SAFETY DATA SHEET

DATE ISSUED :	10/12/2015
SDS REF. No :	4600 SERIES

4600 SERIES SILK SCREEN ACRYLIC

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 4600 SERIES SILK SCREEN ACRYLIC

PRODUCT CODE: 4600 SERIES
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.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

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.
P501 Dispose of in accordance with Local, Regional, State, Federal and International Regulations.
R40 Limited evidence of a carcinogenic effect.
S36 Wear suitable protective clothing.
S37 Wear suitable gloves.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Weight %	CAS Number	
Ethylene glycol mono butyl ether	20% - 25%	111-76-2	
Stoddard Solvent	5% - 10%	8052-41-3	

Diethylene glycol n-butyl ether	1% - 5%	112-34-5	
Ethylene Glycol	1% - 5%	107-21-1	
Phenylethane	0.10% - 0.50%	100-41-4	

The follow substances may be present in varying quantities depending on color.

Titanium Dioxide	0% - 60%	13463-67-7	
Carbon Black	0% - 40%	1333-86-4	

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, CO2, water fog. Unsuitable extinguishing media: Do not use heavy water stream. A heavy water stream my 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.

ENVIROMENTAL 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

Aluminum Hydroxide(21645-51-2)		
USA ACGIH	ACGIH (TLV) TWA	10 mg/m3 (Total dust), 3 mg/m3 (Respirable fraction)
USA OSHA	OSHA (PEL) TWA	15 mg/m3 (Tptal dust), 5 mg/m3 (Respirable fraction)
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
Carbon Black(1333-86-4)		
USA ACGIH	ACGIH TLV (mg/m3)	3.0 mg/m3
USA OSHA	OSHA PEL (mg/m3)	3.5 mg/m3
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
Diethylene glycol n-butyl ether(112-34-5)		
USA ACGIH	ACGIH TLV (TWA)	10 ppm
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
Ethylene Glycol(107-21-1)		
USA ACGIH	ACGIH (C)	100 mg/m3
USA ACGIH	ACGIH (C) (Aerosol only)	100 mg/m3
USA OSHA	OSHA PO (TLV-C)	50 ppm, 125 mg/m3
Isobutyl Alcohol(78-83-1)		
USA ACGIH	ACGIH TWA	50 ppm
USA OSHA	OSHA PEL	100 ppm, 300 mg/m3
Naphtha, petroleum, hydrodesulfurized heavy(64742-82-1)		
USA OSHA	OSHA (OEL) TWA Table Z-1	500 ppm, 2,000 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
Pseudocumene(95-63-6)		
USA NIOSH	NIOSH (TWA) REL	25 ppm, 125 mg/m3
STODDARD SOLVENT(8052-41-3)		
USA ACGIH	ACGIH (TWA)	100 ppm

USA NIOSH	NIOSH (CLVTP)	1,800 mg/m3
USA NIOSH	NIOSH (REL)	350 mg/m3
USA OSHA Z1	OSHA Z1 (PEL)	500 ppm, 2,900 mg/m3
USA OSHA Z1A	OSHA Z1A (TWA)	100 ppm, 252 mg/m3
USA US CA OEL	US CA OEL (TWA/PEL)	100 ppm, 525 mg/m3
Titanium Dioxide(13463-67-7)		
PEL (Permissible Exposure Limit)	OSHA TWA	15 mg/m3
TLV	ACGIH TWA	10 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
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

Physical state	**:**	Liquid
Color	**:**	Various colors depending on the pigmentation.
Odor	**:**	Characteristic. Sweet. Mint like.
Odor threshold	**:**	No data available.
Ph	**:**	N/A – See Technical Data Sheet
Evaporation rate	**:**	Slower Than Ether
Melting point	**:**	-94.7 C (-138.46 F)
Freezing point	**:**	No data available.
Boiling point	**:**	226.0 deg F TO 446.0 deg F
Flash point	**:**	55.00 deg F deg F
Lower explosion limit	**:**	.8
Upper explosion limit	**:**	24.6
Vapor pressure	**:**	185 mm Hg
Vapor density	**:**	Heavier than air
Relative density	**:**	No data available.
Density	**:**	11.7206
Solubility	**:**	No data available.
Partion coefficient: n-octanol/water	**:**	No data available.
Autoignition temperature	**:**	No data available.
Decomposition temperature	**:**	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 (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke.

