

# SAFETY DATA SHEET



<b>DATE ISSUED :</b>	8/10/2018
<b>SDS REF. No :</b>	2050-2

## 2050-2 SANDING SEALER

### 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** 2050-2 SANDING SEALER  
**PRODUCT CODE:** 2050-2  
**PRODUCT USE:** Industrial Solventborne Paint

**MANUFACTURER**  
Cardinal Industrial Finishes  
1329 Potrero Ave

S. El Monte, CA,  
626 444-9274

**24 HR. EMERGENCY TELEPHONE NUMBER**  
**CHEMTREC (US Transportation):** (800)424-9300  
**CHEMTREC (International Transportation)** : 1(202)483-7616  
**WEB:** WWW.CARDINALPAINT.COM

### 2. HAZARDS IDENTIFICATION

#### PICTOGRAMS



**SIGNAL WORD :** DANGER

#### HAZARD STATEMENTS :

H226 Flammable liquid and vapor.  
H304 May be fatal if swallowed and enters airways.  
H312 Harmful if contact with skin.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H335 May cause respiratory irritation.  
H336 May cause drowsiness or dizziness.  
H351 Suspected of causing cancer.  
H401 Toxic to aquatic life.  
H402 Harmful to aquatic life.  
H412 Harmful to aquatic life with long lasting effects.

#### PRECAUTIONARY STATEMENTS :

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P264 Wash thoroughly after handling.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P312 Call a POISON CENTER or doctor/physician if you feel unwell.  
P337 + P313 If eye irritation persists: Get medical advice/attention.  
P403 Store in a well-ventilated place.  
R40 Limited evidence of a carcinogenic effect.  
S36 Wear suitable protective clothing.  
S37 Wear suitable gloves.  
P501 Dispose of in accordance with Local, Regional, State, Federal, and International Regulations.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Weight %	CAS Number	
VM&P Naphtha	15% - 20%	64742-89-8	
Isobutyl Acetate	15% - 20%	110-19-0	
Methyl Ethyl Ketone	10% - 15%	78-93-3	
Toluene	10% - 15%	108-88-3	
Isopropyl Alcohol	5% - 10%	67-63-0	
Zinc Stearate	1% - 5%	557-05-1	
Ethylene glycol mono butyl ether	1% - 5%	111-76-2	
Phenylethane	0.10% - 0.50%	100-41-4	

#### 4. FIRST AID MEASURES

##### Description of first aid measures.

**EYES CONTACT :** Flush with large quantities of water for 15 to 30 minutes. Remove contact lenses. Keep eyes wide open while rising. If eye irritation persists: Get medical attention.

**SKIN CONTACT :** Wash exposed area with mild soap and water for 15 to 30 minutes. Remove contaminated clothing. Repeated exposure may cause dryness or cracking.

**INGESTION :** Rinse mouth. Do NOT induce vomiting. Keep victim warm and seek immediate attention.

**INHALATION :** Remove to fresh air and keep in a position comfortable to breath. Call a doctor/physician if you feel unwell. Get medical attention.

**Most important symptoms and effects, both acute and delayed.** Symptoms/injuries: Eye irritation

Symptoms/injuries after inhalation: May cause drowsiness or dizziness.

Symptoms/injuries after eye contact: Cause serious eye irritation.

Symptoms/injuries after ingestion: Ingestion may cause nausea, vomiting and diarrhea.

Indication of any immediate medical attention and special treatment needed.

If medical advise is needed, have product container or label on hand.

#### 5. FIRE FIGHTING MEASURES

**SUITABLE EXTINGUISHING MEDIA :** In the event of a fire, use specifically suitable extinguishing agents. Suitable extinguishing media: Foam, alcohol resistant foam, CO<sub>2</sub>, water fog. Unsuitable extinguishing media: Do not use heavy water stream. A heavy water stream may spread burning liquid.

**FIRE FIGHTING PROCEDURE :** Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering the environment. Protection during firefighting: Firefighters should wear full protective gear. Do not enter fire area without proper protective equipment, including self-contained breathing apparatus with full face piece operated in pressure demand or other positive pressure modes.

**UNUSUAL FIRE AND EXPLOSION HAZARD :** Fire hazard: Highly flammable/liquid or vapor.

Explosive hazard: May form flammable/explosive vapor-air mixture.

#### 6. ACCIDENTAL RELEASE MEASURES

##### PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES :

General measures: Remove ignition sources. Use special care to avoid static electric charges. No smoking.

##### FOR NON-EMERGENCY PERSONNEL :

For non-Emergency procedures: Evacuate unnecessary personnel.

##### FOR EMERGENCY RESPONDERS :

Equip cleanup crew with proper protection. Avoid breathing fume, vapors.

**ENVIRONMENTAL PRECAUTIONS :**

Prevent entry to sewers and public waters.

**METHODS AND MATERIAL FOR CONTAINMENT AND CLEAN UP :**

Collect damaged aerosols and use absorbent and/or inert material, then place in suitable container.

**7. HANDLING AND STORAGE****PRECAUTIONS FOR SAFE HANDLING :** Additional hazards when processed: Handle empty containers with care because residual vapors are flammable.

Precautions for safe handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when you are leaving work. Provide good ventilation in process area to prevent formation of vapor. No smoking. Use only non-sparking tools. Use outdoors or in a well ventilated area. Avoid breathing fume, vapors.

Hygiene measures: Wash Skin thoroughly after handling.

**CONDITIONS FOR SAFE STORAGE, INCLUDING INCOMPATIBILITIES :** Storage conditions: Store in a dry, cool and well-ventilated place away from: Heat sources. Direct sunlight.

Incompatible products: Strong bases. Strong acids.

Incompatible materials: Source of ignition. Direct sunlight. Heat Sources.

