

Please see below for the traceability back to the OEM.

Part 1

Methyl Isobutyl Ketone  
Hydrite Chemical Co.  
Brookfield, WI (262) 792-1450

Toluol  
Hydrite Chemical Co.  
Brookfield, WI (262) 792-1450

Santicizer 160  
Valtris Specialty Chemicals  
Bridgeport, NJ (216) 875-7284

Paraloid TM B-44 100% Resin  
Dow Chemical Co.  
Midland, MI (800) 258-2436

Paraloid TM B-82 100% Resin  
Dow Chemical Co.  
Midland, MI (800) 258-2436

Part 2

Xylol Thinner  
Barton Solvents, Inc.  
Des Moines, IA (515) 265-7998

Thank you,

Andy

LKG Industries

## SAFETY DATA SHEET

### METHYL ISOBUTYL KETONE

Product ID: OR1306SA

Revised: 09-13-2016

Replaces: 10-09-2013

#### 1. IDENTIFICATION

**Product Identifier:** METHYL ISOBUTYL KETONE  
**Other Identifiers:** 2-methyl-4-pentanone; 2-methylpropyl methyl ketone; 2-pentanone; hexone, isobutyl methyl ketone; MIBK; 4-methylpentan-2-one  
**CAS Number:** 108-10-1  
**Recommended Use:** Catalyst production industrial uses, intermediate, solvent, paint and coatings, pharmaceutical, process/extraction solvent, process material, raw material for chemical process, raw material for industry.  
**Restrictions on Use:** No data available.

Hydrite Chemical Co.  
300 N. Patrick Blvd.  
Brookfield, WI 53008-0948  
(262) 792-1450

**EMERGENCY RESPONSE NUMBERS:**  
**24 Hour Emergency #:** (414) 277-1311  
**CHEMTREC Emergency #:** (800) 424-9300

#### 2. HAZARD(S) IDENTIFICATION

**GHS Classification(s):** Flammable Liquid Category 2  
Serious Eye Damage/Eye Irritation Category 2A  
Carcinogenicity Category 2  
Specific Target Organ Systemic Toxicity (STOT) - Single Exposure Category 3  
Acute Toxicity - Inhalation Vapour Category 4

**GHS Label Elements:**

**GHS Hazard Symbols:**



**Signal Word:** Danger

**Hazard Statements:** Highly flammable liquid and vapour.  
Causes serious eye irritation.  
Harmful if inhaled.  
May cause respiratory irritation.  
Suspected of causing cancer.

**Precautionary Statements:**

**Prevention:** Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Keep away from heat, sparks, open flames and hot surfaces. – No smoking.  
Ground and bond container and receiving equipment.  
Use explosion-proof electrical, ventilating, and lighting equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Avoid breathing dust, gas, mist, vapors or spray.  
Wash thoroughly after handling.  
Use only outdoors or in a well-ventilated area.  
Wear protective gloves/protective clothing/eye protection/face protection.

**Response:** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with

## METHYL ISOBUTYL KETONE

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water.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF exposed or concerned: Get medical advice or attention.

Call a POISON CENTER or doctor if you feel unwell.

If eye irritation persists: Get medical advice or attention.

In case of fire: Use carbon dioxide, dry chemical, alcohol foam, water spray to extinguish.

### Storage:

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store in a secure manner.

### Disposal:

Dispose of in accordance with local, regional and international regulations.

**Hazards Not Otherwise Classified:** Potential peroxide former.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Substances/Mixtures:

<u>Chemical or Common Name/Synonyms</u>	<u>CAS Number</u>	<u>% by Wt.</u>
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Methyl Isobutyl Ketone	108-10-1	100 %
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## 4. FIRST-AID MEASURES

### Description of Necessary Measures:

**Eye Contact:** If in eyes: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Tilt head to avoid contaminating unaffected eye. Get immediate medical attention.

**Skin Contact:** If on skin: Flush skin with plenty of water while removing contaminated clothing and shoes. Do not reuse clothing or shoes until cleaned. If irritation develops or persists, get medical attention. Wash with soap and water. Do not apply oils or ointments unless ordered by the physician. Destroy contaminated leather clothing.

**Inhalation:** If inhaled: Remove to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration, preferably mouth-to-mouth. GET MEDICAL ATTENTION IMMEDIATELY.