11. TOXICOLOGICAL INFORMATION

Aluminum Hydroxide(21645-51-2)	
Additional Information	RTECS: BD0940000 Nausea, Vomiting, and Constipation.
Aspiration hazard	No data available.
Carcinogenicity	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. 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	Mouse lymphocyte Result- negative Mutagenicity (micronucleus test) Rat - male Result: negative
Inhalation	No data available.
LD50 Oral - Rat - female - Acute toxicity	>5,000 mg/kg, Oral - Rat - female
Reproductive toxicity	No data available.
Respiratory or skin sensitization	Maximization Test (GPMT) - Guinea pig Result- Does not cause skin sensitization.(OECD Test Guideline 406)
Serious eye damage/eye irritation	Eyes - Rabbit Result: No eye irritation (OECD Test Guideline 405)
Skin corrosion/irritation	Skin - Rabbit Result: No skin irritation - 4 h (OECD Test Guideline 404)
Specific target organ toxicity - repeated exposure	No data available.
Specific target organ toxicity - single exposure	No data available.
Amorphous Silica(7631-86-9)	
Additional toxicological information	The product is not subject to classification according ot internally approved calculation methods for preparations: When used and handled according tp specifications, the product does not have any harmful effects according to our experience and information provided to us.
Irritant of skin	Not irritating (rabbit) (OCED 404)
Irritatant of eyes	Not irritating (rabbit) (OCED 405)
LC0 - Inhalative	>140->2000 mg/m3 / 4 h (Rat) (OCED 403)
LD50 - Dermal - Rabbit	>5000 mg/kg (Rabbit)
LD50 - Oral - Rat	>5000 mg/kg (Rat) (OECD 401)
Other information - Oral	=> 1340 mg/kg/day
Sensitization	Not sensitizating (guinea pig) (OCED 406)
Benzene(71-43-2)	
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.
Butylglycolate(7397-62-8)	
Additional Information	Repeated dose toxicity - Rat - male and female - No observed adverse effect level - 1,000 mg/kg RTECS: Not available.
Aspiration hazard	No data available.
Carcinogenicity	IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. 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	Hamster Lungs Result: negative
Inhalation	No data available.
LD50 Oral - Rat - female - Acute Toxicity	4,595 mg/kg, (OECD Test Guidline 401)
Reproductive toxicity	Suspected human reproductive toxicant. Developmental Toxicity - Rat Effects on Embryo or Fetus: Fetal death.
Respiratory or skin sensitization	Maximization Test (GPMT) - Guinea pig Result - Does not cause skin sensitization. (OECD Test Guideline 406)
Serious eye damage/eye irritation	Eyes - Rabbit Result - Risk of serious damage to eyes. - 24 h (OECD Test Guideline 405)
Skin corrosion/irritation	Skin - Rabbit Result: No skin irritation - 4 h (OECD Test Guideline 404)
Specific target organ toxicity - repeated exposure	No data available.
Specific target organ toxicity - single exposure	No data available.
Carbon Black(1333-86-4)	
ACGIH	ACGIH The American Conference of Governmental Industrial Hygienists classifies carbon black as A4, Not Classifiable as a Human Carcinogen.
Carcinogenicity Classification	GHS- Not a hazardous substance or preparation according to the Global Harmonized System (GHS).
Human Epidemiology	Results of epidemiological studies of carbon black production workers suggest that cumulative exposure to carbon black may result in small decrements in lung function, as measured by FEV1. A recent U.S. respiratory morbidity study suggested a 27 mL decline in FEV1 from a 1 mg/m3 (inhalable fraction) exposure over a 40-year period. An older European investigation suggested an exposure to 1 mg/m3 (inhalable fraction) of carbon black over a 40-year working-lifetime will result in a 48 mL decline in FEV1. In contrast, normal age related decline over a similar period of time would be approximately 1200 ml. The relationship between symptoms and exposure to carbon black is less clear. In the U.S. study, 9% of the highest exposure group (in contrast to 5% of the unexposed group) reported symptoms consistent with chronic bronchitis. In the European study, methodological limitations in the administration of the questionnaire limit the drawing of definitive conclusions about symptoms.
Human Epidemiology - cont	Since this IARC evaluation of carbon black, Sorahan and Harrington 16) re-analyzed the UK study data using an alternative exposure hypothesis and found a positive association with carbon black exposure in two of the five plants. The same exposure hypothesis was applied by Morfeld and McCunney 17-18) to the German cohort; in contrast, they found no association between carbon black exposure and lung cancer risk and, thus, no support for the alternative exposure hypothesis used by Sorahan and Harrington 16).
Human Epidemiology - cont.	Morfeld and McCunney 19) applied a Bayesian approach to unravel the role of uncontrolled confounders and identified smoking and prior exposure to occupational carcinogens received before being hired in the carbon black industry as main causes of the observed lung cancer excess risk. Overall, as a result of these detailed investigations, no causative link between carbon black exposure and cancer risk in humans has been demonstrated. This view is consistent with the IARC evaluation in 2006. Several epidemiological and clinical studies of workers in the carbon black production industries show no evidence of clinically significant adverse health effects due to occupational exposure to carbon black. No dose response relationship was observed in workers exposed to carbon black.

