Propellant < 0 °F	0.9	12.8	Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Containers may explode when exposed to extreme heat.
Application to hot surfaces requires special precautions.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Available

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.
During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.
Consult NFPA Code. Use approved Bonding and Grounding procedures.
Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

None required for normal application of aerosol products where minimal skin contact is expected. For long or repeated contact, wear chemical resistant gloves.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	7.21 lb/gal	864 g/l
SPECIFIC GRAVITY	0.87	
BOILING POINT	<0 - 325 °F	<-18 - 162 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	85%	
EVAPORATION RATE	Faster than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	7.0	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

Volatile Weight 44.77% Less Water and Federally Exempt Solvents

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations. There is no evidence that ethylbenzene causes cancer in humans.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

TOXICOLOGY DATA

CAS No.	Ingredient Name			
74-98-6	Propane			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
106-97-8	Butane			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
64742-89-8	V. M. & P. Naphtha			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
108-88-3	Toluene			
		LC50 RAT	4HR	4000 ppm
		LD50 RAT		5000 mg/kg
100-41-4	Ethylbenzene			
		LC50 RAT	4HR	Not Available
		LD50 RAT		3500 mg/kg
67-64-1	Acetone			
		LC50 RAT	4HR	Not Available
		LD50 RAT		5800 mg/kg
471-34-1	Calcium Carbonate			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
13463-67-7	Titanium Dioxide			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.
Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

May be classed as LTD. QTY. OR ORM-D
UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, (ERG#126)

Canada (TDG)

May be classed as LTD. QTY. OR ORM-D
UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, (ERG#126)

IMO

May be shipped as Limited Quantity
UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, EmS F-D, S-U, ADR (D)

IATA/ICAO

UN1950, AEROSOLS, FLAMMABLE, 2.1, LIMITED QUANTITY

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
108-88-3	Toluene	11	
100-41-4	Ethylbenzene	0.1	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 09/29/2011 Reviewed on 09/29/2011

1 Identification of substance

· **Product details**

· **Trade name: Magic Kote**

· **Article number:** 83-243131
· **Application of the substance / the preparation**

· **Manufacturer/Supplier:**
Dayton Superior
4226 Kansas Avenue
Kansas City, KS 66106

Tel.: (866) 329-8724

Emergency Telephone Number: Use only in the event of an emergency involving a spill, leak, fire, exposure, or accident involving chemicals. Within the U.S., Canada, or the U.S. Virgin Islands, call ChemTrec at (800) 424-9300, 24 hours a day. Or, outside these areas, call (703) 527-3887. Collect calls are accepted.

· **Information department:** Environmental, Health, and Safety department.

2 Composition/Data on components

· **Chemical characterization**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

64742-53-6	Distillates (petroleum), hydrotreated light naphthenic	50-75%
64742-65-0	Distillates (petroleum), solvent-dewaxed heavy paraffinic	10-25%
64742-62-7	Residual oils (petroleum), solvent-dewaxed	≤ 10%
64742-57-0	Residual oils (petroleum), hydrotreated	< 10%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

· **Hazard description:** Not applicable.
· **Information pertaining to particular dangers for man and environment:**
The product has to be labelled due to internationally acknowledged calculation procedures using the latest valid versions.
· **Classification system:**
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
· **NFPA ratings (scale 0 - 4)**

Health = 1
Fire = 1
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = 1
Fire = 1
Reactivity = 0

4 First aid measures

· **After inhalation:**
Supply fresh air and to be sure call for a doctor.

(Contd. on page 2)

(Contd. of page 1)

In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact:** Rinse opened eye for several minutes under running water.
· **After swallowing:** Seek medical treatment.

5 Fire fighting measures

· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
· **Protective equipment:**
Because fire may produce thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.

6 Accidental release measures

· **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
· **Measures for environmental protection:**
Inform respective authorities in case of seepage into water course or sewage system.
· **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

7 Handling and storage

· **Handling:**
· **Information for safe handling:**
Wear appropriate personal protective clothing to prevent eye and skin contact. Avoid breathing vapors or mists of this product. Use with adequate ventilation. Do not take internally.
· **Information about protection against explosions and fires:** No special measures required.

· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** None.

8 Exposure controls and personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
· **Additional information:** The lists that were valid during the creation were used as basis.

· **Personal protective equipment:**
· **General protective and hygienic measures:**
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
· **Breathing equipment:** Not required.

(Contd. on page 3)

Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 09/29/2011 *Reviewed on 09/29/2011*

Trade name: Magic Kote

(Contd. of page 2)

· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **Eye protection:** *Wear appropriate eye protection to prevent eye contact.*

9 Physical and chemical properties

· **General Information**	
Form:	*Liquid*
Color:	*According to product specification*
Odor:	*Characteristic*
· **Change in condition**	
Melting point/Melting range:	*Undetermined.*
Boiling point/Boiling range:	*> 218°C (> 424°F)*
· **Flash point:**	*140°C (284°F)*
· **Auto igniting:**	*Product is not selfigniting.*
· **Danger of explosion:**	*Product does not present an explosion hazard.*
· **Density at 20°C (68°F):**	*0.890 g/cm³*
· **Solubility in / Miscibility with Water:**	*Not miscible or difficult to mix.*
· **Solvent content:**	
Organic solvents:	*0.0 %*
· **Solids content:**	*65.5 %*
· **Volatile Organic Compounds:**	*Contains less than 250 g/L.*

10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:** *No decomposition if used according to specifications.*

· **Dangerous reactions** *No dangerous reactions known.*

· **Dangerous products of decomposition:** *No dangerous decomposition products known.*

11 Toxicological information

· **Acute toxicity:**

· **Primary irritant effect:**

· **on the skin:** *No irritant effect known.*

· **on the eye:** *No irritating effect known.*

· **Sensitization:** *Sensitization possible through skin contact.*

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

(Contd. on page 4)

(Contd. of page 3)

Irritant

12 Ecological information

· **General notes:** Water hazard class 1 (Self-assessment): slightly hazardous for water

13 Disposal considerations

· **Product:**
· **Recommendation:**
It is the generator's responsibility to determine if the waste meets applicable definitions of hazardous waste. State and local regulations may differ from federal disposal regulations. Dispose of waste material according to local, state, federal, and provincial environmental regulations.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to Federal, State, and Local regulations.