**Ingestion:** If swallowed: Call a physician immediately. DO NOT induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.

### Most Important Symptoms/Effects, Acute and Delayed:

**Eye Contact:** Causes mild to severe irritation. May cause: pain. redness.

**Skin Contact:** May cause mild irritation. Contact may cause: pain. redness. Prolonged and repeated contact with skin can cause defatting and drying of the skin which may result in skin irritation and dermatitis.

**Skin Absorption:** May be absorbed through skin.

**Inhalation:** Causes moderate irritation. Harmful if inhaled.

**Ingestion:** May cause moderate irritation. Aspiration into the lungs may occur during ingestion or vomiting, resulting in severe pulmonary injury.

**Indication of Immediate Medical Attention and Special Treatment Needed:** There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.



## 5. FIRE-FIGHTING MEASURES

**Extinguishing Media:** Carbon dioxide. Dry chemical. Alcohol foam. Water spray. Water may be ineffective but should be used to cool fire-exposed structures and vessels.

### **Specific Hazards Arising from the Chemical:**

**Fire and Explosion Hazards:** HIGHLY FLAMMABLE LIQUID. Vapors are heavier than air. Vapors may settle in low or confined areas, or travel long distances along the ground or surface to an ignition source where they may ignite, flashback, or explode. Keep away from heat, sparks, flames or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment). **PROCESS HAZARD:** Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into hot equipment under a vacuum, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated-temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions. Forms explosive peroxides which may be shock sensitive. This material may produce a floating fire hazard.

**Hazardous Combustion Products:** Carbon dioxide. Carbon monoxide.

**Special Protective Equipment and Precautions for Fire-Fighters:** Evacuate area of unprotected personnel. Wear protective clothing including NIOSH-approved self-contained breathing apparatus. Remain upwind of fire to avoid hazardous vapors and decomposition products. Use water spray to cool fire-exposed containers. If container is not properly cooled, it can rupture in the heat of a fire. Run-off from fire control may cause pollution.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment, Emergency Procedures:** HIGHLY FLAMMABLE LIQUID. Eliminate all sources of ignition. Evacuate unprotected personnel from area. Maintain adequate ventilation. Follow personal protective equipment recommendations found in Section 8. Never exceed any occupational exposure limit.

**Methods and Materials for Containment and Clean Up:** Shut off source of leak if safe to do so. Contain spill, place into drums for proper disposal. Soak up residue with non-flammable absorbent material. DO NOT use sawdust or other cellulose-type material. Place in non-leaking containers for immediate disposal. Flush remaining area with water to remove trace residue and dispose of properly. Avoid direct discharge to sewers and surface waters. Notify authorities if entry occurs. Prevent entry into basements, low areas, or confined areas. If fire potential exists, blanket spill with alcohol-type aqueous film-forming foam or use water spray to disperse vapors.

## 7. HANDLING AND STORAGE

**Precautions for Safe Handling:** Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Do not swallow. Avoid breathing vapors, mists, or dust. Do not eat, drink, or smoke in work area. Wash thoroughly after handling. Empty containers retain product residue (vapor, dust, or liquid) and can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other source of ignition. They may explode and cause injury or death. Launder contaminated clothing before reuse. Air-dry contaminated clothing in a well ventilated area before laundering. Always open containers slowly to allow any excess pressure to vent.

**Conditions for Safe Storage, Including any Incompatibilities:** HIGHLY FLAMMABLE LIQUID. Store in a cool, well-ventilated area away from all sources of ignition and out of direct sunlight. Store in a dry location away from heat. Keep away from incompatible materials. Keep containers tightly closed. Do not store in unlabeled or mislabeled containers. Static electricity may accumulate and create a fire hazard. Ground fixed equipment. Bond and ground transfer containers and equipment. Store away from light. Minimize exposure to air. After opening, purge container with nitrogen before reclosing. Periodically test for peroxide formation on long-term storage. If peroxide formation is suspected, do not open or move container. Addition of water or appropriate reducing



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materials will lessen peroxide formation. The Occupational Safety and Health Administration (OSHA) permits the use of polyethylene containers, under its de minimis policy, for storing flammable and combustible liquids provided certain conditions are met. The complete OSHA standard on storing flammable and combustible liquids can be found in 29 CFR 1910.106.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### OSHA Exposure Guidelines:

<u>Component</u>	<u>Limits</u>
Methyl Isobutyl Ketone	100 ppm TWA; 410 mg/m <sup>3</sup> TWA

#### ACGIH Exposure Guidelines:

<u>Component</u>	<u>Limits</u>
Methyl Isobutyl Ketone	75 ppm STEL; 20 ppm TWA

**Engineering Controls:** Local exhaust ventilation, process enclosures, or other engineering controls are required when handling or using this product to avoid overexposure. Use explosion-proof ventilation equipment. Maintain adequate ventilation. Do not use in closed or confined spaces. Keep levels below exposure limits. To determine exposure levels, monitoring should be performed regularly.

#### Individual Protection Measures:

**Eye/Face Protection:** Wear chemical safety goggles while handling this product. Wear additional eye protection such as a face shield when the possibility exists for eye contact with splashing or spraying liquid, or airborne material. Wear a full-face respirator, if needed.

**Skin Protection:** Prevent contact with this product. Wear gloves and protective clothing depending on condition of use. Protective gloves: Butyl rubber.

**Respiratory Protection:** Respiratory protection must be worn if ventilation does not eliminate symptoms or keep levels below recommended exposure limits. If exposure limits are exceeded, wear: NIOSH-Approved air-purifying respirator with: Organic vapor cartridge. NIOSH-Approved positive pressure supplied air respirator. NIOSH-Approved self-contained breathing apparatus. DO NOT exceed limits established by the respirator manufacturer. All respiratory protection programs must comply with OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements and must be followed whenever workplace conditions require a respirator's use.

**Other Protective Equipment:** Eye-wash station. Safety shower. Rubber apron. Chemical safety shoes. Rubber boots. Protective clothing.

**General Hygiene Conditions:** Wash with soap and water before meal times and at the end of each work shift.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** Liquid.

**Color:** Clear. Colorless.

**Odor:** Ketone odor.

**Odor Threshold:** N.D.

**pH:** N.A.

**Freezing Point (deg. F):** N.D.

**Melting Point (deg. F):** ~ - 121

**Initial Boiling Point or Boiling Range:** 243 °F

**Flash Point:** 52 - 60 °F

**Flash Point Method:** TCC.

**Evaporation Rate (nBuAc = 1):** N.D.

**Flammability (solid, gas):** N.D.

**Lower Explosion Limit:** 1.2% (by volume)

**Upper Explosion Limit:** 8.0% (by volume)

**Vapor Pressure (mm Hg):** 20.2 hPa @ 20 Deg. C

**Vapor Density (air=1):** 3.45-3.5

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**Specific Gravity or Relative Density:** 0.7978 - 0.80 @ 20 Deg. C

**Solubility in Water:** miscible

**Partition Coefficient (n-octanol/water):** 24-79 (Pow) 1.38-1.9 (log Pow)

**Autoignition Temperature:** 443 Deg. C (829 Deg. F)

**Decomposition Temperature:** Distills without decomposition at atmospheric pressure.

**Viscosity:** 0.585 mPa.s @ 20 Deg. C (dynamic)

**% Volatile (wt%):** 100

**VOC (wt%):** 100

**VOC (lbs/gal):** 6.64 - 6.66

**Fire Point:** N.D.

### 10. STABILITY AND REACTIVITY

**Reactivity:** No data available.

**Chemical Stability:** Stable under normal conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur under normal conditions.

**Conditions to Avoid:** Avoid contact with heat, sparks, electric arcs, other hot surfaces, and open flames. Avoid other ignition sources. Forms explosive peroxides which may be shock sensitive. Avoid contact with air. Do not distill to near dryness. Avoid extremes of temperature. Avoid direct sunlight.

**Incompatible Materials:** Strong oxidizing agents.

**Hazardous Decomposition Products:** Carbon dioxide. Carbon monoxide.

### 11. TOXICOLOGICAL INFORMATION

**Routes of Exposure:** Eyes. Ingestion. Inhalation. Skin.

**Symptoms/Effects: Acute, Delayed and Chronic:**

**Eye Contact:** Causes mild to severe irritation. May cause: pain. redness.

**Skin Contact:** May cause mild irritation. Contact may cause: pain. redness. Prolonged and repeated contact with skin can cause defatting and drying of the skin which may result in skin irritation and dermatitis.