Human Epidemiology - cont.	This study, however, indicated a link between carbon black and small opacities on chest films, with negligible effects on lung function. A study on carbon black production workers in the UK 10) found an increased risk of lung cancer in two of the five plants studied; however, the increase was not related to the dose of carbon black. Thus, the authors did not consider the increased risk in lung cancer to be due to carbon black exposure. A German study of carbon black workers at one plant 11-14) found a similar increase in lung cancer risk but, like the 2001 UK study 10), found no association with carbon black exposure. In contrast, a large US study 15) of 18 plants showed a reduction in lung cancer risk in carbon black production workers. Based upon these studies, the February 2006 Working Group at IARC concluded that the human evidence for carcinogenicity was inadequate 1) .l
IARC	IARC In 1995 IARC concluded, "There is inadequate evidence in humans for the carcinogenicity of carbon black." Based on rat inhalation studies IARC concluded that there is, "sufficient evidence in experimental animals for the carcinogenicity of carbon black," IARC's overall evaluation was that, "Carbon black is possibly carcinogenic to humans (Group 2B)". This conclusion was based on IARC's guidelines, which require such a classification if one species exhibits carcinogenicity in two or more studies. IARC performed another review in 2006, and again classified carbon black as possibly carcinogenic to humans (Group 2B). In its 1987 review IARC concluded, "There is sufficient evidence in experimental animals for the carcinogenicity of carbon black extracts." Carbon black extracts are classified as, possibly carcinogenic to humans (Group 2B).
LD50 (Rat)	>8000 mg/kg
Mutagenic Effects and Germ Cell Mutagenicity	In an experimental investigation, mutational changes in the hprt gene were reported in alveolar epithelial cells in the rat following inhalation exposure to carbon black. This observation is believed to be rat specific and a consequence of "lung overload" which led to chronic inflammation and release of genotoxic oxygen species. This mechanism is considered to be a secondary genotoxic effect and thus, carbon black itself would not be considered to be mutagenic. Carbon black is not suitable to be tested in bacterial (Ames test) and other in vitro systems because of its insolubility in aqueous solutions. When tested, however, results for carbon black showed no mutagenic effects. Organic solvent extracts of carbon black can, however, contain traces of polycyclic aromatic hydrocarbons (PAHs). A study to examine the bioavailability of these PAHs showed that PAHs are very tightly bound to carbon black and not bioavailable.
NIOSH	NIOSH The U.S. National Institute of Occupational Safety and Health (NIOSH) 1978 criteria document on carbon black recommends that only carbon blacks with PAH contaminant levels greater than 0.1% require the measurement of PAHs in air. As some PAHs are possible human carcinogens, NIOSH recommends an exposure limit of 0.1 mg/m3 for PAHs in air, measured as the cyclohexane-extractable fraction.
NTP	NTP Carbon black is not designated a carcinogen by the U.S. National Toxicology Program (NTP), the U.S. Occupational Safety and Health Administration (OSHA) or the European Union (EU).
Reproductive and Teratogenic Effects	No experimental studies on effects of carbon black on fertility and reproduction have been located. However, based on toxicokinetic data, carbon black is deposited in the lungs and based on its specific physicochemical properties (insolubility, low absorption potential), it is not likely to distribute in the body to reach reproductive organs, embryo and/or foetus under in vivo conditions. Therefore, no adverse effects of carbon black to fertility/reproduction or to foetal development are expected. No effects have been reported in long-term animal studies.
Sensitization	No animal data is available. No cases in humans have been reported.
STOT- repeated exposure	Therefore, no STOT, Repeated exposure classification is made.
STOT- single exposure	Inhalation studies with the rat showed lung effects (see Section 11.2 and 11.3), these effects are believed to be the effects of "lung overload" 1 and these effects are believed to be specific to the species. In addition, the European CLP Regulation states that no classification is necessary if the mechanism is not relevant to humans. 4) Also, the CLP Guidance on classification and labeling states that the "lung overload" mechanism is not relevant to humans. 4) Therefore, no STOT, Repeated Exposure classification is made
Cumene(98-82-8)	
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, S. typhimurium, Result: negative
Inhalation:	No data available.
LD50 Oral - Rat - Acute toxicity	2,260 mg/kg,
Reproductive toxicity	No data available.
Respiratory or skin	Guinea pig - Result: No skin irritation. (OECD Test Guideline 406)