14 Transport information

· **DOT regulations:**	
· **Hazard class:**	N/A
· **Limited Quantity Exemption:**	No Limited Quantity exemption applies for this shipping class.
· **U.S. Domestic Ground Shipments:**	Not Regulated by D.O.T.
· **U.S. Domestic Ground Non-Bulk (119 gal or less per container) Shipments:**	Same as listed for Standard Shipments above.
· **Emergency Response Guide (ERG) Number:**	Not determine
· **Land transport ADR/RID (cross-border):**	
· **ADR/RID class:**	N/A
· **Maritime transport IMDG:**	
· **IMDG Class:**	N/A
· **Marine pollutant:**	No
· **Air transport ICAO-TI and IATA-DGR:**	
· **ICAO/IATA Class:**	N/A

15 Regulations

· **Sara**

· **Section 355 (extremely hazardous substances):**
None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**
This product may contain 1 or more toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR part 372. If so, the chemicals are listed below.

111-42-2	2,2'-iminodiethanol	≤0.1%

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

(Contd. on page 5)

Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 09/29/2011 Reviewed on 09/29/2011

Trade name: Magic Kote

(Contd. of page 4)

· **Proposition 65**

· **Chemicals known to the State of California (Prop. 65) to cause cancer:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**
None of the ingredients is listed.

· **IARC (International Agency for Research on Cancer)**

111-42-2	2,2'-iminodiethanol	3

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**
None of the ingredients is listed.

· **MAK (German Maximum Workplace Concentration)**

112-80-1	oleic acid, pure	4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

· **Product related hazard informations:**
The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:** Xi Irritant

· **Hazard-determining components of labelling:**
Distillates (petroleum), hydrotreated lightnaphthenic
Residual oils (petroleum), solvent-dewaxed
Residual oils (petroleum), hydrotreated
Distillates (petroleum), solvent-dewaxed heavy paraffinic

· **Risk phrases:** 43 May cause sensitisation by skin contact.

· **Safety phrases:**
24 Avoid contact with skin.
28 After contact with skin, wash immediately with plenty of ... (to be specified by the manufacturer).
29 Do not empty into drains.
37/39 Wear suitable gloves and eye/face protection.
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

(Contd. on page 6)

Trade name: Magic Kote

(Contd. of page 5)

· **National regulations:**

· **Water hazard class:** Water hazard class 3 (Self-assessment): extremely hazardous for water.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing MSDS:** Environmental, Health & Safety Department
· **Contact:** Environmental, Health & Safety Manager

USA

*** MATERIAL SAFETY DATA SHEET ***

This MSDS is being provided to your company for the purpose of providing current health and safety information to your management and for your employees who work with this material. Please read the information on these sheets, and then provide this information to those people at your company whose responsibility it is to implement the "Workplace Hazardous Materials Information System (WHMIS)". Also make this information available to any employee who requests it.

Date of preparation: 06/01/05 3300-195

SECTION I PRODUCT IDENTIFICATION AND USE

Manufacturer : **W. R. MEADOWS OF CANADA**
Address : 70 Hannant Court
: Milton, Ontario L9T 5C1
Telephone # : (905) 878-4122
Emergency # : 1-800-424-9300 Chemtrec

- H M I S -
|Health : 0 |
|Fire : 1 |
|Reactivity : 0 |
|Person Protection : |

(Hazard Rating: 0=Least,1=Slight,2=Moderate,3=High,4=Extreme,*=Chronic)

Product Class : Class D, Division 2, Subdivision B, Toxic Materials
Product Identification Number: 3300-195
Product Identifier : **SEALTIGHT VOCOMP-25 WATER-BASE CURING AND SEALING COMPOUND**
Product Use : Concrete curing and sealing compound

SECTION II HAZARDOUS INGREDIENTS

No. Hazardous Ingredient(s)*	CAS#	% By Weight	LD50	LC50	ACGIH TLV/TWA	TLV/Ceiling	TLV/STEL	SKIN
1. Propylene Glycol Phenyl Ether	770-35-4	1-5	2830 mg/kg+	N/E	N/E	N/E	N/E	N/E
2. Ammonium Hydroxide	1336-21-6	0-1	350 mg/kg+	N/E	25 ppm	N/E	35 ppm	N/E

* A more complete disclosure will be provided to a physician or nurse in the event of a medical emergency. None of the components of this product are recognized as carcinogenic.

Component data is defined in accordance with Sub-paragraph 13 (a) (i) to (iv) of the Hazardous Product Act.

N/A = Not applicable N/E = Not established + = Rat

SECTION III PHYSICAL DATA

Physical State : Liquid
Specific Gravity : 1.02
Odour/Appearance : White, opaque, mild organic odour
Vapour Pressure : N/A
pH : 9.3
Odour Threshold : Not determined
Vapour Density : >1 (air = 1)
Evaporation Rate : < 1 (ether = 1)
Percent Volatile : 82
Freezing Point : Not established
Boiling Point : 100 degrees C.
Coefficient of water/oil distribution: Not determined

SECTION IV FIRE AND EXPLOSION DATA

Conditions of Flammability: None.
Means of extinction: Water fog, foam, dry chemical, or Carbon Dioxide
Flash point and method: Greater than 93 degrees C.
Flammability limits: **LEL:** N/A **UEL:** N/A
Autoignition temperature: Not established
Sensitivity to mechanical impact: No
Sensitivity to static discharge: No
Hazardous combustion products: Carbon Monoxide, Carbon Dioxide and incomplete combustion products.

SECTION V REACTIVITY DATA

Chemical stability: Stable.
If no, under which conditions:
Incompatibility (materials to avoid): Strong oxidizing agents.
Conditions of reactivity: None.
Hazardous decomposition products: None known.

SECTION VI TOXICOLOGICAL PROPERTIES

Route(s) of entry: Skin contact.

Effect(s) of acute exposure to product:

EYE CONTACT: This product may cause mild to moderate skin irritation upon direct contact.

SKIN CONTACT: Exposure may cause mild skin irritation. Prolonged or repeated contact may cause redness, burning, drying, and cracking of the skin. Persons with pre-existing skin disorders may be more susceptible to the effects of this material.