**Skin Absorption:** May be absorbed through skin.

**Inhalation:** Causes moderate irritation. Harmful if inhaled.

**Ingestion:** May cause moderate irritation. Aspiration into the lungs may occur during ingestion or vomiting, resulting in severe pulmonary injury.

**Numerical Measures of Toxicity:**

<u>Component</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Inhalation LC50</u>
Methyl Isobutyl Ketone	Rat: 2080 mg/kg	Rabbit: 3000 mg/kg	4H Rat: 10 - 20 mg/L

**Cancer Information:**

This product contains 0.1% or more of the following chemicals listed by NTP, IARC or OSHA as known or possible carcinogens:

Methyl isobutyl ketone

**Medical Conditions Aggravated by Exposure to Product:** Central nervous system disorders. Eye disorders. Skin disorders. Respiratory system disorders. Digestive tract disorders.

**Other:** None known.

### 12. ECOLOGICAL INFORMATION

**Ecotoxicological Information:** LC50: Danio rerio (zebra fish) - > 100 mg/L (96 hr) static test

LC50: Goldfish - 460 mg/L (24 hr)



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LC50: Golden orfe – 675-750 mg/L (48 hr)

LC50: Water flea – 4300 mg/L (24 hr)

LC50: Brown shrimp – 1250 mg/L (24 hr)

EC50: Daphnia magna (water flea) - &gt; 100 mg/L (48 hr) static test

NOEC: Daphnia magna (water flea) - &gt; 10-100 mg/L (21 day) semi-static test

**Chemical Fate Information:** Readily biodegradable: > 60% (28 day) OECD Test Guideline 301F

No bioaccumulation is to be expected (log Pow &lt;=4)

This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

BOD -5 (Biological Oxygen Demand): 1940-2060 mg/g

COD (Chemical Oxygen Demand): 2160-2460 mg/g

**13. DISPOSAL CONSIDERATIONS****Hazardous Waste Number:** U161; D001**Note:** When methyl isobutyl ketone is a spent solvent, it is classified as a hazardous waste from a nonspecific source (F003), as stated in 40 CFR 261.31.

**Disposal Method:** Dispose of in a permitted hazardous waste management facility following all local, state and federal regulations. Since emptied containers retain product residue, follow label warnings even after container is emptied. DO NOT pressurize, cut, weld, solder, drill, grind or expose empty containers to heat, flame, sparks or other sources of ignition. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly. Disposal methods identified are for the product as sold. For proper disposal of used material, an assessment must be completed to determine the proper and permissible waste management options permitted under applicable rules, regulations and/or laws governing your location.

**14. TRANSPORT INFORMATION****DOT (Department of Transportation):**

**Identification Number:** UN1245  
**Proper Shipping Name:** METHYL ISOBUTYL KETONE  
**Hazard Class:** 3  
**Packing Group:** II  
**Label Required:** FLAMMABLE  
**Reportable Quantity (RQ):** 5000# (Methyl Isobutyl Ketone)

**15. REGULATORY INFORMATION****TSCA Inventory Status:** All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.**SARA Title III Section 311/312 Category Hazards:**

<u>Immediate (Acute)</u>	<u>Delayed (Chronic)</u>	<u>Fire Hazard</u>	<u>Pressure Release</u>	<u>Reactive</u>			
Yes	Yes	Yes	No	No			
<b>Regulated Components:</b>	<b>CAS</b>	<b>CERCLA</b>	<b>SARA</b>	<b>SARA</b>	<b>U.S.</b>	<b>WI</b>	<b>Prop</b>
<b>Component</b>	<b>Number</b>	<b>RQ</b>	<b>EHS</b>	<b>313</b>	<b>HAP</b>	<b>HAP</b>	<b>65</b>
Methyl Isobutyl Ketone	108-10-1	Yes	No	Yes	Yes	Yes	Yes

**\*Prop 65 - May Contain the Following Trace Components:**

No data available.