sensitization	
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.
Diethylene glycol n-butyl ether(112-34-5)	
Additional Information	Repeated dose toxicity - Rat - male and female - Oral - No observed adverse effect level - 250 mg/kg RTECS: KJ9100000 To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Stomach - Irregularities - Based on Human Evidence Stomach - Irregularities - Based on Human Evidence
Aspiration hazard	No data available.
Carcinogenicity	Carcinogenicity IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. 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.
Inhalation	The LC50 has not be determined.
LD Dermal - Rabbit	2,764 mg/m3
LD50 Oral - Mouse-male	2,410 mg/m3
LD50 Oral - Rat - male	3,305 mg/kg
Repeated Dose Toxicity	In animals, effects have been reported on the following organs: Blood. kidney. Liver
Reproductive toxicity	In animals studies, did not interfere with reproduction. However, body weights of newborn animals were decreased.
Respiratory or skin sensitization	Maximization Test GPMT,Guinea pig Result: Does not cause skin sensitization. (OECD Test Guideline 406)
Serious eye damage/eye irritation	May cause severe eye irritation. May cause slight corneal injury.
Skin corrosion/irritation	Skin - Rabbit Result: Mild skin irritation - 1 h (OECD Test Guideline 404)
Specific target organ toxicity - repeated exposure	No data available.
Specific target organ toxicity - single exposure	No data available.
Ethylene glycol mono butyl ether(111-76-2)	
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, NAOEL: 125 ppm Result: Limited evidence of carcinogenic effects with no relevance to humans., Carcinogenicity-Assement: 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 foetal 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 sensitsation	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.
Ethylene Glycol(107-21-1)	
Aspiration hazard	No aspiration toxicity classification.
Carcinogenicity	Species: mouse, (male, female), Application Route: Oral, Exposure time: 24 mths, Dose: 0, 40, 200, 1000 mg/kg, daily, LOAEL: 1,000 mg/kg, Result: Ambiguous., Carcinogenicity - Assessment: Not classified as a human carcinogen.
Further information	Remarks: No data available.
Germ cell mutagenicity	Test Type: Ames test, Metabolic activation: with and without activation, Method OECD Test Guideline 471, Result: negative, GLP: yes.
LC50 Inhalation Toxicity - (Rat)	>2.5 mg/l, Exposure time: 6 h, Test atmosphere: dust/mist. Assessment: The substance or mixture has no acute inhalation toxicity.
LD50 Dermal Toxicity (Mouse)	>3,500 mg/kg, Assessment: The substance or mixture has no acute dermal toxicity.
LD50 Oral - Rat Acute toxicity	2,000 mg/kg, Assement: This component/mixture is moderately toxic after single ingestion.
Reproductive toxicity	Results: No reproductive effects.
Respiratory or skin sensitization	Test Type: Maximization Test (GPMT), Species: guinea pig, Result: Did not cause sensitsation on laboratory animals.
Serious eye damage/eye irritation	Species: rabbit, Result: No eye irritation, Exposure time 24 h, Method: In vivo.
Skin corrosion/irritation	Skin - Rabbit Result, Exposure time: 20 h, Method: In vivo, Result: No skin irritation.
Specific target organ toxicity - repeated exposure	Oral - May cause damage to organs through prolonged or repeated exposure. - Kidney
Specific target organ toxicity - single exposure	No data available.
Isobutyl Alcohol(78-83-1)	
Carcinogenicity Data:	The ingredient(s) of this product is (are) not classified as carcinogenic by ACGIH, IARC, OSHA or NTP.
LC50 Inhalation - Rat	8000 ppm; (4 h)
LD50 Dermal - Rabbit	3400 mg/kg
LD50 Oral - Rat (Acute Toxicity)	2460 mg/kg
Mutagenicity Data:	No adverse mutagenicity effects are anticipated.
Reproductive Data:	No adverse reproductive effects are anticipated.
Respiratory / Skin Sensitization Data:	None known.
Synergistic Materials:	Alcohols may interact synergistically with chlorinated solvents (example - carbon tetrachloride, chloroform, bromotrichloromethane), dithiocarbamates (example - disulfiram), dimethylnitrosamine and thioacetamide.
Tetragenicity Data:	No adverse Tetragenicity effects are anticipated.
Naphtha, petroleum, hydrodesulfurized heavy(64742-82-1)	
Additional Information	RTECS: Not available Stomach - Irregularities - Based on Human Evidence (Benzene)
Aspiration hazard	No data available. The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.
Carcinogenicity	IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans () 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.
Germ cell mutagenicity	S. typhimurium Result: negative
LC50 Inhalation - Rat - male and female	> 7,630 mg/m3 - Rat - male and female - 4 h, (OECD Test Guideline 403)
LD50 Dermal - Rabbit - Male and female	>2,000 mg/kg - Rabbit - male and female, (OECD Test Guideline 402)