INHALATION: Exposure may cause irritation to the nose, throat, respiratory tract, and other mucous membranes.

INGESTION: This product may cause irritation to the gastrointestinal tract.

SIGNS AND SYMPTOMS: Symptoms of eye irritation include pain, tearing, and reddening. Symptoms of skin irritation include reddening, swelling, rash, and redness. Symptoms of respiratory irritation include runny nose, sore throat, coughing, chest discomfort, shortness of breath, and reduced lung function. Symptoms of gastrointestinal irritation include sore throat, abdominal pain, nausea, vomiting, and diarrhea. Central nervous system depression may be evidenced by headache, dizziness, nausea, and symptoms of intoxication; in extreme cases, unconsciousness and death may occur. Symptoms of chronic overexposure include loss of memory, loss of intellectual ability, and loss of coordination.

Exposure limits: See Section II.

Effect(s) of chronic exposure to product:

Carcinogenicity: No | Reproductive toxicity: Not established

Teratogenicity: Not established | Mutagenicity: Not established | Synergistic Properties: None known

SECTION VII PREVENTIVE MEASURES

Personal protective equipment: Wear safety glasses, goggles, or a splash shield to prevent eye contact. Contact lenses should not be worn. Wear appropriate gloves and protective clothing to prevent contact with skin and clothing.

Engineering controls: None required with normal product use.

Leak and spill procedures: LARGE SPILLS>> Evacuate the hazard area of unprotected personnel. Wear appropriate personal protective equipment. Place in non-leaking containers for proper disposal. Flush area with water to remove trace residue; dispose of flush solutions as above. SMALL SPILLS>> Absorb spilled material and place in non-leaking containers; seal tightly for proper disposal.

Waste disposal: Observe all Provincial, Federal, State and local regulations regarding proper disposal.

Handling procedures/equipment: No special handling procedures/equipment required.

Storage requirements: Store in a cool dry area. Keep containers closed when not in use. Prevent stored material from freezing.

Special shipping information: None.

SECTION VIII FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with water for at least fifteen (15) minutes. If symptoms persist, seek medical attention.

SKIN CONTACT: Remove contaminated shoes and clothing. Cleanse affected area(s) thoroughly by washing with mild soap and water. If irritation or redness develops and persists, seek medical attention.

INHALATION: Remove victim to fresh air and treat symptomatically. Provide oxygen if breathing is difficult. Provide oxygen if breathing is difficult. Give artificial respiration if the victim is not breathing.

INGESTION: Dilute with liquid unless the victim is unconscious or very drowsy. If vomiting spontaneously occurs, keep the victim's head below the hips to prevent aspiration into the lungs. Consult a physician, hospital, or poison control center and/or transport to an emergency facility immediately.

SECTION IX PREPARATION OF MSDS

Prepared by: David Carey Phone number:(847) 683-4500 Preparation date: 06/01/05

Product Identification Number: 3300-195

QPL Product Application

Product

Ref No.	Product	Category - Subcategory - Basecategory	Manufacturer	Representative
07-647-1	SET High Strength Epoxy	Adhesives - Epoxy	Simpson Strong-Tie	F. Keith Bohren, P.E.

Representative

Name: F. Keith Bohren, P.E.
Address: 5956 W. Las Positas Blvd
City: Pleasanton
State: CA
Zip code: 94588
Phone: 235-670-9010
Fax: 253-661-3987
Email: kbohren@strongtie.com

Manufacturer

Name: Simpson Strong-Tie
Address: 5956 W. Las Positas Blvd.
City: Pleasanton
State: CA
Zip code: 94588
Phone: 800-999-5099
Fax: 925-833-1496
Website: www.simpsonanchors.com

General Questions

Description of Product

SET Epoxy-Tie High-Strength Adhesive by Simpson Strong-Tie is a cartridge type, two-component, solid epoxy based system dispensed and mixed through a static mixing nozzle supplied by the manufacturer. The adhesive shall meet the minimum requirements of ASTM C-881 Type I, II, IV and V, Grade 3, Class B and C. Code report: ICC-ES ESR-1772

Usage of product

Threaded rod anchoring, rebar doweling, bonding hardened concrete to hardened concrete or paste-over for crack injection.

Benefits to DOT&PF

SET epoxy has very high strength and is cost competitive.

State DOT approvals

Please see all other DOT approvals at: http://www.simpsonanchors.com/technicalinfo/dot_approvals.html MSDS info at: http://www.simpsonanchors.com/pdf/msds/T-SAS-ETMSD07.pdf

Evaluation procedures

ICC Code report ESR-1772: http://www.simpsonanchors.com/pdf/codes/previous_reports/ESR1772_prev.pdf Tested to Acceptance Criteria for Adhesive Anchors in Concrete and Masonry Elements (AC58) for the following: seismic and wind loading, Long term creep at elevated temperatures, Static loading at elevated temperatures, Damp and water-filled holes, Freeze-thaw conditions, Critical and minimum edge distance and spacing

Comments

See MSDS info at: http://www.simpsonanchors.com/pdf/msds/T-SAS-SETMSD07.pdf See AASHTO standrard testing below ASTM standard C-881 standard testing has also been completed Please let me know if there is anything additional I need to do. wallen@strongtie.com or 415-559-9038

Are samples Available? Yes Materials safety data sheets (MSDS)? Yes

Testing and Reporting

Specifications

Agency	Specifications
DOT&PF	

Attachments

Agency Specification	Report Name	Testing Date	Uploaded File
ASTM		08/24/2007	SET FHA Submittal.pdf
AASHTOM235-03	AASHTO M235-03 Compliance_04-28-08	04/28/2008	AASHTO M235-03 Compliance_04-28-08.pdf

85080: Marking Paint-Fluor Orange
MSDS Last updated: 09/07/2004

MATERIAL SAFETY DATA SHEET
acc. to ISO/DIS 11014

Printing date 01/07/2004 Reviewed on 01/07/2004

1. IDENTIFICATION OF SUBSTANCE

Trade name; STRIPE INVERTED TIP FLUORESCENT ORANGE
Product code; 0000200657
Manufacturer/Supplier: SEYMOUR OF SYCAMORE
917 Crosby Avenue
Sycamore, IL 60178
(815)-895-9101, www.seymourpaint.com
Information department: Health & Safety Department
Emergency information: CHEMTEL 1-800-255-3924, 813-248-0585 if located outside the U.S.