**8. EXPOSURE CONTROLS\PERSONAL PROTECTION**

Benzene(71-43-2)		
USA ACGIH	ACGIH STEL	2.5 ppm
USA ACGIH	ACGIH TWA	0.5 ppm
USA OSHA	OSHA CARC PEL	1 ppm
USA OSHA	OSHA CARC STEL	5 ppm
USA OSHA	OSHA CIEL (Table Z-1-A)	5 ppm
USA OSHA	OSHA STEL	5 ppm
USA OSHA	OSHA TWA (Table Z-1-A)	1 ppm
Cumene(98-82-8)		
USA ACGIH	ACGIH (TLV) TWA	50 ppm
USA NIOSH	NIOSH (TWA) REL	50 ppm, 245 mg/m3
USA OSHA	OSHA (TWA) Table Z-1	50 ppm, 245 mg/m3
Ethyl Alcohol(64-17-5)		
USA ACGIH	ACGIH TWA (TLV)	1,000 ppm
USA NIOSH	NIOSH TWA	1,000 ppm, 1,900 mg/m3
USA OSHA	OSHA TWA (Table Z-1)	1,000 ppm, 1,900 mg/m3
Ethylene glycol mono butyl ether(111-76-2)		
USA ACGIH	ACGIH TWA (ppm)	20 ppm
USA NIOSH	NIOSH REL (ppm)	5 ppm
USA OSHA	OSHA PO TWA (ppm)	25 ppm
USA OSHA	OSHA TABLE Z-1 TWA (mg/m3)	50 ppm, 240 mg/m3
Isobutyl Acetate(110-19-0)		
USA ACGIH	ACGIH TWA TLV	150 ppm
USA OSHA	OSHA PEL (TABLE Z-1)	150ppm, 700 mg/m3
Isopropyl Alcohol(67-63-0)		
USA ACGIH	ACGIH STEL	400 ppm
USA ACGIH	ACGIH TWA	200 ppm
USA NIOSH	NIOSH IDLH	2,000 ppm
USA OSHA	OSHA TWA	400 ppm, 980 mg/m3
Meta-Xylene(108-38-3)		
USA ACGIH	ACGIH STEL TLV (15 m)	150 ppm, 651 mg/m3
USA ACGIH	ACGIH TWA (8 h)	100 ppm, 434 mg/m3
USA OSHA	OSHA TWA (8 h)	100 ppm, 435 mg/m3
Methyl Ethyl Ketone(78-93-3)		
USA ACGIH	ACGIH STEL (ppm)	300 ppm
USA ACGIH	ACGIH TWA (ppm)	200 ppm
USA OSHA	OSHA PEL (STEL) (ppm)	100 ppm
USA OSHA	OSHA PEL TWA (mg/m3)	410 mg/m3
Phenylethane(100-41-4)		
USA ACGIH	ACGIH STEL	125 ppm
USA ACGIH	ACGIH TWA	20 ppm
USA NIOSH	NIOSH REL	100 ppm, 435 mg/m3

USA NIOSH	NIOSH REL (ST)	125 ppm, 545 mg/m3
USA OSHA	OSHA STEL	125 ppm, 545 mg/m3
USA OSHA	OSHA TWA (Table Z-1)	100 ppm, 435 mg/m3
Toluene(108-88-3)		
USA ACGIH	ACGIH TWA	20 ppm
USA NIOSH	NIOSH REL (ST)	150 ppm, 560 mg/m3
USA NIOSH	NIOSH REL TWA	100 ppm, 375 mg/m3
USA OSHA	OSHA STEL (PO)	150 ppm, 560 mg/m3
USA OSHA	OSHA TWA (PO)	100 ppm, 375 ppm
USA OSHA	OSHA TWA (Table Z-2)	200 ppm
VM&P Naphtha(64742-89-8)		
USA OSHA	OSHA TWA (Table PO)	400 ppm, 1,600 mg/m3
USA OSHA	OSHA TWA (Table Z-1)	500 ppm, 2,000 mg/m3
Xylene(1330-20-7)		
USA ACGIH	ACGIH STEL	150 ppm
USA ACGIH	ACGIH TWA	100 ppm
USA OSHA	OSHA TWA (Table Z-1)	100 PPM, 435 mg/m3

## PERSONAL PROTECTIVE EQUIPMENT

**RESPIRATORY PROTECTION :** If TLV of the product or any component is exceeded, a NIOSH approved dust respirator is advised in absence of environmental control. OSHA Regulations also permit other NIOSH dust respirators under specified conditions. (See your Safety Equipment Supplier) Engineering or administrative controls should be implemented to reduce exposure.

**HAND PROTECTION REMARKS :** The suitability for a specific workplace should be discussed with the producers of the protective gloves.

**EYES PROTECTION :** Eye wash bottle with pure water.  
Tightly fitting safety goggles.  
Where face-shield and protective suit for abnormal processing problems.

**SKIN AND BODY PROTECTION :** Wear impervious clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place.

**WORK HYGIENIC PRACTICES:** When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state</b>	:	Liquid
<b>Color</b>	:	Various colors depending on the pigmentation.
<b>Odor</b>	:	Characteristic. Sweet. Mint like.
<b>Odor threshold</b>	:	No data available.
<b>Ph</b>	:	N/A – See Technical Data Sheet
<b>Evaporation rate</b>	:	Slower Than Ether
<b>Melting point</b>	:	-94.7 C (-138.46 F)
<b>Freezing point</b>	:	No data available.
<b>Boiling point</b>	:	173.0 deg F TO 334.0 deg F
<b>Flash point</b>	:	24.00
<b>Lower explosion limit</b>	:	.8
<b>Upper explosion limit</b>	:	12.7
<b>Vapor pressure</b>	:	185 mm Hg
<b>Vapor density</b>	:	Heavier than air
<b>Relative density</b>	:	No data available.
<b>Density</b>	:	7.5259
<b>Solubility</b>	:	No data available.
<b>Partion coefficient: n-octanol/water</b>	:	No data available.
<b>Autoignition temperature</b>	:	No data available.
<b>Decomposition temperature</b>	:	No data available.

## 10. STABILITY AND REACTIVITY

**REACTIVITY :** No dangerous reaction known under conditions of normal use.

**CHEMICAL STABILITY :** Stable under normal conditions.

**CONDITIONS TO AVOID :** Heat, flames and sparks. Extremely high temperatures and direct sunlight.

**INCOMPATIBLE MATERIALS :** Avoid contact with strong oxidizing agents.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), dense black smoke.

## 11. TOXICOLOGICAL INFORMATION

<b>BENZENE(71-43-2)</b>	
Aspiration toxicity	May be fatal if swallowed and enters airways. Substances known to cause human aspiration toxicity hazards or to be regarded as if they cause human aspiration toxicity hazard.
Carcinogenicity	Species: rat Sex: female Dose: 0, 25, 50, 250 mg/kg Exposure time: 103 wks Number of exposures: daily, 5 days/week Test substance: yes Remarks: zymbal gland carcinomas, squamous cell papillomas Species: rat Sex: male Dose: 0, 50, 100, 200 mg/kg Exposure time: 103 wks Number of exposures: daily, 5 days/week Test substance: yes Remarks: zymbal gland carcinomas, squamous cell papillomas Species: mouse Sex: male and female Dose: 25, 50, 100 mg/kg Exposure time: 103 wks Number of exposures: daily, 5 days/week Test substance: yes Remarks: Clear evidence of multiple organ carcinogenicity.
CMR effects	Carcinogenicity: Human carcinogen. Mutagenicity: In vivo tests showed mutagenic effects Teratogenicity: Did not show teratogenic effects in animal experiments. Reproductive toxicity: Animal testing did not show any effects on fertility.
Eye irritation	May cause irreversible eye damage.
Further information	Chronic Health Hazard. Solvents may degrease the skin.
LC50 Dermal	44.5 mg/l Exposure time: 4 h Species: rat Sex: Not Specified Test atmosphere: vapor
LD50	> 8,260 mg/kg Species: rabbit
LD50 Oral	> 2,000 mg/kg Species: rat Sex: female
Repeated dose toxicity	Species: rat, female Sex: female. Application Route: oral gavage Dose: 0, 25, 50, 100 mg/kg Exposure time: 103 wk Number of exposures: 5 d/wk NOEL: < 25 mg/kg Lowest observable effect level: 25 mg/kg Species: rat, male Sex: male Application Route: oral gavage Dose: 0, 50, 100, 200 mg/kg Exposure time: 103 wk Number of exposures: 5 d/wk NOEL: < 50 mg/kg Lowest observable effect level: 50 mg/kg Species: mouse Application Route: oral gavage Dose: 0, 25, 50, 100 mg/kg Exposure time: 103 wk NOEL: < 25 mg/kg
Sensitization	Did not cause sensitization on laboratory animals.
Skin irritation	May cause skin irritation in susceptible persons.
<b>Cumene(98-82-8)</b>	
Additional Information	RTECS: GR8575000
Aspiration hazard	No data available.
Carcinogenicity	Carcinogenicity IARC: 2B - Group 2B: Possibly carcinogenic to humans (Cumene) ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Dermal	No data available.
Germ cell mutagenicity	invitro assay, <i>S. typhimurium</i> , Result: negative
Inhalation:	No data available.
LD50 Oral - Rat - Acute toxicity	2,260 mg/kg,
Reproductive toxicity	No data available.
Respiratory or skin sensitization	Guinea pig - Result: No skin irritation. (OECD Test Guideline 406)
Serious eye damage/eye irritation	Eyes - Rabbit Result: No skin irritation. (OECD Test Guideline 405)
Skin corrosion/irritation	Skin - Rabbit Result: No skin irritation. (OECD Test Guideline 404)
Specific target organ toxicity - repeated exposure	No data available.
Specific target organ toxicity - single exposure	No data available.
<b>Ethyl Alcohol(64-17-5)</b>	
Additional Information	RTECS: KQ6300000 Central nervous system depression, narcosis, Damage to the heart., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Heart - Irregularities - Based on Human Evidence Stomach - Irregularities - Based on Human Evidence
Aspiration hazard	No data available.