LD50 Oral - Rat - Acute toxicity	5,000 mg/kg - 4h - Oral - Rat
Reproductive toxicity	No data available.
Respiratory or skin sensitization	Buehler Test - Guinea pig Result: Does not cause skin sensitization. (OECD Test Guideline 406)
Serious eye damage/eye irritation	Eyes - Rabbit Result: No eye irritation (OECD Test Guideline 405)
Skin corrosion/irritation	No data available.
Specific target organ toxicity - repeated exposure	No data available.
Specific target organ toxicity - single exposure	No data available.
Phenylethane(100-41-4)	
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 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.
Pseudocumene(95-63-6)	
Additional Information	RTECS: DC3325000 prolonged or repeated exposure can cause:, narcosis, Bronchitis., Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Central nervous system
Carcinogenicity	IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. 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	in vitro assay S. typhimurium Result: negative Mutagenicity (micronucleus test) Rat - male and female - Bone marrow Result: negative
Inhalation:	No data available.
LD50 Oral - Rat - Acute toxicity	6,000 mg/kg, Rat - male.
Reproductive toxicity	No data available.
Respiratory or skin sensitization	No data available.
Serious eye damage/eye irritation	No data available.
Skin corrosion/irritation	No data available
Specific target organ toxicity - repeated exposure	No data available.
Specific target organ toxicity - single exposure	No data available.
STODDARD SOLVENT(8052-41-3)	
LD 50 Dermal Rabbit: Acute Toxicity	3 g/kg
LD50 Oral Rat: Acute Toxicity	5 g/kg
Titanium Dioxide(13463-67-7)	
Carcinogenicity	In lifetime inhalation studies rats were exposed for 2 years to respectively 10, 50, 250 mg/m3 of respirable Ti02.
Dermal ALD (rabbit)	>10000 mg/m3
Eye irritation	slight irritation
Inhalation 4 h ALC	>6.82 mg/l
ORAL ALD (rat)	>2400 mg/kg
Sensitsation	Did not cause sensitsation on laboratory animals.
Skin irritation	slight irritation
Toluene(108-88-3)	
Aspiration toxicity	Aspiration Toxicity - Category 1
Carcinogenicity	Species: rat, (male and female) Application Route: inhalation (vapor) 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 (vapor) 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 (vapor) 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 (vapor) 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: vapor 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 (vapor) Exposure time: 6, 12, or 18 mths 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 (vapor) 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 (vapor) 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.
Xylene(1330-20-7)	
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 virto. Test Species: Chinese hamster ovary (CHO) Metabolic Activation: With and without metabolic activation. Method Mutagenicity (in vitro mammalian cytogenetic test) Result: Negative. Test Type: Sistrer chromatic 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