2. COMPOSITION/DATA ON COMPONENTS

Chemical Description: This product is a mixture of the substances listed below with nonhazardous additions.

Dangerous components:

64742-89-8	VM&P Naptha	Xn: R 20/22	23.49%
74-98-6	Propane	F+: R 12	15.74%
1317-65-3	Calcium Carbonate	Xi: R 36/37/38	12.94%
106-97-8	n-butane	F+: R 12	9.25%
64742-47-8	Mineral Spirits	Xn, F: R 11-65	3.1%

Additional information: For the wording of the listed risk phrases refer to section 3.

3. HAZARDS IDENTIFICATION

Hazard description: F+ Extremely flammable

Physical and
Environmental dangers; Warning! Pressurized container.
R 12 Extremely flammable.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights.
Do not pierce or burn, even after use.
Keep out of the reach of children.

NFPA ratings (scale 0 - 4): Health - 1
Flammability - 3
Reactivity - 3

HMIS-ratings (scale 0 - 4): Health - 1
Flammability - 3
Physical Hazard - 3

4. FIRST AID MEASURES

After inhalation; Supply fresh air: consult doctor in case of complaints.

After skin contact: Generally the product does not irritate the skin.

After eye contact; Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing: Consult a doctor if symptoms persist.

5. FIRE FIGHTING MEASURES

Extinguishing agents: CO2, sand, extinguishing powder, or water spray. Fight larger fires with water spray or alcohol resistant foam

Protective equipment: No special measures required.

6. ACCIDENTAL RELEASE MEASURES

Personal safety precautions: Wear protective equipment. Keep unprotected persons away.

Environmental safety precautions: Do not allow product to reach sewage systems or ground water. Inform appropriate authorities in case of seepage into water course or sewage system.

Measures for cleaning/ collecting: Do not flush with water or aqueous cleansing agents. Use diluted caustic solution. Soak up spills with inert absorbent material. Refer to section 13 for disposal information.

7. HANDLING AND STORAGE

Safe handling information: Handle carton and cans with care. Avoid dropping.

Fire/explosion protection: Do not spray on a naked flame or any incandescent material. Keep ignition sources away - Do not smoke. Protect against electrostatic charges.

Storage requirements: Observe official regulations on storing packaging with pressurized containers. Consult with your local authorities. Keep away from sources of heat and direct sunlight. Do not warehouse in subfreezing conditions.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION:

Components with limit values that require monitoring at the workplace:

74-98-6	propane	
	PEL	1800 mg/m3, 1000 ppm
	REL	1800 mg/m3, 1000 ppm
	TLV	(4508) mg/m3, (2500) ppm
1317-65-3	Calcium Carbonate	
	PEL	15*: 5** mg/m3
		*Total dust **Respirable fraction
	REL	10*: 5** mg/m3
		*Total dust **Respirable fraction
	TLV	10 mg/m3
		(e)
106-97-8	n-butane	
	REL	1900 mg/m3, 800 ppm
	TLV	1900 mg/m3, 800 ppm
64742-47-8	Mineral Spirits	
	TLV	200 mg/m3
		As total hydrocarbon vapor: Skin: (P)

Protective hygienic measures: Wash hands before breaks and at the end of work.

Breathing equipment: Use suitable respiratory protective device in case of insufficient ventilation.

Protection of hands: Protective gloves. The glove material has to be impermeable and resistant to the substance. No glove recommendation can be given.

Eye protection: Tightly sealed goggles.

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information;
Form; Aerosol
Color: According to trade name description in section 1.
Odor: Solvent
Boiling point/
Boiling range; -44°C (-47°F)
Flash point; -19°C (-2°F)
Ignition temperature: 365.0°C (689°F)
Auto igniting; Product is not self-igniting.
Danger of explosion; Heating may cause an explosion.
In use, may form flammable/explosive vapor-air mixture.

Lower Explosion Limit: 0.9 Vol %
Upper Explosion Limit: 10.9 Vol %
Vapor Pressure: 40 PSI, 2750 hPa
Density; Not determined.
Specific Gravity; Between 0.77 and 0.90 (Water equals 1.00)
VOC content: 0.52 kg/l / 4.37 lb/gl
VOC in weight percent (less acetone): 52.4 %
Water: 19.5 %
Solids content: 28.0 %

10. STABILITY AND REACTIVITY:

Conditions to be avoided: Do not allow the can to exceed 120 degrees Fahrenheit. Stable at normal temperatures.

Possibility of Hazardous
Reactions: No dangerous reactions known.

11. TOXICOLOGICAL INFORMATION:

Primary effect on the skin: No irritant effect.

Primary effect on the eye; No irritating effect.

Sensitization: No sensitizing effects known.

12. ECOLOGICAL INFORMATION

Other information: This product does not contain any chlorinated solvents or lead. No specific ecological data is available for this product.

Acquatic toxicity: Harmful to aquatic organisms.
Hazardous for water, do not empty into drains.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of in accordance with local, state, and federal regulations. Do not puncture, incinerate, or compact. Partially empty cans cannot be disposed of with regular trash. Do not heat or cut empty containers with electric or gas
torches.

Recommendation: Empty cans should be recycled.

14. TRANSPORT INFORMATION

Hazard class; 2.1
Identification number: N/A
Label: 2.1
ADR/RID class: 2 5F Gases
UN-Number; 1950
IMDG Class: 2
Packaging group: II
EMS Number; F-D,S-U
Marine pollutant: No
ICAO/IATA Class: 2.1
Proper shipping name: Aerosols, Flammable
Consumer Commodity ORM-D

15. REGULATIONS:

SARA Section 355 (extremely hazardous substances):
None of the ingredients in this product are listed.