Carcinogenicity - Mouse - Oral	Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Liver: Tumors. Blood: Lymphomas including Hodgkin's disease. IARC: No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. NTP: No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Dermal:	No data available
Germ cell mutagenicity	No data available.
LC50 Inhalation - Rat	20000 ppm, (10 h)
LD50 Oral - Rat	7,060 mg/kg , Remarks: Lungs, Thorax, or Respiration: Other changes.
Reproductive toxicity	No data available. Reproductive toxicity - Human - female - Oral Effects on Newborn: Apgar score (human only). Effects on Newborn: Other neonatal measures or effects. Effects on Newborn: Drug dependence.
Respiratory or skin sensitization	No data available.
Serious eye damage/eye irritation Eyes Rabbit	Result: Mild eye irritation - 24 h (OECD Test Guideline 405)
Skin corrosion/irritation Skin - Rabbit	Result: No skin irritation - 24 h (OECD Test Guideline 404)
Specific target organ toxicity - repeated exposure	No data available.
Specific target organ toxicity - single exposure	No data available.
<b>Ethylene glycol mono butyl ether(111-76-2)</b>	
Aspiration toxicity	Remarks: No data available.
Carcinogenicity	Species mouse, Application Route: Inhalation, Exposure time 2 yr, Activity duration: 6 h, Frequency of Treatment: 5 days/week, NOEL: 125 ppm Result: Limited evidence of carcinogenic effects with no relevance to humans., Carcinogenicity-Assessment: Not evidence of carcinogenicity in animal studies..
Further information	Product Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.,
Germ cell mutagenicity	Genotoxicity in vitro: Test Type: Mammalian cell gene mutation assay; Test species: Chinese hamster (CHO), Metabolic activation: with and without metabolic activation. Result: negative., Genotoxicity in vivo: Test Type: In vivo micronucleus test., Test species: mouse (male), application Route: Intraperitoneal, Result: negative., Germ cell mutagenicity Assessment: Tests on bacterial or mammalian did not show mutagenic effects.
LC50 (rat) inhalation	Acute inhalation toxicity: 500 ppm, Exposure time: 4 h; Assessment: the component/mixture is moderately toxic after short term inhalation.
LC50 (rat) Oral	Acute toxicity estimate: 500 mg/kg; Method: Expert judgment.; Assessment: the component/mixture is moderately toxic after single ingestion.
LD50 (rat) dermal	Acute toxicity estimate: 1,1000 mg/kg; Method: Expert judgment; Assessment: the component/mixture is moderately toxic after single contact with skin.
Repeated dose toxicity	Species: rat NOAEL: 30, Application Route: Inhalation Exposure time: 14 wk Number of exposures: 6 h/d, 5 d/wk.
Reproductive toxicity	Effects on fertility : Test Type: Two-generation study Species: mouse Application Route: oral Fertility: NOAEL: 720 mg/kg body weight Symptoms: Reduced fertility Result: Reduced fertility at maternally toxic doses Effects on fetal development : Test Type: Embryo-fetal development Species: rat Application Route: Inhalation Duration of Single Treatment: 10 d Frequency of Treatment: 6 hr/day Developmental Toxicity: Lowest observed adverse effect level: 100 ppm Result: Developmental toxicity occurred at maternal toxicity dose levels Reproductive toxicity - Assessment : No evidence of adverse effects on sexual function and fertility, and on development, based on animal experiments
Respiratory or skin sensitisation	Test Type: Maximization test, Species guinea pig, Result: Did not cause sensitization on laboratory animals.
Serious eye damage/eye irritation	Species rabbit, Exposure time 24 h, Result: Irritating to eyes.
Skin corrosion/irritation	Remarks: Moderate skin irritation in susceptible persons., Species rabbit, Exposure time 24 h, Result: Mild skin irritation
STOT - repeated exposure	No data available.
STOT - single exposure	No data available.
<b>Isobutyl Acetate(110-19-0)</b>	
Aspiration hazard	No data available.
Carcinogenicity	No data available.
LC50 Inhalation	No data available

LD50 (Rabbit) Dermal	> 17,400 mg/kg
LD50 (Rat) Oral	3,200 - 6,400 mg/m3
Mutagenicity	In vitro Product: Salmonella typhimurium assay (Ames test), : negative +/- activation In vivo Product: Chromosomal aberration, oral: gavage (Mouse): Read-across from a similar material.
Other adverse effects	No data available.
Repeated dose toxicity	NOEL (Rat, Oral Study, 92 d): 316 mg/kg Read-across from a similar material.
Reproductive toxicity	No data available.
Respiratory or skin sensitization	Skin Sensitization:, (Guinea Pig) - non-sensitizing.
Serious eye damage/eye irritation	(Rabbit): none
Skin corrosion/irritation	(Rabbit, 4 h): none
Specific target organ toxicity - repeated exposure	No data available.
Specific target organ toxicity - single exposure	No data available.
<b>Isopropyl Alcohol(67-63-0)</b>	
Aspiration hazard	Based on physico-chemical values or lack of human evidence, not classified.
Carcinogenicity	Not classified.
Effects on Development	Not classified.
Germ cell mutagenicity	Not classified No adverse effect observed.
LC50 (Rat)	46.6 mg/l; Exposure time: 8 h, Acute inhalation toxicity: Based on acute toxicity values, not classified. High vapor concentrations may cause irritation of the eyes, nose, and/or throat, changes to the liver, lung, spleen, and brain, and central nervous system depression (ataxia, dizziness, narcosis, and muscle relaxation, with respiratory arrest and death in cases of severe over exposure).
LD50 (Rabbit)	12,870 mg/kg
LD50 (Rat)	4,396 mg/kg; Acute oral toxicity: Based on acute toxicity values, not classified. Ingestion may cause gastrointestinal effects (pain, nausea, vomiting, and hemorrhage), hypothermia, cardiac effects (low blood pressure, shock and cardiac arrest), liver changes, kidney damage, and CNS effects (headache, dizziness, sleepiness, coma and death).
Reproductive toxicity	Effects on fertility / Effects on or via lactation: Not classified.
Respiratory or skin sensitization	Not classified No adverse effect observed.
Serious eye damage/eye irritation	Classified Causes serious eye irritation.
Skin corrosion/irritation	Based on skin irritation values, not classified. Liquid may cause slight skin irritation. Exposure of liquid to the underdeveloped skin of premature infants may cause severe irritation.
Target Organ Systemic Toxicant - Repeated exposure	Based on repeated exposure toxicity values, not classified.
Target Organ Systemic Toxicant - Single exposure	Routes of exposure: Ingestion, Inhalation Target Organs: Central nervous system Classified, May cause drowsiness or dizziness.
<b>Meta-Xylene(108-38-3)</b>	
Additional Information	RTECS: ZE2275000 Liver injury may occur., Kidney injury may occur., Blood disorders, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, narcosis, Lung irritation, chest pain, pulmonary edema, Central nervous system depression, Dermatitis, Gastrointestinal disturbance.
Aspiration hazard	May be fatal if swallowed and enters airways.
Carcinogenicity	This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification. IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (m-Xylene) NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product presents at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Germ cell mutagenicity	No data available.
LC50 Inhalation (Rat, Male)	6700 ppm, 4 h - (Directive 67/548/EEC, Annex V, B.2.)
LD50 Dermal (Rabbit, Male)	12,126 mg/kg Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2). No data available.
LD50 Oral (Rat, Male)	6,602 mg/kg (OECD Test Guideline 401)
Reproductive toxicity	Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