Aluminum Hydroxide(21645-51-2)	
Bioaccumulative potential	Inert material.
EC50 - Daphnia - Toxicity to daphnia and other aquatic invertebrates	>10,000 mg/l, Daphnia magna (Water flea) (OECD Test Guideline 202)
EC50 - Fish - Toxicity ro fish	>10,000 mg/l, Fish
Mobility in soil	Inert material.
NOEC - Toxicity to algae	>0.004 mg/l, 72 h, Pseudokirchneriella subcapitata (algae) - (OECD Test Guideline 201)
Other adverse effects	None known.
Persistence and degradability	Non-degradable
Amorphous Silica(7631-86-9)	
Additional ecological information	General notes: Do not allow product to reach ground water, water course or sewage system.
Bioaccumulative potential	No further relevant information available.
EC50 - Algae	>10000 mg/l (Scenedesmus subspicatus) (72 h) (OCED 201) comparable substance
EC50 - Daphnia magna	>1000 mg/l (Daphnia magna) (24 h) (OCED 202)
LCO - Zebra fish	10000 mg/l (zebra fish) (96 h) (static) (OCED203)
Mobility in soil	No further relevant information available.
Persistence and degrability	The product is chemically and biologically inert. By the insolubility in water there is a seperstion at every filtration and sedimentation process.
BENZENE(71-43-2)	
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 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).
Butylglycolate(7397-62-8)	
Bioaccumulative potential	No data available.
EC50 - Daphnia magna - Toxicity to daphnia and other aquatic invertebrates	280 mg/l - 24h - Daphnia magna (Water flea)
EC50 - Pseudomonas putida - Toxicity to bacteria	2,240 mg/l - 3h - Pseudomonas putida, (DIN 38 412 Part 8)
Mobility in soil	No data available.
Other adverse effects	No data available.
Persistence and degradability	Biodegradability aerobic - Exposure time 28 d Result: 81 % - Readily biodegradable (OECD Test Guideline 301B)
Results of PBT and vPvB assessment	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
Carbon Black(1333-86-4)	
Behavior in water treatment plants	Activated sludge, EC0 (3 h) > 800 mg/L. DEV L3 (TTC test)
Bioaccumulation Potential	Potential bioaccumulation is not expected because of the physicochemical properties of the substance
EC50 (Scenedesmus subspicatus)	> 10,000 mg/L, OECD (Guideline 201)