SARA Section 313 (Specific toxic chemical listings):

1330-20-7 xylene (mix)
100-41-4 ethyl benzene

TSCA (Toxic Substances Control Act):
64742-89-8 VM&P Naptha
7732-18-5 Water
74-98-6 propane
1317-65-3 Calcium Carbonate
106-97-8 n-butane
71243-64-6 V.T. Alkyd Resin
64742-47-8 Mineral Spirits
1330-20-7 xylene (mix)
68953-58-2 Alkyl Quanternary Ammonium Montmorilloni
26266-58-0 Sorbitan Trioleate
100-41-4 ethyl benzene

PROPOSITION 65 Chemicals known to cause cancer:
None of the ingredients in this product are listed.

PROPOSITION 65 Chemicals known to cause reproductive toxicity:
None of the ingredients in this product are listed.

Canadian WHMIS: This product has been classified according to the Controlled Product Regulations and the MSDS contains all the necessary information required by the CPR.
Class B, D5---Flammable Aerosols

EPA: A=Known human carcinogen B=Probable human carcinogen
C=Possible human carcinogen
D=Not classifiable as to human carcinogenicity: Inadequate human and animal evidence of carcinogenicity (or no data is available).
1330-20-7 xylene (mix) D
100-41-4 ethyl benzene D

IARC:
1330-20-7 xylene (mix) 3
110-91-8 morpholine 3

ACGIH TLVs: A1-designates a confirmed human carcinogen.
A2-designates a suspected human carcinogen.
A3-designates an animal carcinogen.
A4-designates "not classifiable as a human carcinogen".
1330-20-7 xylene (mix) A4
110-91-8 morpholine A4

NIOSH:
None of the ingredients is listed.

16. OTHER INFORMATION:

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
Contact: Craig Swafford, Regulatory Affairs. Email: cswafford@seymourpaint.com

Questions or comments? Contact us.

85088: Marking Paint-Hot Pink Fluor.
MSDS Last updated: 12/10/2004

MATERIAL SAFETY DATA SHEET
acc. to ISO/DIS 11014

Printing date 01/07/2004 Reviewed on 01/07/2004

1. IDENTIFICATION OF SUBSTANCE

Trade name: STRIPE INVERTED TIP HOT PINK
Product code: 0000160679
Manufacturer/Supplier: SEYMOUR OF SYCAMORE
917 Crosby Avenue
Sycamore, IL 60178
(815)-895-9101, www.seymourpaint.com

Information department: Health & Safety Department
Emergency information: CHEMTEL 1-800-255-3924, 813-248-0585 if located outside the U.S.

2. COMPOSITION/DATA ON COMPONENTS

Chemical Description: This product is a mixture of the substances listed below with nonhazardous additions.

Dangerous components:

64742-89-8	VM&P Naptha	Xn: R 20/22	18.99 %
74-98-6	propane	F+: R 12	17.63 %
1317-65-3	Calcium Carbonate	Xi: R 36/37/38	15.64 %
106-97-8	n-butane	F+: R 12	10.36 %
64742-47-8	Mineral Spirits	Xn, F: R 11-65	3.74 %

Additional information: For the wording of the listed risk phrases refer to Section 3.

3. HAZARDS IDENTIFICATION

Hazard description: F+ Extremely flammable

Physical and
Environmental dangers: Warning! Pressurized container.
R 12 Extremely flammable.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.

Keep out of the reach of children.
NFPA ratings (scale 0 - 4); Health - 1
Flammability - 3
Reactivity - 3
HMIS - ratings (scale 0 - 4): Health - 1
Flammability - 3
Physical Hazard - 3

4. FIRST AID MEASURES

After inhalation: Supply fresh air: consult doctor in case of complaints.
After skin contact; Generally the product does not irritate the skin.
After eye contact; Rinse opened eye for several minutes under running water. Then consult a doctor.
After swallowing: Consult a doctor if symptoms persist.

5. FIRE FIGHTING MEASURES

Extinguishing agents: CO2, sand, extinguishing powder, or water spray. Fight larger fires with water spray or alcohol resistant foam.
Protective equipment: No special measures required.

6. ACCIDENTAL RELEASE MEASURES

Personal safety
Precautions: Wear protective equipment. Keep unprotected persons away.
Environmental safety
Precautions: Do not allow product to reach sewage systems or ground water. Inform appropriate authorities in case of seepage into water course or sewage system.
Measures for cleaning/
Collecting; Do not flush with water or aqueous cleansing agents. Use diluted caustic solution. Soak up spills with inert absorbent material. Refer to section 13 or disposal information.

7. HANDLING AND STORAGE

Safe handling
Information: Handle carton and cans with care. Avoid dropping.
Fire/explosion
Protection; Do not spray on a naked flame or any incandescent material. Keep ignition sources away - Do not smoke. Protect against electrostatic charges.
Storage requirements: Observe official regulations on storing packagings with pressurized containers. Consult with your local authorities. Keep away from sources of heat and direct sunlight. Do not warehouse in subfreezing conditions.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with limit values that require monitoring at the workplace:
74-98-6 propane
PEL 1800 mg/m3, 1000 ppm
REL 1800 mg/m3, 1000 ppm

TLV (4508) mg/m3, (2500) ppm

317-65-3 Calcium Carbonate
PEL 15*: 5** mg/m3
*Total dust **Respirable fraction
REL 10*; 5** mg/m3
*Total dust **Respirable fraction
TLV 10 mg/m3
(e)

106-97-8 n-butane
REL 1900 mg/m3, 800 ppm
TLV 1900 mg/m3, 800 ppm

64742-47-8 Mineral Spirits
TLV 200 mg/m3
As total hydrocarbon vapor: Skin; (P)

Protective hygienic
Measures; Wash hands before breaks and at the end of work.
Breathing equipment: Use suitable respiratory protective device in case of insufficient ventilation.
Protection of hands: Protective gloves. The glove material has to be impermeable and resistant to the substance. No glove recommendation can be given.
Eye protection: Tightly sealed goggles.

9. PHYSICAL AND CHEMICAL PROPERTIES:

General Information:
Form: Aerosol
Color; According to trade name description in section 1.
Odor; Solvent
Boiling point/Boiling range: -44°C (-47°F)
Flash point: -19°C (-2°F)
Ignition temperature; 365.0°C (689°F)
Auto igniting; Product is not self-igniting.
Danger of explosion: Heating may cause an explosion.
In use, may form flammable/explosive vapor-air mixture.