**16. OTHER INFORMATION****Hazard Rating System****Health:** 2\***Flammability:** 3



**METHYL ISOBUTYL KETONE**

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**Reactivity:** 1  
\* = Chronic Health Hazard

**NFPA Rating System**

**Health:** 2  
**Flammability:** 3  
**Reactivity:** 1  
**Special Hazard:** None

**SDS Abbreviations**

**N.A. = Not Applicable**  
**N.D. = Not Determined**  
**HAP = Hazardous Air Pollutant**  
**VOC = Volatile Organic Compound**  
**C = Ceiling Limit**  
**N.E./Not Estab. = Not Established**

**SDS Prepared by:** JAK

**Reason for Revision:** Changes made throughout the SDS.

**Revised:** 09-13-2016  
**Replaces:** 10-09-2013

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The data in this Safety Data Sheet relates to the specific material designated and does not relate to its use in combination with any other material or process. The data contained is believed to be correct. However, since conditions of use are outside our control it should not be taken as warranty or representation for which HYDRITE CHEMICAL CO. assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.

## SAFETY DATA SHEET

TOLUOL  
Product ID: AA200403  
Revised: 06-08-2016  
Replaces: 10-29-2013

### 1. IDENTIFICATION

**Product Identifier:** TOLUOL  
**Other Identifiers:** Toluene; Methylbenzene; Methaphene; Phenylmethane;  
**CAS Number:** MIXTURE  
**Recommended Use:** No data available.  
**Restrictions on Use:** No data available.

**Hydrite Chemical Co.**  
300 N. Patrick Blvd.  
Brookfield, WI 53008-0948  
(262) 792-1450

**EMERGENCY RESPONSE NUMBERS:**  
**24 Hour Emergency #:** (414) 277-1311  
**CHEMTREC Emergency #:** (800) 424-9300

### 2. HAZARD(S) IDENTIFICATION

**GHS Classification(s):** Aspiration Hazard Category 1  
Flammable Liquid Category 2  
Skin Corrosion/Irritation Category 2  
Serious Eye Damage/Eye Irritation Category 2A  
Reproductive Toxicity Category 2  
Specific Target Organ Systemic Toxicity (STOT) - Repeated Exposure Category 2  
Specific Target Organ Systemic Toxicity (STOT) - Single Exposure Category 3

**GHS Label Elements:**

**GHS Hazard Symbols:**



**Signal Word:** Danger

**Hazard Statements:** Highly flammable liquid and vapour.  
May be fatal if swallowed and enters airways.  
Causes skin irritation.  
Causes serious eye irritation.  
May cause drowsiness or dizziness.  
Suspected of damaging fertility or the unborn child.  
May cause damage to organs (central nervous system) through prolonged or repeated exposure.

**Precautionary Statements:**

**Prevention:** Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Keep away from heat, sparks, open flames and hot surfaces. – No smoking.  
Ground and bond container and receiving equipment.  
Use explosion-proof electrical, ventilating, and lighting equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Do not breathe dust/fume/gas/mist/vapours/spray.  
Wash thoroughly after handling.  
Use only outdoors or in a well-ventilated area.

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**Response:** Wear protective gloves/protective clothing/eye protection/face protection.  
IF SWALLOWED: Immediately call a POISON CENTER or doctor.  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
IF exposed or concerned: Get medical advice or attention.  
Call a POISON CENTER or doctor if you feel unwell.  
Specific treatment (see First Aid on SDS or on this label).  
Do NOT induce vomiting.  
If skin irritation occurs: Get medical advice or attention.  
If eye irritation persists: Get medical advice or attention.  
Take off contaminated clothing and wash before reuse.  
In case of fire: Use dry chemical, carbon dioxide, water spray, foam to extinguish.

**Storage:** Store in a well-ventilated place. Keep container tightly closed.  
Store in a well-ventilated place. Keep cool.  
Store in a secure manner.

**Disposal:** Dispose of in accordance with local, regional and international regulations.

**Hazards Not Otherwise Classified:** Breathing high concentrations can cause irregular heartbeats which may be fatal.

**Percentage of Components with Unknown Acute Toxicity:**

**Oral:** 100 %  
**Inhalation Vapor:** 100 %  
**Inhalation Dust/Mist:** 100 %

**3. COMPOSITION/INFORMATION ON INGREDIENTS****Substances/Mixtures:****Chemical or Common Name/Synonyms**

Toluene

**CAS Number**

108-88-3

**% by Wt.**

&gt; 99 %

Note: Any chemical identity and/or exact percentage not expressly stated is being withheld as a trade secret or is due to batch variation.