EC50 Daphnia magna (waterflea)	>5600 mg/l (24 h) OECD (Guideline 202)
Environmental fate	Carbon black is an inert solid, stable and insoluble in water or organic solvents. Its vapour pressure is negligible. Based on these properties it is expected that carbon black will not occur in air or water in relevant amounts. Also potential for distribution via water or air can be dismissed. The deposition in soil or sediments is therefore the most relevant compartment of fate in the environment.
LC50 Brachydanio reio (zebrafish)	>1000 mg/l (96 h) OECD (Guideline 203)
NOEC 50 (Scenedesmus subspicatus)	> 10,000 mg/L, OECD (Guideline 201)
Cumene(98-82-8)	
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
Diethylene glycol n-butyl ether(112-34-5)	
12.6 Other adverse effects	No data available.
Bioaccumulative potential	Bioconcentration poteitional is low (BCF <100 or Log Pow <3).
EC50 Daphnia magna - Toxicity to daphnia and other aquatic invertebrates	>100 mg/l - 48 h - Daphnia magna (Water flea), (Directive 67/548/EEC, Annex V, C.2.)
EC50 Desmodesmus subspicatus - Toxicity of algae	100 mg/l - 96 h - Desmodesmus subspicatus (Scenedesmus subspicatus) - (OECD Test Guideline 201)
LC50 Lepomis macrochirus - Toxicity to fish	1,300 mg/l - 96 h - Lepomis macrochirus (OECD Test Guideline 203)
LC50 Pseudomonas putida - Toxicity to bacteria	1170 mg/l - 16 h - Pseudomonas putida
Mobility in soil	Poteitional for mobility in soil very high (koc between 0 and 50).
Persistence and degradability	Biodegradability aerobic - Exposure time 28 d Result: 91.7 % - Readily biodegradable (OECD Test Guideline 301B)
Ethylene glycol mono butyl ether(111-76-2)	
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:
Ethylene Glycol(107-21-1)	
LC50 Toxicity to daphnia and other aquatic invertebrates	>100 mg/l (Daphnia magna (water flea)), Exposure time 48 h, Test type: static test, Method: OECD Test Guideline 202, GLP: yes.
LC50 Toxicity to fish	100 mg/l (Pimephales promelas (fathead minnow)): Exposure time: 96 h, Test Type: static test
Mobility in soil	No data available.
Other adverse effects	No data available.
Persistence and degradability	Aerobic, Inoculum: Activated sludge, domestic, adaption not specified, Biodegradation: 90-100%, Exposure time 10 d, GLP: yes, Remarks: Readily biodegradable.
Results of PBT and vPvB assessment	PBT/vPvB assessment not available
Toxicity to Algae	>100 mg/l (Pseudokirchneriella subcapitata (Selenastrum capricornutum)), Exposure time 96 h, Test type: static test.
Toxicity to Bacteria	>10,000 mg/l, Exposure time: 16 h, Test type: Static, Method: DIN 38412.
Isobutyl Alcohol(78-83-1)	
Chronic	No data available.
Degradability / Persistence; Biological / A biological Degradation	Evaluation: Not readily biodegradable (by OECD criteria).
EC50 - Aquatic Plants	>100 mg/l (72 h) The product has not been tested. The statement has been derived from properties of the individual components.
EC50 - Daphnia - Acute	>100 mg/l (48 h) The product has not been tested. The statement has been derived from properties of the individual components.
LC50 - Fish - Acute	>100 mg/l (96 h) The product has not been tested. The statement has been derived from properties of the individual components.
Microorganisms	Toxicity to microorganisms: bacteria EC10 (17 h): >750 mg/l. The product has not been tested. The statement has been derived from properties of the individual components.
Naphtha, petroleum, hydrodesulfurized heavy(64742-82-1)	
Bioaccumulative potential	No data available.
LC50 - other fish - Toxicity to fish	<100 mg/l - 96h - other fish.
Mobility in soil	No data available.
Other adverse effects	No data available.
Persistence and degradability	Biodegradability aerobic - Exposure time 28 d Result: 77.05 % - Readily biodegradable.
Results of PBT and vPvB assessment	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.
Phenylethane(100-41-4)	
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.
Pseudocumene(95-63-6)	
Bioaccumulative potential	No data available.
EC50 - Daphnia magna (Water flea) - Toxicity to daphnia and other aquatic invertebrates static test	3.6 mg/l - 48 h (OECD Test Guideline 202), Daphnia magna (Water flea)

LC50 - Pimephales promelas (fathead minnow) - Toxicity to fish	7.72 mg/l - 96.0 h, Pimephales promelas (fathead minnow)
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	No data available.
Results of PBT and vPvB assessment	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
Titanium Dioxide(13463-67-7)	
LC50 fish	Fathead minnow 96 h >1000 mg/l
Toluene(108-88-3)	
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
Xylene(1330-20-7)	
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 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 ignation; do not cut, drill, grind or weld or near this container.