Lower Explosion Limit; 0.9 Vol %
Upper Explosion Limit; 10.9 Vol %

Vapor Pressure; 40 PSI, 2750 hPa
Density: Not determined.
Specific Gravity: Between 0.77 and 0.90 (Water equals 1.00)
VOC content: 0.52 kg/l / 4.31 lb/gl

VOC in weight percent
(less acetone): 51.5 %
Water; 20.6 %
Solids content: 27.9 %

10. STABILITY AND REACTIVITY:

Conditions to be avoided: Do not allow the can to exceed 120 degrees Fahrenheit.
Stable at normal temperatures.
Possibility of Hazardous
Reactions: No dangerous reactions known.

11. TOXICOLOGICAL INFORMATION:

Primary effect on the skin: No irritant effect.
Primary effect on the eye: No irritating effect.
Sensitization; No sensitizing effects known.

12. ECOLOGICAL INFORMATION

Other information: This product does not contain any chlorinated solvents or lead. No specific ecological data is available for this product.
Aquatic toxicity; Harmful to aquatic organisms.
Hazardous for water, do not empty into drains.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of in accordance with local, state, and federal regulations. Do not puncture, incinerate, or compact. Partially empty cans cannot be disposed of with regular trash. Do not heat or cut empty containers with electric or gas torches.
Recommendation: Empty cans should be recycled.

14. TRANSPORT INFORMATION:

Hazard class:	2.1
Identification number:	N/A
Label:	2.1
ADR/RID Class;	2 5F Gases
UN-Number:	1950
IMDG Class:	2
Packaging group:	II
EMS Number:	F-D,S-U
Marine pollutant;	No
ICAO/IATA Class:	2.1
Proper shipping name:	Aerosols, Flammable Consumer Commodity ORM-D

15. REGULATIONS:

SARA Section 355 (extremely hazardous substances):
None of the ingredients in this product are listed.

SARA Section 313 (Specific toxic chemical listings):

1330-20-7	xylene (mix)
100-41-4	ethyl benzene

TSCA (Toxic Substances Control Act):

7732-18-5	Water
64742-89-8	VM&P Naptha
74-98-6	propane
1317-65-3	Calcium Carbonate
106-97-8	n-butane
71243-64-6	V.T. Alkyd Resin
64742-47-8	Mineral Spirits
1330-20-7	xylene (mix)
68953-58-2	Alkyl Quanternary Ammonium Montmorilloni
100-41-4	ethyl benzene
26266-58-0	Sorbitan Trioleate

PROPOSITION 65 Chemicals known to cause cancer:
None of the ingredients in this product are listed.

PROPOSITION 65 Chemicals known to cause reproductive toxicity:
None of the ingredients in this product are listed.

Canadian WHMIS: This product has been classified according to the Controlled Product Regulations and the MSDS contains all the necessary information required by the CPR.
Class B, D5---Flammable Aerosols

EPA: A=Known human carcinogen B=Probable human carcinogen
C=Possible human carcinogen
D=Not classifiable as to human carcinogenicity: Inadequate human and animal evidence of carcinogenicity (or no data is available).

1330-20-7	xylene (mix)	D
100-41-4	ethyl benzene	D

IARC:

1330-20-7	xylene (mix)	3
110-91-8	morpholine	3

ACGIH TLVs:
A1-designates a confirmed human carcinogen.
A2-designates a suspected human carcinogen.
A3-designates an animal carcinogen.
A4-designates "not classifiable as a human carcinogen".

1330-20-7	xylene (mix)	A4
110-91-8	morpholine	A4

NIOSH:
None of the ingredients is listed.

16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
Contact; Craig Swafford, Regulatory Affairs.
Email: cswafford@seymourpaint.com

MATERIAL SAFETY DATA SHEET

Complies with OSHA Hazard Communication Standard, 29 CFR 1910.1200

US SPEC EZKOTE GREEN

Version 1.1 Revised 1/06

N.F.P.A. & H.M.I.S. RATING

HAZARD INDEX	HAZARD CLASS	
4 = Severe	Flammability	
3 = Serious	1	
2 = Moderate	Health	Reactivity
1 = Slight	0	0
0 = Minimal	Special Note	
	-	

SECTION I - MANUFACTURER

Product Name: US SPEC EZKote Green

Manufacturer: US MIX Co.
112 South Santa Fe Drive
Denver, CO 80223

Emergency Contact: CHEMTREC 800-424-9300

Information Contact: US MIX Co. 303-778-7227

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

None of the components of the mixture are considered Hazardous Material or carcinogens (1910.1200 Hazard Communication (d)(4).

SECTION III - PHYSICAL CHEMICAL CHARACTERISTICS

Appearance: Pale yellow liquid

Odor: Mild

Boiling Point: >400°F (>200°C)

Freezing / Melting Point: NA

Vapor Pressure (mm Hg): <2

Evaporation (Butyl Acetate = 1): <1

Vapor Density (Air = 1): >1

Water Solubility: Insoluble

Specific Gravity (H_20=1): <1

Other Solubilities: None Known

pH: NA

VOC Content: 0 g/L

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Tag Closed Cup): 260°F (130°C)

Flammable Limits: None known

Extinguishing Media: Dry chemical, foam or CO_2

Special Fire Fighting Procedures: Firefighters should wear NIOSH approved self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: Oil soaked rags can cause spontaneous combustion if not handled properly. Before disposal, wash rags with soap and water and dry in well ventilated area.

SECTION V - REACTIVITY DATA

Stability: Stable

Incompatibility (Materials to Avoid): Oxidizers

Hazardous Decomposition (Byproducts): Carbon monoxide and Carbon dioxide.

Hazardous Polymerization: Will not occur.

SECTION VI - HEALTH HAZARD DATA

ROUTES OF ENTRY

Inhalation? Yes Skin? Yes Ingestion? Yes Eyes? Yes

HEALTH HAZARDS (ACUTE AND CHRONIC)

Inhalation: Breathing mist can cause irritation of nasal and respiratory passages. May cause dizziness, headache, nausea and vomiting if used in unventilated areas.

Skin Contact: Prolonged or repeated contact is not likely to cause significant skin irritation.

Ingestion: No hazards anticipated from ingestion incidental to industrial exposure.