**4. FIRST-AID MEASURES****Description of Necessary Measures:**

**Eye Contact:** If in eyes: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Tilt head to avoid contaminating unaffected eye. Get immediate medical attention. Remove contact lens if easy to do. Do not use eye ointment.

**Skin Contact:** If on skin: Flush skin with plenty of water while removing contaminated clothing and shoes. Do not reuse clothing or shoes until cleaned. If irritation develops or persists, get medical attention. If skin surface is damaged, apply a clean dressing and seek medical attention. Do not use ointments. If skin surface is not damaged, wash thoroughly with soap and water. Discard contaminated leather articles such as shoes and belt.

**Inhalation:** If inhaled: Remove to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration, preferably mouth-to-mouth. GET MEDICAL ATTENTION IMMEDIATELY.

**Ingestion:** If swallowed: Call a physician immediately. DO NOT induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. If victim is drowsy or unconscious, place on the left side with head down. Do not leave victim unattended.

**Most Important Symptoms/Effects, Acute and Delayed:**



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**Eye Contact:** Causes mild to severe irritation. Liquid contact may cause: redness, stinging, swelling, tearing, burning, blurred vision. Prolonged contact may be more severe.

**Skin Contact:** Causes mild to moderate irritation. Contact may cause: redness, burning, itching. Prolonged or repeated contact may cause more serious effects.

**Skin Absorption:** May be harmful if absorbed through skin. May be absorbed through the skin and cause effects similar to inhalation or ingestion.

**Inhalation:** May cause moderate to severe irritation. Vapors or mists may irritate: respiratory tract. Inhalation overexposure may lead to central nervous system depression producing effects such as: dizziness, headache, nausea, fatigue, delirium, drowsiness, loss of consciousness. Breathing high concentrations of this material, for example, in an enclosed space or by intentional abuse, can cause irregular heartbeats which can cause death.

**Ingestion:** May cause mild to severe irritation. May be harmful if swallowed. May cause: gastrointestinal irritation, diarrhea, nausea, pain, central nervous system depression. May cause effects similar to inhalation. Aspiration can result in severe lung damage or death.

**Indication of Immediate Medical Attention and Special Treatment Needed:** INHALATION: Inhalation overexposure can produce toxic effects. Monitor for respiratory distress. If cough or difficulty breathing develops, evaluate for upper respiratory tract inflammation, bronchitis, and pneumonia. Administer supplemental oxygen with assisted ventilation, as required.

This material (or a component) sensitizes the heart to the effects of sympathomimetic amines. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in individuals exposed to this material. Administration of sympathomimetic drugs should be avoided.

INGESTION: If ingested, this material presents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended. Consider activated charcoal and/or gastric lavage. If patient is obtunded, protect the airway by cuffed endotracheal intubation or by placement of the body in a Trendelenburg and left lateral decubitus position.

## 5. FIRE-FIGHTING MEASURES

**Extinguishing Media:** Carbon dioxide. Dry chemical. Foam. Water spray. Water fog. DO NOT USE: Direct water stream. Water may be ineffective but should be used to cool fire-exposed structures and vessels.

### Specific Hazards Arising from the Chemical:

**Fire and Explosion Hazards:** FLAMMABLE LIQUID. Vapors are heavier than air. Vapors may settle in low or confined areas, or travel long distances along the ground or surface to an ignition source where they may ignite, flashback, or explode. Keep away from heat, sparks, flames or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment). **PROCESS HAZARD:** Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into hot equipment under a vacuum, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated-temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions. This material releases vapors at or below ambient temperatures.

**Hazardous Combustion Products:** Carbon dioxide. Carbon monoxide. Smoke. Fumes. Aldehydes. Unburned hydrocarbons. Products of incomplete combustion.

**Special Protective Equipment and Precautions for Fire-Fighters:** Evacuate area of unprotected personnel. Wear protective clothing including NIOSH-approved self-contained breathing apparatus. Remain upwind of fire to avoid hazardous vapors and decomposition products. Use water spray to cool fire-exposed containers and disperse vapors. Do not use direct water stream. May spread fire. Avoid water accumulation. Product may reignite and burn on the water's surface. Cover pooling liquid with foam. If container is not properly cooled, it can rupture in the heat of a fire.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment, Emergency Procedures:** FLAMMABLE LIQUID. Eliminate all sources of ignition. Evacuate unprotected personnel from area. Maintain adequate ventilation. Follow personal protective equipment recommendations found in Section 8. Never exceed any occupational exposure limit.