14. TRANSPORT INFORMATION

***CHECK WITH YOUR CARRIER FOR ADDITIONAL RESTRCITIONS 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#
Ethylene glycol mono butyl ether	111-76-2
Ethylene Glycol	107-21-1
Xylene	1330-20-7
Isobutyl Alcohol	78-83-1
Carbon Black	1333-86-4
Phenylethane	100-41-4

SARA 304 Extremely Hazardous Substances Reportable Quantity : This material does not contain any components with a section 304 EHS RQ.
SARA TITLE III (SUPERFUND AMENDMENRS AND REAUTHORIZATION ACT)
SARA 311/312 Hazards : Fire Hazard, Acute Health Hazard, Chronic Health Hazard
SARA 313 :

This product contains:	Chemical CAS#
Titanium Dioxide	13463-67-7
Ethylene glycol mono butyl ether	111-76-2
Stoddard Solvent	8052-41-3
Amorphous Silica	7631-86-9
Diethylene glycol n-butyl ether	112-34-5
Ethylene Glycol	107-21-1
Phenylethane	100-41-4
Carbon Black	1333-86-4

CLEAN AIR ACT :

This product contains:	Chemical CAS#
Diethylene glycol n-butyl ether	112-34-5
Ethylene Glycol	107-21-1
Phenylethane	100-41-4
Toluene	108-88-3

Benzene	71-43-2
Cumene	98-82-8

INTERNATIONAL REGULATIONS

CLASSIFICATION ACCORDING TO REGULATION (EC) No. 1272/2008 (CLP) :
Flam. Liq. 2 H226
Eye Irrit. 2 H319
STOT SE 3 H336

NATIONAL REGULATIONS

This product contains:	Chemical CAS#
#Titanium Dioxide	13463-67-7
#Phenylethane	100-41-4
#Carbon Black	1333-86-4
#Phenylethane	100-41-4

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

STATE REGULATIONS
CALIFORNIA PROPOSITION 65

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

*****This product contains (a) chemical (s) known to the State of California to cause cancer.
#This product contains (a) chemical (s) known to the State of California to be carcinogenic.
+This product contains (a) chemical (s) known to the State of California to cause birth defects or other reproductive harm.

Massachusetts Right to Know

This product contains	Chemical CAS#
Ethylene glycol mono butyl ether	111-76-2
Ethylene Glycol	107-21-1
Naphtha, petroleum, hydrodesulfurized heavy	64742-82-1
Xylene	1330-20-7
Isobutyl Alcohol	78-83-1
Carbon Black	1333-86-4
Phenylethane	100-41-4
Pseudocumene	95-63-6
Benzene	71-43-2
Cumene	98-82-8

Pennsylvania Right to Know

This product contains	Chemical CAS#
Titanium Dioxide	13463-67-7
Ethylene glycol mono butyl ether	111-76-2
Amorphous Silica	7631-86-9
Diethylene glycol n-butyl ether	112-34-5

Ethylene Glycol	107-21-1
Aluminum Hydroxide	21645-51-2
Naphtha, petroleum, hydrodesulfurized heavy	64742-82-1
Xylene	1330-20-7
Isobutyl Alcohol	78-83-1
Carbon Black	1333-86-4
Phenylethane	100-41-4
Toluene	108-88-3
Pseudocumene	95-63-6
Butylglycolate	7397-62-8
Cumene	98-82-8

New Jersey Right to Know

This product contains	**Chemical CAS#**
Titanium Dioxide	13463-67-7
Ethylene glycol mono butyl ether	111-76-2
Amorphous Silica	7631-86-9
Diethylene glycol n-butyl ether	112-34-5
Ethylene Glycol	107-21-1
Aluminum Hydroxide	21645-51-2
Naphtha, petroleum, hydrodesulfurized heavy	64742-82-1
Xylene	1330-20-7
Isobutyl Alcohol	78-83-1
Carbon Black	1333-86-4
Phenylethane	100-41-4
Pseudocumene	95-63-6
Butylglycolate	7397-62-8
Cumene	98-82-8

16. OTHER INFORMATION

Other Product Information

% Volatile by Volume: 61.02
% Solids by volume: 38.98
% Exempt by Volume: 0.00

% Volatile by Weight: 38.39
% Solids by Weight: 61.61
% Exempt by Weight: 0.00

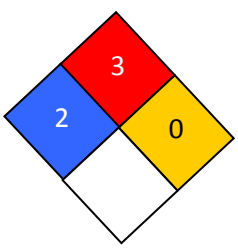
VOC CONTENT:

Excluding Exempt VOC: 539
Including Exempt VOC: 539

HMIS RATING

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

NFPA CODES



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