Respiratory or skin sensitization	Mouse Result: Does not cause skin sensitization. (OECD Test Guideline 429)
Serious eye damage/eye irritation	Eyes - Rabbit Result: Severe eye irritation - 24 h
Skin corrosion/irritation	Skin - Rabbit Result: Skin irritation - 24 h
Specific target organ toxicity - repeated exposure	No data available.
Specific target organ toxicity - single exposure	Inhalation - May cause respiratory irritation.
<b>Methyl Ethyl Ketone(78-93-3)</b>	
Aspiration toxicity	Product: May be harmful if swallowed and enters airways.
Carcinogenicity	Remarks: This information is not available, Carcinogenicity-Assessment: Not classified as a human carcinogen.
Further information	Product Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.,
Germ cell mutagenicity	Genotoxicity in vitro: Test Type: Ames test, Metabolic activation: with and without metabolic activation, Method OECD Test Guideline 471
LC50 (mouse) inhalation	320 mg/l (4 h exposure)
LC50 (rat) Oral	3737 mg/kg
LD50 (rabbit) dermal	6,480 mg/kg
Reproductive toxicity	Effects on fetal development, Species: rat female, Application Route: Inhalation, Dose: 400, 1000, 3000 ppm,
Respiratory or skin sensitisation	Test Type: Buehler Test, Species guinea pig, Method OECD Test Guideline 406, Result: Did not cause sensitization on laboratory animals.
Serious eye damage/eye irritation	Remarks: Severe skin irritation, Species rabbit, Exposure time 24 h, Result: Irritation to eyes
Skin corrosion/irritation	Remarks: Moderate skin irritation, Species rabbit, Exposure time 24 h, Result: Mild skin irritation
STOT - repeated exposure	Product: No data available, Components: No data available.
STOT - single exposure	Product: Target Organs: Central Nervous system, Components: Exposure routes: Inhalation, Product: Target Organs: Central Nervous system
<b>Phenylethane(100-41-4)</b>	
Aspiration toxicity	May be fatal if swallowed and enters airways.
Carcinogenicity	Species: mouse, (male and female) Application Route: Inhalation Exposure time: 103 wk Activity duration: 6 h Dose: 0, 75, 250, 750 ppm Frequency of Treatment: 5 days/week NOAEL: 250 ppm Method: OECD Test Guideline 453 Result: evidence of carcinogenic activity Symptoms: increased incidences of alveolar/bronchiolar neoplasms, increase incidence of hepatocellular carcinomas GLP: yes Carcinogenicity - Assessment : Carcinogenicity classification not possible from current data.
Germ cell mutagenicity	Genotoxicity in vitro, Test Type: Chromosome aberration test in vitro Test species: Chinese hamster ovary (CHO) Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative GLP: no : Test Type: Mammalian cell gene mutation assay Test species: mouse lymphoma cells Metabolic activation: with and without metabolic activation Method : OECD Test Guideline 476 Result: negative GLP: yes Genotoxicity in vivo : Test Type: In vivo micronucleus test species: mouse (male) Application Route: Oral Method: OECD Test Guideline 474 Result: negative GLP: yes Test Type: DNA damage and/or repair Test species: mouse (male and female)Application Route: Inhalation Method: OECD Test Guideline 486 Result: negative GLP: yes Germ cell mutagenicity Assessment : In vivo tests did not show mutagenic effects
LC50 (Mouse, Male)	10 mg/l Assessment: The component/mixture is moderately toxic after short term inhalation.
LD50 (rabbit)	15,433 mg/kg
Repeated dose toxicity	Species: rat, male and female NOAEL: 75 mg/kg Application Route: Oral Exposure time: 28 d Dose: 75, 250 and 750 mg/kg bw/day Method: OECD Test Guideline 407 GLP: yes Symptoms: Increased kidney and liver weights
Reproductive toxicity	Effects on fertility : Test Type: One generation study Species: rat, male and female Application Route: Inhalation Dose: 0, 100, 500 and 1000 ppm Duration of Single Treatment: 6 h General Toxicity - Parent: NOAEC: 1,000 ppm General Toxicity F1: NOAEC: 100 ppm Symptoms: Reduced fetal weight. Reduced offspring weight gain. Method: OECD Test Guideline 415 Result: No reproductive effects. GLP: yes Effects on fetal development : Species: rat Application Route: Inhalation Dose: 0, 100, 500, 1000, 2000 ppm Duration of Single Treatment: 15 d General Toxicity Maternal: NOAEC: 500 ppm Teratogenicity: NOAEC: 2,000 ppm Developmental Toxicity: NOAEC: 500 ppm Symptoms: Reduced body weight Method: OECD Test Guideline 414 Result: Developmental toxicity occurred at maternal toxicity dose levels GLP: No data available Reproductive toxicity - Assessment : No toxicity to reproduction Did not show teratogenic effects in animal experiments.