**Methods and Materials for Containment and Clean Up:** A vapor suppressing foam may be used to reduce vapors. Shut off source of leak if safe to do so. Contain spill, place into drums for proper disposal. Soak up residue with non-flammable absorbent material. DO NOT use sawdust or other cellulose-type material. Place in non-leaking containers for immediate disposal. Flush remaining area with water to remove trace residue and dispose of properly. Avoid direct discharge to sewers and surface waters. Notify authorities if entry occurs. Prevent entry into basements, low areas, or confined areas. Do not touch or walk through spilled material. Remove spillage immediately from hard, smooth walking areas. Use non-sparking tools and equipment. Ground and bond all containers and handling equipment. Water mist or spray may be used to reduce or disperse vapors; but, it may not prevent ignition in closed spaces. This material will float on water and its run-off may create an explosion or fire hazard.

## 7. HANDLING AND STORAGE

**Precautions for Safe Handling:** Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Do not swallow. Avoid breathing vapors, mists, or dust. Do not eat, drink, or smoke in work area. Wash thoroughly after handling. Empty containers retain product residue (vapor, dust, or liquid) and can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other source of ignition. They may explode and cause injury or death. Launder contaminated clothing before reuse. Air-dry contaminated clothing in a well ventilated area before laundering. Always open containers slowly to allow any excess pressure to vent. A static electrical charge can accumulate when this material is flowing through pipes, nozzles or filters and when it is agitated. Do not fill any portable container in or on a vehicle. DO NOT use compressed air for filling, discharging or other handling operations. Always keep nozzle in contact with the container throughout the loading process. Bond and ground transfer containers and equipment. This product can form ignitable vapor-air mixture inside storage tanks and can accumulate static electricity during transfer and storage, even with proper grounding and bonding. Additional precautions beyond standard grounding and bonding may be necessary to prevent static discharge and fire/explosion hazards. Additional measures include, but are not limited to, inerting tank head space with nitrogen, adding anti-static agents, and reducing pump flow velocity during transfer to 1 meter/second or less. Consult NFPA 77, NFPA 69 and API RP 2003 for additional information and preventative measures. Observe precautions pertaining to confined space entry.

**Conditions for Safe Storage, Including any Incompatibilities:** FLAMMABLE LIQUID. Store in a cool, well ventilated area away from all sources of ignition and out of direct sunlight. Store in a dry location away from heat. Keep away from incompatible materials. Keep containers tightly closed. Do not store in unlabeled or mislabeled containers. Static electricity may accumulate and create a fire hazard. Ground fixed equipment. Bond and ground transfer containers and equipment. Avoid contamination of food or feed. Protect containers against physical damage.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### OSHA Exposure Guidelines:

<u>Component</u>	<u>Limits</u>
Toluene	300 ppm Ceiling; 200 ppm TWA

### ACGIH Exposure Guidelines:

<u>Component</u>	<u>Limits</u>
Toluene	20 ppm TWA

**Engineering Controls:** Local exhaust or other engineering controls are needed to minimize exposures. Use explosion-proof ventilation equipment. Maintain adequate ventilation. Do not use in closed or confined spaces. Avoid creating dust or mist. Keep levels below exposure limits. To determine exposure levels, monitoring should be performed regularly.



**Individual Protection Measures:**

**Eye/Face Protection:** Wear safety glasses with side shields while handling this product. Wear additional eye protection such as chemical safety goggles and/or face shield when the possibility exists for eye contact with splashing or spraying liquid, or airborne material.

**Skin Protection:** Prevent contact with this product. Wear gloves and protective clothing depending on condition of use. Protective gloves: Chemical-resistant.

**Respiratory Protection:** Respiratory protection must be worn if ventilation does not eliminate symptoms or keep levels below recommended exposure limits. If exposure limits are exceeded, wear: NIOSH-Approved organic respirator. NIOSH-Approved self-contained breathing apparatus. DO NOT exceed limits established by the respirator manufacturer. All respiratory protection programs must comply with OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements and must be followed whenever workplace conditions require a respirator's use.