Eye Contact: May cause irritation, redness, tearing and blurred vision.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

SIGNS AND SYMPTOMS OF EXPOSURE

Headache, drowsiness, respiratory irritation, skin irritation and nausea.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

None Known

EMERGENCY AND FIRST AID PROCEDURES

Inhalation: Move to fresh air. If cough, irritation, difficulty in breathing persist or develop, call a physician.

Skin Contact: Wash thoroughly with soap and water. If irritation persists call a physician.

Ingestion: Call a physician or Poison Control Center immediately. DO NOT give anything orally to an unconscious person.

Eye Contact: Do not rub eyes. Flush with water for 15 minutes. Call a physician.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in Case Material is Released or Spilled: Stop flow. Contain with earthen dike if necessary. Absorb spill in sand, earth or other suitable material. Transfer to appropriate container for disposal. Use appropriate protective equipment.

Waste Disposal Method: Dispose of in accordance with local, state and federal regulations.

Precautions to be taken in Handling and Storage: Keep away from all ignition sources (heat, flame, sparks, & strong oxidizers). Store in safety containers. Use only in well ventilated areas.

Other Precautions: Do not weld or cut empty steel drums with a torch.

SECTION VIII - CONTROL MEASURES

Respiratory Protection: Organic vapor cartridge or NIOSH approved supplied air respirators according to OSHA regulation 29 CFR 1910.134.

Ventilation: Fan or forced air exhaust. If ventilation is inadequate use respiratory protection.

Protective Gloves: Neoprene or equivalent gloves according to OSHA regulation 29 CFR 1910.138.

Eye Protection: Chemical splash goggles or face shield according to OSHA regulation 29 CFR 1910.133.

Other Protective Clothing or Equipment: PVC or equivalent chemically resistant apron. Safety showers, eye wash stations and washing facilities should be available.

Work/Hygienic Practices: Wash thoroughly with soap and water before eating, smoking or using washroom. Remove and wash contaminated clothing before re-use. Use only in well-ventilated areas unless recommended respiratory protection is used. Keep body contact and splash to a minimum.

SECTION IX – DOT DATA

DOT Transportation Data (49 CFR 172.101)

Shipping Name:	Fatty acid ester
Hazard Class:	Non-Hazardous
ID No.:	NA
Packing Group:	NA
Label:	NA
Limited Quantity Exceptions:	NA
US Domestic Ground Shipments: NA	
Maritime Transport:	NA
Air Transport:	NA
Placards:	None Needed
National Motor Freight NMF-100-0:	Fatty acid ester Item: 144920 Class: 65

SECTION X – REGULATORY INFORMATION

OSHA Status:	This product is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.
SARA Title III:	Section 312 Extremely Hazardous Substances: None Section 311/312 Hazard Categories: Non-hazardous Section 313 Toxic Chemicals: None
RCRA Status:	If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product derived from the product should be classified as a hazardous waste.
California Proposition 65:	The chemical(s) noted below are contained in this product and are known to the state of California to cause cancer, birth defects or other reproductive harm: None Known

Comments: This Material Safety Data Sheet and the information it contains are offered to you in good faith as accurate. We have reviewed any information contained in this datasheet, which we received from sources outside our company. We believe that information to be correct, but cannot guarantee its accuracy or completeness. Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as a permission or recommendation for the use of this product in a manner that might infringe existing patents. No warranty is made, either expressed or implied.

Legend

ACGIH – American Conference of Governmental Hygienists	NTP – National Toxicology Program
CAS (#) – Chemical Abstracts Service	OSHA – Occupational Safety and Health Administration
CERCLA – Comprehensive Environmental Response, Compensation and Liability Act	PEL – Permissible Exposure Limit
DOT – Department of Transportation	RCRA – Resource Conservation and Recovery Act
DSL – Domestic Substance List	SARA – Superfund Amendments and Reauthorization Act
EPA – Environmental Protection Agency	STEL – Short Term Exposure Limit
HMIS – Hazardous Materials Information System	TLV – Threshold Limit Value
IARC – International Agency for Research on Cancer	TSCA – Toxic Substances Control Act
MPPCF – Million Particles per Cubic Foot	TWA – Time Weighted Average
NFPA – National Fire Protection Agency	VOC – Volatile Organic Compound
NIOSH – National Institute for Occupational Safety and Health	WHMIS – Workplace Hazardous Materials Information System

PLASTI-WELD MEDIUM BODIED PVC SOLVENT CEMENT

Latest Revision Date...05/05/00

Section 1 IDENTITY OF MATERIAL

TRADE NAME	PLASTI-WELD MEDIUM BODIED PVC SOLVENT CEMENT
PRODUCT NUMBERS	40466S, 40456S, 40446S, 40436S, 40424
FORMULA	PVC Resin in Solvent Solution
SYNONYMS	PVC Plastic Pipe Cement

SECTION 2 HAZARDOUS INGREDIENTS

INGREDIENTS	%	CAS NUMBER	SEC 313
Amorphous Silica	1-4%	112945-52-5	No
PVC Resin (Non-Hazardous)	9-15%	9002-86-2	No
Cyclohexanone	11-19%	108-94-1	No
Tetrahydrofuran (See SECTION-6)	20-30%	109-99-9	No
Methyl Ethyl Ketone	35-50%	78-93-3	Yes

SECTION 3 KNOWN HAZARDS UNDER 29 CFR 1910.1200

HAZARDS	YES	NO	HAZARDS	YES	NO
Combustible Liquid		X	Skin Hazard	X	
Flammable Liquid	X		Eye Hazard	X	
Pyrophoric Material		X	Toxic Agent	X	
Explosive Material		X	Highly Toxic Agent		x
Unstable Material		X	Sensitizer		x
Water Reactive Material		X	Kidney Toxin	X	
Oxidizer		X	Reproductive Toxin	X	

Organic Peroxide	X	Blood Toxin	x
Corrosive Material	X	Nervous System Toxin	X
Compressed Gas	X	Lung Toxin	X
Irritant	X	Liver Toxin	X
Carcinogen NTP/IARC/OSHA (see SECTION 6)	X		