Respiratory or skin sensitization	Remarks: No data available
Serious eye damage/eye irritation	Species: rabbit Result: Mild eye irritation Remarks: No data available
Skin corrosion/irritation	Species: rabbit Result: Mild skin irritation
STOT - repeated exposure	Target Organs: Auditory system Assessment: May cause damage to organs through prolonged or repeated exposure., The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.
STOT - single exposure	No data available.
Toluene(108-88-3)	
Aspiration toxicity	Aspiration Toxicity - Category 1
Carcinogenicity	Species: rat, (male and female) Application Route: inhalation (vapour) Exposure time: 103 wks Dose: 0, 600, 1200 ppm Frequency of Treatment: 6.5 h/d, 5 d/wk NOAEL: No observed adverse effect level: 1,200 ppm Method: OECD Test Guideline 453 Result: did not display carcinogenic properties Symptoms: Erosion of nasal epithelium Species: rat, (male and female) Application Route: inhalation (vapour) Exposure time: 103 wks Dose: 0, 600, 1200 ppm Frequency of Treatment: 6.5 h/d, 5 d/wk NOAEL: No observed adverse effect level: 1,200 ppm Method: OECD Test Guideline 453 Result: did not display carcinogenic properties Symptoms: Erosion of nasal epithelium Species: rat, (male and female) Application Route: inhalation (vapour) Exposure time: 103 wks Dose: 0, 600, 1200 ppm Frequency of Treatment: 6.5 h/d, 5 d/wk NOAEL: No observed adverse effect level: 1,200 ppm Method: OECD Test Guideline 453 Result: did not display carcinogenic properties Symptoms: Erosion of nasal epithelium , GLP: yes, Carcinogen
Further information	Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Concentrations substantially above the TLV value may cause narcotic effects. Solvents may degrease the skin.
Germ cell mutagenicity	Genotoxicity in vitro : Test Type: Mammalian cell gene mutation assay Test species: Mouse lymphoma cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative : Test Type: Ames test Metabolic activation: with and without metabolic activation Result: negative Genotoxicity in vivo : Test Type: Chromosome aberration assay in vivo Test species: rat Cell type: Bone marrow Application Route: Intraperitoneal Exposure time: 1 or 5 d Dose: 0, 0.025, 0.082, 0.247 ml/kg Result: negative Test Type: Dominant lethal assay Test species: mouse (male) Application Route: inhalation (vapour) Exposure time: 6 h/d, 5 d/wk for 8 wks Dose: 0, 100, 400 ppm Method: OECD Test Guideline 478 Result: negative Germ cell mutagenicity Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
LC50 (rat, male and female)	28.1 mg/l Exposure time: 4 h Test atmosphere: vapour Method: OECD Test Guideline 403
LD50 (rabbit)	> 5,000 mg/kg
LD50 (rat, male)	> 5,580 mg/kg
Repeated dose toxicity	Species: mouse, male and female NOAEL: 625 mg/kg LOAEL: 1,250 mg/kg Application Route: Oral Exposure time: 13 wks Number of exposures: 5 d/wk Dose: 312, 625, 1250, 2500, 5000 Group: yes GLP: yes Symptoms: death, Increased liver weight, ataxia, hyperactivity, hypothermia Species: rat, male and female NOAEL: 300 Application Route: inhalation (vapour) Exposure time: 6, 12, or 18 months Number of exposures: 6 h/d, 5 d/wk Dose: 0, 30, 100, 300 ppm Method: OECD Test Guideline 453 Repeated dose toxicity - Assessment : Causes skin irritation.
Reproductive toxicity	Effects on fertility : Test Type: Two-generation study Species: rat, male and female Application Route: Inhalation Dose: 0, 100, 500, 2000 ppm Frequency of Treatment: 7 days/week General Toxicity - Parent: NOAEC: 500 ppm General Toxicity F1: NOAEC: 500 ppm Fertility: NOAEC: 2,000 ppm Symptoms: Reduced maternal body weight gain. Reduced offspring weight gain. Method: OECD Test Guideline 416 Result: Animal testing did not show any effects on fertility. GLP: yes Test Type: Fertility Species: rat, male and female Application Route: inhalation (vapour) Dose: 0, 600, 1200 ppm Frequency of Treatment: 7 days/week General Toxicity - Parent: NOAEC: 600 ppm Symptoms: Decreased sperm count Result: Animal testing did not show any effects on fertility.
Reproductive toxicity (cont.)	Effects on fetal development : Species: rat Application Route: inhalation (vapour) Dose: 0, 250, 750, 1500, 3000 ppm Duration of Single Treatment: 10 d Frequency of Treatment: 6 hr/day General Toxicity Maternal: NOAEC: 750 ppm Developmental Toxicity: NOAEC: 750 ppm Symptoms: Maternal toxicity, Reduced body weight, Skeletal malformations. GLP: yes Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.
Respiratory or skin sensitization	Test Type: Maximization Test (GPMT) Species: guinea pig Result: Did not cause sensitization on laboratory animals. GLP: yes
Serious eye damage/eye irritation	Species: rabbit Result: Irritating to eyes. Method: OECD Test Guideline 405
Skin corrosion/irritation	Species: rabbit Exposure time: 4 h Result: Irritating to skin.