SECTION 4 **REGULATION**

CHEMICAL	TLV (TWA)	PEL	STEL	Hazard Action Level
Amorphous Silica	10 mg/cu m	20 mppcf	N/A	N/A
Cyclohexanone	25 ppm	50 ppm	N/A	N/A
	100 mg/cu m (skin)	200 mg/cu m		
Tetrahydrofuran	200 ppm	200 ppm	250 ppm	N/A
	590 mg/cu m	590 mg/cu m	735 mg/cu m	
Methyl Ethyl Ketone	200 ppm	200 ppm	300 ppm	N/A
	590 mg/cu m	590 mg/cu m	885 mg/cu m	

SECTION 5 **REGULATED IDENTIFICATION**

DOT PROPER SHIPPING NAME	CONSUMER COMMODITY ORM-D; For Gallons: Adhesives, 3, UN 1133, PG II
DOT HAZARD CLASS	Class 3 Flammable Liquid
SHIPPING ID NUMBER	UN 1133 (Gallons Only)
EPA HAZARDOUS WASTE ID NUMBER	D-001
EPA HAZARD WASTE CLASS	Ignitable Waste/Toxic Waste

SECTION 6 **EFFECTS OF EXPOSURE**

ENTRY ROUTE	INHALE - YES INGEST - YES SKIN - YES EYE - YES
INHALATION	May cause irritation of mucous membranes, nose & throat, headache, dizziness, nausea, numbness of the extremities and narcosis in high concentrations. Has caused CNS depression & liver damage in animals, & high concentrations have caused retardation of fetal development in rats.
TETRAHYDROFURAN WARNING	The National Toxicology Program has reported that exposure of mice and rats to Tetrahydrofuran (THF) vapor levels up to 1800 ppm 6 hr/day, 5 days/week for their lifetime caused an increased incidence of kidney tumors in male rats and liver tumors in female mice. The significance of these findings for human health are unclear at this time, and may be related to "species specific" effects. Elevated incidences of tumors in humans have not been reported for THF. THF is not listed as a carcinogen by NTP, IARC, or OSHA. One THF vendor has recommended a reduction in the "acceptable exposure limit" from 200 ppm to 25 ppm, 8 and 12 hour time weighted average.
TARGET ORGANS	Eye, Skin, Kidney, Lung, Liver, Central Nervous System
SKIN	Chronic contact may lead to irritation & dermatitis. Chronic exposure to vapors of high concentration may cause dermatitis. May possibly be absorbed through the skin.
EYE	Vapors or direct contact may cause irritation.
INGESTION	May be aspirated into the lungs or cause systemic effects described under inhalation.

SECTION 7 **EMERGENCY AND FIRST AID PROCEDURES - 303/623-5716 COLLECT**

SKIN	If irritation arises, wash thoroughly with soap and water. Seek medical attention if irritation persists.
EYES	If fumes cause irritation, move to fresh air and irrigate eyes with water for 15 minutes. If irritation persists, seek medical attention.
INHALATION	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Keep victim quiet and warm. Call a poison control center or physician immediately.
INGESTION	Drink water and call a poison control center or physician immediately. Avoid alcoholic beverages. Never give anything by mouth to an unconscious person.

SECTION 8 **PHYSICAL AND CHEMICAL PROPERTIES**

NFPA HAZARD SIGNAL	HEALTH 2 STABILITY 1 FLAMMABILITY 3 SPECIAL NONE
BOILING POINT	151 Degrees F / 66 C

MELTING POINT	N/A
VAPOR PRESSURE	145 mmHg @ 20 Degrees C
VAPOR DENSITY (AIR = 1)	2.5
VOLATILE COMPONENTS	84-88% wt.
SOLUBILITY IN WATER	Negligible
PH	N/A
SPECIFIC GRAVITY	0.91 +/- 0.02
EVAPORATION RATE	(BUAC = 1) = 5.5 - 8.0
APPEARANCE	Clear Liquid
ODOR	Ether-Like
WILL DISSOLVE IN	Tetrahydrofuran
MATERIAL IS	Liquid

SECTION 9 **FIRE AND EXPLOSION HAZARD DATA**

FLAMMABILITY	LEL =1.8 % Volume UEL= 11.8 % Volume
FLASHPOINT AND METHOD USED	0-5 Degrees F. / PMCC
STABILITY	Stable CONDITIONS TO AVOID: Heat, sparks and open flame. HAZARDOUS DECOMP. PDTS: Carbon monoxide/ carbon dioxide/hydrogen chloride/smoke.
HAZARDOUS POLYMERIZATION	Will Not Occur. CONDITIONS TO AVOID: None
INCOMPATIBILITY/ MAT. TO AVOID	Acids, oxidizing materials, alkalis, chlorinated inorganics (potassium, calcium and sodium hypochlorite), copper or copper alloys.
SPECIAL FIRE FIGHTING PROCEDURE	FOR SMALL FIRES: Use dry chemical, CO2, water or foam extinguisher. FOR LARGE FIRES: Evacuate area and call Fire Department immediately.

SECTION 10 **SPILL AND DISPOSAL INFORMATION**

SPILL OR LEAK PROCEDURES	Ventilate area, stop leak if it can be done without risk. Take up with sand, earth, or other non-combustible absorbing material.
WASTE DISPOSAL	Dispose of according to local, state, and Federal regulations.

SECTION 11 **SAFE USAGE DATA**

PROTECTIVE EQUIPMENT TYPES	EYES: Safety glasses with side shields. RESPIRATORY: NIOSH-approved canister respirator in absence of adequate ventilation. GLOVES: Rubber gloves. OTHER: Eye wash and safety shower should be available.
VENTILATION	LOCAL EXHAUST: Open doors & windows. Exhaust ventilation capable of maintaining emissions at the point of use below PEL. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that explosive concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.
PRECAUTIONS	HANDLING & STORAGE: Keep away from heat, sparks and flames; store in cool, dry place. OTHER: Containers, even empties will retain residue and vapors.

SECTION 12 **MANUFACTURER OR SUPPLIER DATA**

FIRM NAME & MAILING ADDRESS	United Elchem Industries, 11535 Reeder Rd., Dallas, TX, 75229
PHONE NUMBER	(972) 241-6601
EMERGENCY PHONE NUMBER	For Emergency First Aid call (303) 623-5716 COLLECT For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300

SECTION 13 **DISCLAIMER**

The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, United Elchem Industries cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use.