STOT - repeated exposure	Inhalation Auditory system, Eyes May cause damage to organs through prolonged or repeated exposure., The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.
STOT - single exposure	Exposure routes: Target Organs: Assessment: Remarks: Inhalation Central nervous system May cause drowsiness or dizziness. The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.
<b>VM&amp;P Naphtha(64742-89-8)</b>	
Aspiration toxicity	Aspiration Toxicity - Category 1
Carcinogenicity	Species: mouse, (male) Application Route: Dermal Exposure time: 102 wk Dose: 0.05 ml neat Method: OECD Test Guideline 453 Result: did not display carcinogenic properties GLP: No data available Remarks: Category 1B
Germ cell mutagenicity	Genotoxicity in vitro : Test Type: Ames test Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative GLP: No data available : Test Type: Mammalian cell gene mutation assay Test species: Mouse lymphoma cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative GLP: no Genotoxicity in vivo : Test Type: In vivo micronucleus test species: rat (male and female) Application Route: Inhalation Exposure time: 6 hours/day Dose: 0, 2000, 10000, 20000 mg/m <sup>3</sup> Result: negative GLP: yes Germ cell mutagenicity Assessment : Did not show carcinogenic, teratogenic or mutagenic effects in animal experiments.
LC50 Inhalation (rat, male and female)	7.6 mg/l Exposure time: 4 h Test atmosphere: vapour Method: OECD Test Guideline 403 GLP: yes
LD50 Dermal (rabbit, male and female)	> 2,000 mg/kg Method: OECD Test Guideline 402 GLP: yes
LD50 Oral (rat, male and female)	> 5,000 mg/kg Method: OECD Test Guideline 401 GLP: yes
Repeated dose toxicity	Species: rat, male NOAEL: < 500 mg/kg Application Route: Oral Exposure time: 4 wk Number of exposures: 5 d/wk Dose: 500 or 2000 mg/kg/day Symptoms: nephropathy 64742-89-8: Species: rat, male and female NOAEL: 1402 Application Route: inhalation (vapour) Test atmosphere: vapour Exposure time: 13 weeks Number of exposures: 6 hours/day, 5 days/week Material Safety Data Sheet VM&P Naphtha Version 1.2 Revision Date: 08/11/2014 MSDS Number: 10000002744 30 / 44 VM&P Naphtha Dose: 322, 1402, 9869 mg/m <sup>3</sup> GLP: yes Target Organs: Kidney Symptoms: Nasal and ocular discharge.
Reproductive toxicity	Effects on fertility : Test Type: Two-generation study Species: rat, male and female Application Route: vapour Dose: 0, 5000, 10000, 20000 mg/m <sup>3</sup> Duration of Single Treatment: 6 h Frequency of Treatment: 7 days/week General Toxicity - Parent: NOAEC: > 20,000 mg/m <sup>3</sup> General Toxicity F1: NOAEC: > 20,000 mg/m <sup>3</sup> Symptoms: No adverse effects. Method: OECD Test Guideline 416 GLP: yes Effects on fetal development : Species: rat Application Route: Inhalation Dose: 2653, 7960, 23900 mg/m <sup>3</sup> Duration of Single Treatment: 6 h Frequency of Treatment: 7 days/week General Toxicity Maternal: NOAEL: 23,900 mg/m <sup>3</sup> Embryo-fetal toxicity.: NOAEL: 23,900 mg/m <sup>3</sup> Symptoms: No malformations were observed. Method: OECD Test Guideline 414 GLP: yes
Respiratory or skin sensitization	Test Type: Buehler Test Species: guinea pig Assessment: Does not cause skin sensitization. Result: Did not cause sensitization on laboratory animals. GLP: yes Remarks: not sensitizing.
Serious eye damage/eye irritation	Species: rabbit Result: Not irritating to eyes Exposure time: 1 - 2 s Classification: Not irritating to eyes GLP: yes Remarks: No eye irritation
Skin corrosion/irritation	Species: rabbit Exposure time: 4 h Classification: Irritating to skin Result: Irritating to skin GLP: yes
STOT - repeated exposure	No data available.
STOT - single exposure	Exposure routes: Inhalation Target Organs: Central nervous system Assessment: May cause drowsiness or dizziness.
<b>Xylene(1330-20-7)</b>	
Acute dermal toxicity	Acute toxicity estimate : 1,100 mg/kg Method: Expert judgment.
Acute inhalation toxicity	Acute toxicity estimate, 4631 ppm Exposure time, 4 h Test atmosphere: gas Method; Calculation method.
Acute toxicity Product	Acute oral toxicity : Acute toxicity estimate : 3,523 mg/kg Method: Calculation method.
Aspiration Toxicity	May be fatal if swallowed and enters airways.
Carcinogenicity	Species: mouse, (male and female) Application Route: Oral Exposure time: 103 wk Dose: 0, 500 or 1000 mg/kg Frequency of Treatment: 5 days/week Method: Directive 67/548/EEC, Annex V, B.32. Result: did not display carcinogenic properties GLP: No data available, Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.
Germ cell mutagenicity	Test Type: Chromosome aberration test in vitro. Test Species: Chinese hamster ovary (CHO) Metabolic Activation: With and without metabolic activation. Method Mutagenicity (in vitro mammalian cytogenetic test) Result: Negative. Test Type: Sister chromatid exchange assay in mammalian cells.
Germ cell mutagenicity Assessment	Animal testing did not show any mutagenic effects.
LC50 (rat, male) Inhalation	6700 ppm Exposure time: 4 h Method: Directive 67/548/EEC, Annex V, B.2. GLP: No data available Assessment: The substance or mixture is classified as specific target organ toxicant,

	single exposure, category 3 with respiratory tract irritation. Remarks: Acutely Toxic Category 4
LC50 (rat, male) Oral	3,523 mg/kg Method: EU Method B.1 (Acute Toxicity, Oral) Target Organs: Kidney, Bladder GLP: no
Repeated dose toxicity	Species: rat, male and female NOAEL: 250 mg/kg Application Route: Oral Exposure time: 103 wk Number of exposures: 5 d/wk Dose: 0, 250 or 500 mg/kg Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.
Reproductive toxicity	Effects on fertility : Test Type: Two-generation study Species: rat, male and female Application Route: Inhalation Dose: 0, 25, 100 and 500 ppm Duration of Single Treatment: 6 h Frequency of Treatment: 7 days/week General Toxicity - Parent: NOAEC: > 500 ppm General Toxicity F1: NOAEC: > 500 ppm Early Embryonic Development: NOAEC: > 500 ppm Result: No reproductive effects. Effects on fetal development : Species: rat Application Route: Inhalation Dose: 0, 100, 500, 1000 or 2000 ppm Duration of Single Treatment: 14 d Frequency of Treatment: 6 hr/day General Toxicity Maternal: NOAEC: 500 ppm Teratogenicity: NOAEC: > 2,000 Developmental Toxicity: NOAEC: 100 ppm Result: No teratogenic effects., Developmental toxicity occurred at maternal toxicity dose levels Reproductive toxicity - Assessment : Animal testing did not show any effects on fertility. Damage to fetus not classifiable
Respiratory or skin sensitization	Remarks: No data available
Serious eye damage/eye irritation	Species: rabbit Result: Mild eye irritation
Skin corrosion/irritation	Species: rabbit Exposure time: 24 h Result: Irritating to skin Remarks: Skin irritation, Category 2
STOT - repeated exposure	Target Organs: Liver, Kidney, Central nervous system Assessment: May cause damage to organs through prolonged or repeated exposure.
STOT - single exposure	No data available.

## 12. ECOLOGICAL INFORMATION

<b>Benzene(71-43-2)</b>	
Additional ecological information	Toxic to aquatic life. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life.
EC50	10 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea) static test Test substance: yes Method: OECD Test Guideline 202
Ecotoxicology Assessment	Acute aquatic toxicity Benzene : Toxic to aquatic life. Chronic aquatic toxicity Benzene : Harmful to aquatic life with long lasting effects.
ErC50	100 mg/l Exposure time: 72 h Species: Pseudokirchneriella subcapitata (green algae) Test substance: yes Method: OECD Test Guideline 201
LC50	5.3 mg/l Exposure time: 96 h Species: Oncorhynchus mykiss (rainbow trout) flow-through test substance: yes Method: OECD Test Guideline 203
Persistence and degradability	Biodegradability : This material is expected to be readily biodegradable.
Results of PBT assessment	This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). This substance is not considered to be very persistent nor very bioaccumulating (vPvB).
<b>Cumene(98-82-8)</b>	
Bioaccumulative potential	No data available.
EC50 - Daphnia (water flea) - Toxicity to daphnia and other aquatic invertebrates	2.14 mg/l - 48 h (OECD Test Guideline 202), Daphnia (water flea)
EC50 - Pseudokirchneriella subcapitata (green algae) - Toxicity to algae	2.60 mg/l - 72 h, Pseudokirchneriella subcapitata (green algae)
LC50 - Oncorhynchus mykiss (rainbow trout) Toxicity to fish	4.8 mg/l - 96 h, Oncorhynchus mykiss (rainbow trout)
Mobility in soil	No data available.
Other adverse effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life with long lasting effects.
Persistence and degradability	Biodegradability Result: - According to the results of tests of biodegradability this product is not readily biodegradable.
Results of PBT and vPvB assessment	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
<b>Ethyl Alcohol(64-17-5)</b>	

Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No data available.
Persistence and degradability	No data available.
Results of PBT and vPvB assessment	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
Toxicity	No data available.
<b>Ethylene glycol mono butyl ether(111-76-2)</b>	
Bioaccumulative potential	Partition coefficient: n-octanol/water: log Pow: 0.83
EC50 (Algae)	911 mg/l End point: Biomass Exposure time: 72 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: no
EC50 (Daphnia)	1,800 mg/l(48 h; Daphnia magna (Water flea)): Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 GLP: no
LC50 (fish)	1,474 mg/l Pimephales promelas (Fathead minnow))Exposure time: 96 h Test Type: static test, Method: OECD Test Guideline 203 GLP: no
Mobility in soil	No data available
Other adverse effects	No data available
Persistence and degradability	aerobic Inoculum: Activated sludge, domestic, adaption not specified, Result: Readily biodegradable. Biodegradation: 90.4 % Exposure time: 28 d Method: OECD Test Guideline 301B GLP: no
Product	Regulation: 40CFR Protection of Environment, Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class 1 Substances:
<b>Isobutyl Acetate(110-19-0)</b>	
Bioaccumulative potential Product	No data available.
Biological Oxygen Demand	BOD-5: 970 mg/g BOD-20: 1,300 mg/g
BOD/COD ratio	0.52 %
Chemical Oxygen Demand	1,870 mg/g
EC50 (Alga)	370 mg/l, (72 h, (Alga))
EC50 (Daphnia)	28.2 mg/l, (48 h, (Daphnis))
LC50 (Fish)	22.4 mg/l, (96 h, (Fathead minnow))
Mobility in soil	Known or predicted distribution to environmental compartments isobutyl acetate 1.193 - 1.844 (QSAR model)
NOEC (Alga)	95 mg/l, (72 h, Alga))
Other adverse effects	No data available.
Persistence and degradability	81 % (20 d, Ready Biodegradability: Closed Bottle Test) Readily biodegradable
Results of PBT and vPvB assessment	Not fulfilling PBT (persistent/bioaccumulative/toxic) criteria Not fulfilling vPvB (very persistent, very bioaccumulative) criteria
<b>Isopropyl Alcohol(67-63-0)</b>	
Bioaccumulative potential	Bioaccumulation : Bioconcentration factor (BCF): 3.16 this material is not expected to bioaccumulate.
Ecotoxicology Assessment	Acute aquatic toxicity: Based on acute aquatic toxicity values, not classified. Chronic aquatic toxicity: Not classified, based on readily biodegradability and low acute toxicity.
Mobility in soil	Distribution among environmental compartments: Stability in water initially partitioning mainly to water and air. Stability in soil Volatilization from water or soil surfaces is expected to be limited. Additional advice Environmental fate and pathways : No additional information available.
Other adverse effects Additional ecological information	No additional information available.
Persistence and degradability	Biodegradability : 86 - 94 % Rapidly degradable. (After two weeks in a ready biodegradability test)
Results of PBT and vPvB assessment	Not applicable.
Toxicity to algae	Acute toxicity to aquatic plants very low.
Toxicity to bacteria	Low toxicity to sewage microbes.
Toxicity to daphnia and other aquatic invertebrates	Acute toxicity to freshwater and marine invertebrates is very low.
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	Chronic toxicity expected to be low.

Toxicity to fish	Acute toxicity to fish is very low.
Toxicity to fish (Chronic toxicity)	Chronic toxicity to fish is expected to be low.
<b>Meta-Xylene(108-38-3)</b>	
Bioaccumulative potential	Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.
LC50 (Fish)	11.23 mg/l - 96 h (OECD Test Guideline 203)
Mobility in soil	No data available.
Other adverse effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life with long lasting effects.
Persistence and degradability	No data available.
Results of PBT and vPvB assessment	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.
Toxicity to algae	Remarks: No data available
Toxicity to daphnia and other aquatic invertebrates	Remarks: No data available.
<b>Methyl Ethyl Ketone(78-93-3)</b>	
Bioaccumulative potential	Partition coefficient: n-octanol/water: log Pow: 2.49
EC50 (Algae)	2029 mg/l (48 h; Pseudokirchneriella subcapitata (Green Algae))
EC50 (Daphnia)	308 mg/l (48 h; Daphnia magna (Water flea))
LC50 (fish)	2993 mg/l (96 h; Pimephales promelas (Fathead minnow))
Mobility in soil	No data available
Other adverse effects	No data available
Persistence and degradability	Biodegradability: Concentration: 2mg/l; Result: Readily biodegradation: 98%; Exposure 28 d;
Product	Regulation: 40CFR Protection of Environment, Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class 1 Substances:
<b>Phenylethane(100-41-4)</b>	
Bioaccumulative potential	Partition coefficient: noctanol/water : log Pow: 2.92
EC50 (Daphnia magna (Water flea))	1.8 mg/l Exposure time: 48 h Test Type: static test
EC50 (Pseudokirchneriella subcapitata)	5.4 mg/l Exposure time: 72 h Test Type: static test Analytical monitoring: yes Method: Static GLP: yes
LC50 (Oncorhynchus mykiss (rainbow trout))	4.2 mg/l Exposure time: 96 h Test Type: semi-static test
Mobility in soil	No data available.
Other adverse effects	Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). This substance is not considered to be very persistent nor very bioaccumulating (vPvB).
Persistence and degradability	Biodegradability : Inoculum: activated sludge Concentration: 22 mg/l Result: Readily biodegradable. Biodegradation: 70 % Exposure time: 28 d GLP: yes
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	(Daphnia): 3.6 mg/l Toxicity to bacteria : GLP: Remarks: No data available Ecotoxicology Assessment Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.
<b>Toluene(108-88-3)</b>	
Bioaccumulative potential	Partition coefficient: noctanol/water : log Pow: 2.73
EC50 (Ceriodaphnia dubia)	3.78 mg/l Exposure time: 48 h Test Type: Renewal
EC50 (Chlorella vulgaris (Fresh water algae))	134 mg/l Exposure time: 3 h Test Type: static test
IC50 (Bacteria)	84 mg/l Exposure time: 24 h, Test Type: Static Ecotoxicology Assessment Acute aquatic toxicity : Toxic to aquatic life. Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.
LC50 (Oncorhynchus mykiss (rainbow trout))	5.5 mg/l Exposure time: 96 h Test Type: flow-through test
Mobility in soil	No data available.
Other adverse effects	No data available.
Persistence and degradability	Biodegradability : Inoculum: Sewage Biodegradation: 100 % Remarks: Readily biodegradable

<b>VM&amp;P Naphtha(64742-89-8)</b>	
Bioaccumulative potential	Partition coefficient: noctanol/water: log POW: 2.13 - 4.85 (25 °C)
EL50 (Daphnia magna (Water flea))	4.5 mg/l Exposure time: 48 h Test Type: Immobilization Analytical monitoring: yes Test substance: Naphtha GLP: yes
EL50 (Pseudokirchneriella subcapitata (green algae))	3.7 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: yes GLP: yes. Ecotoxicology Assessment Acute aquatic toxicity : Harmful to aquatic organisms.
LL50 (Fish)	8.2 mg/l Exposure time: 96 h Test Type: semi-static test Analytical monitoring: yes GLP: yes
Mobility in soil	No data available.
Other adverse effects	No data available.
Persistence and degradability	Biodegradability : Concentration: 49.2 mg/l Result: Readily biodegradable. Biodegradation: 77 % Testing period: 2 d Exposure time: 28 d GLP: yes
<b>Xylene(1330-20-7)</b>	
Bioaccumulative potential	Partition coefficient: noctanol/water : log Pow: 2.77 - 3.15
EC50 (Pseudokirchneriella subcapitata)	4.36 mg/l End point: Growth rate Exposure time: 73 h Test Type: static test Analytical monitoring: yes
IC50 (Daphnia magna (Water flea))	1 mg/l Exposure time: 24 h Test Type: static test substance: Information given is based on data obtained from similar substances. Method: OECD Test Guideline 202 GLP
LC50 (Oncorhynchus mykiss (rainbow trout))	2.6 mg/l Exposure time: 96 h Test substance: Information given is based on data obtained from similar substances. Method: OECD Test Guideline 203 GLP: No data available
Mobility in soil	No data available.
Persistence and degradability	Biodegradability : Inoculum: activated sludge Result: Readily biodegradable. Biodegradation: 72 % Exposure time: 20 d

### 13. DISPOSAL CONSIDERATIONS

#### WASTE TREATMENT METHODS

**GENERAL INFORMATION :** No data available.

**DISPOSAL METHOD:** Dispose of waste and residues in accordance with Local, State, and Federal Regulations. Mix with compatible chemical which is less flammable and incenerate. Since emptied containers retain product residue, follow label warnings even after container is emptied. Residual vapors may explode on ignition; do not cut, drill, grind or weld or near this container.

### 14. TRANSPORT INFORMATION

**\*CHECK WITH YOUR CARRIER FOR ADDITIONAL RESTRICTIONS THAT MAY APPLY.**

#### USDOT GROUND

##### DOT (DEPARTMENT OF TRANSPORTATION)

**PROPER SHIPPING NAME (DOT) :** Paint

**HAZARDS CLASS :** 3

**UN/NA NUMBER :** UN1263

**PACKING GROUP :** PG II

**EMERGENCY RESPONSE GUIDE (ERG) :** 128

#### IATA (AIR)

##### DOT (INTERNATIONAL AIR TRANSPORTATION ASSOCIATION)

**PROPER SHIPPING NAME :** Paint

**HAZARDS CLASS :** 3

**UN/NA NUMBER :** UN1263

**PACKING GROUP :** PG II

**EMERGENCY RESPONSE GUIDE (ERG) :** 128

#### IMDG (OCEAN)

**PROPER SHIPPING NAME :** Paint

**HAZARDS CLASS :** 3

**UN/NA NUMBER :** UN1263

**PACKING GROUP :** PG II

**EMERGENCY RESPONSE GUIDE (ERG) :** 128

**MARINE POLLUTANT :** No

**SPECIAL PRECAUTIONS :** P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P235 Keep cool.

## 15. REGULATORY INFORMATION

### US FEDERAL REGULATIONS

All ingredients in Section #3 are TSCA (Toxic Substance Control Act) listed.

**OSHA HAZARDS :** Flammable liquid, Moderate skin irritant, Moderate eye irritant, Carcinogen.

**EPCRA - Emergency**

**CERCLA REPORTABLE QUANTITY**

This product contains:	Chemical CAS#
VM&P Naphtha	64742-89-8
Methyl Ethyl Ketone	78-93-3
Ethylene glycol mono butyl ether	111-76-2
Xylene	1330-20-7
Phenylethane	100-41-4
Ethyl Alcohol	64-17-5

**SARA 304 Extremely Hazardous Substances Reportable Quantity :** This material does not contain any components with a section 304 EHS RQ.

**SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)**

**SARA 311/312 Hazards :** Fire Hazard, Acute Health Hazard, Chronic Health Hazard

**SARA 313 :**

This product contains:	Chemical CAS#
VM&P Naphtha	64742-89-8
Isobutyl Acetate	110-19-0
Methyl Ethyl Ketone	78-93-3
Toluene	108-88-3
Isopropyl Alcohol	67-63-0
Zinc Stearate	557-05-1
Ethylene glycol mono butyl ether	111-76-2
Phenylethane	100-41-4

**CLEAN AIR ACT :**

This product contains:	Chemical CAS#
Toluene	108-88-3
Phenylethane	100-41-4
Benzene	71-43-2
Meta-Xylene	108-38-3
Cumene	98-82-8

### INTERNATIONAL REGULATIONS

**CLASSIFICATION ACCORDING TO REGULATION (EC) No. 1272/2008 (CLP) :**

Flam. Liq. Cat 2;	H226
Aspir. Haz. Cat. 1;	H304
Acute Tox. Cat. 4;	H312
Skin Irrit. Cat. 2;	H315
Eye Irrit. Cat. 2A;	H319
STOT SE Resp. Cat. 3;	H335
STOT SE, Inhalation, Cat. 3;	H336
Carc. 2;	H351
STOT RE Cat.2;	H373
Aquatic Acute 2;	H401

Aquatic Tox. 3; Cat. 3;  
Aquatic Chronic 3;

H402  
H412

#### NATIONAL REGULATIONS

This product contains:	Chemical CAS#
~Phenylethane	100-41-4

#### IARC KEY

~ Indicates a chemical listed by IARC as a possible carcinogen.

^ Indicates a chemical listed by IARC as a carcinogen.

#### STATE REGULATIONS CALIFORNIA PROPOSITION 65

This product contains:	Chemical CAS#
+Toluene	108-88-3
*Phenylethane	100-41-4
#Benzene	71-43-2

#### PROPOSITION 65 KEY

\*  **WARNING** Cancer – [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

#  **WARNING** Reproductive Harm – [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

+  **WARNING** Cancer and Reproductive Harm – [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

#### Massachusetts Right to Know

This product contains	Chemical CAS#
Methyl Ethyl Ketone	78-93-3
Ethylene glycol mono butyl ether	111-76-2
Xylene	1330-20-7
Phenylethane	100-41-4
Benzene	71-43-2
Cumene	98-82-8

#### Pennsylvania Right to Know

This product contains	Chemical CAS#
Methyl Ethyl Ketone	78-93-3
Toluene	108-88-3
Ethylene glycol mono butyl ether	111-76-2
Xylene	1330-20-7
Phenylethane	100-41-4
Ethyl Alcohol	64-17-5
Cumene	98-82-8

#### New Jersey Right to Know

This product contains	Chemical CAS#
Methyl Ethyl Ketone	78-93-3
Ethylene glycol mono butyl ether	111-76-2
Xylene	1330-20-7
Phenylethane	100-41-4

Ethyl Alcohol	64-17-5
Cumene	98-82-8

**16. OTHER INFORMATION**

**Other Product Information**

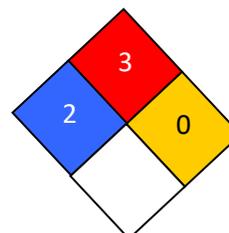
% Volatile by Volume: 78.91	% Volatile by Weight: 71.08
% Solids by volume: 21.09	% Solids by Weight: 28.92
% Exempt by Volume: 0.00	% Exempt by Weight: 0.00

**VOC CONTENT:**                      Excluding Exempt VOC: 641  
Including Exempt VOC: 641

**HMIS RATING**

Health :	2*
Flammability :	3
Reactivity :	0
Personal Protection :	H

**NFPA CODES**



**MANUFACTURER DISCLAIMER :** The information contained in this Safety Data Sheet is considered to be true and accurate. Cardinal Industrial Finishes makes no warranties, expressed or implied, as to the accuracy and adequacy of this information. This data is offered solely for the user's consideration, investigation and verification.