**Other Protective Equipment:** Eye-wash station. Safety shower. Rubber apron. Rubber boots. Protective clothing.

**General Hygiene Conditions:** Wash with soap and water before meal times and at the end of each work shift. Good manufacturing practices require gross amounts of any chemical be removed from skin as soon as practical, especially before eating or smoking.

<b>9. PHYSICAL AND CHEMICAL PROPERTIES</b>
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**Physical State:** Liquid.

**Color:** Clear. Colorless.

**Odor:** Sweet, pungent aromatic hydrocarbon odor.

**Odor Threshold:** N.D.

**pH:** N.A.

**Freezing Point (deg. F):** ~ -139

**Melting Point (deg. F):** ~ -139

**Initial Boiling Point or Boiling Range:** 228 - 231 °F

**Flash Point:** 40 °F

**Flash Point Method:** TCC.

**Evaporation Rate (nBuAc = 1):** 1.9 - 2.0

**Flammability (solid, gas):** N.D.

**Lower Explosion Limit:** ~ 1.2

**Upper Explosion Limit:** ~ 7

**Vapor Pressure (mm Hg):** 24 @ 20 Deg. C

**Vapor Density (air=1):** ~3

**Specific Gravity or Relative Density:** 0.87

**Solubility in Water:** < 0.1 %

**Partition Coefficient (n-octanol/water):** N.D.

**Autoignition Temperature:** 896 Deg. F.

**Decomposition Temperature:** N.D.

**Viscosity:** < 3 cSt @ 40 Deg. C

**% Volatile (wt%):** 100%

**VOC (wt%):** 100%

**VOC (lbs/gal):** 7.25

**Fire Point:** N.D.

<b>10. STABILITY AND REACTIVITY</b>
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**Reactivity:** No data available.

**Chemical Stability:** Stable under normal conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur under normal conditions.



## TOLUOL

Product ID: AA200403

**Conditions to Avoid:** Avoid contact with heat, sparks, electric arcs, other hot surfaces, and open flames. Avoid static discharges.

**Incompatible Materials:** Strong acids. Alkalies. Oxidizing agents. Halogens or halogen compounds. Liquid chlorine. Hydrogen peroxide. Oxygen.

**Hazardous Decomposition Products:** Carbon dioxide. Carbon monoxide. Aldehydes. Hydrocarbons.

### 11. TOXICOLOGICAL INFORMATION

**Routes of Exposure:** Absorption. Eyes. Ingestion. Inhalation. Skin.

**Symptoms/Effects: Acute, Delayed and Chronic:**

**Eye Contact:** Causes mild to severe irritation. Liquid contact may cause: redness. stinging. swelling. tearing. burning. blurred vision. Prolonged contact may be more severe.

**Skin Contact:** Causes mild to moderate irritation. Contact may cause: redness. burning. itching. Prolonged or repeated contact may cause more serious effects.

**Skin Absorption:** May be harmful if absorbed through skin. May be absorbed through the skin and cause effects similar to inhalation or ingestion.

**Inhalation:** May cause moderate to severe irritation. Vapors or mists may irritate: respiratory tract. Inhalation overexposure may lead to central nervous system depression producing effects such as: dizziness. headache. nausea. fatigue. delirium. drowsiness. loss of consciousness. Breathing high concentrations of this material, for example, in an enclosed space or by intentional abuse, can cause irregular heartbeats which can cause death.

**Ingestion:** May cause mild to severe irritation. May be harmful if swallowed. May cause: gastrointestinal irritation. diarrhea. nausea. pain. central nervous system depression. May cause effects similar to inhalation. Aspiration can result in severe lung damage or death.

**Numerical Measures of Toxicity:**

<u>Component</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Inhalation LC50</u>
Toluene	No Data	Rabbit: 12000 mg/kg	No Data

**Cancer Information:**

This product does not contain 0.1% or more of the known or potential carcinogens listed in NTP, IARC, or OSHA.

**Medical Conditions Aggravated by Exposure to Product:** Kidney disorders. Liver disorders. Respiratory system disorders. Skin disorders. Central nervous system disorders. Heart disorders. Auditory System Disorders.

**Other:** Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage (sometimes referred to as Solvent or Painters' Syndrome). Intentional misuse by deliberately concentrating and inhaling this material may be harmful or fatal. Chronic effects of ingestion and subsequent aspiration into the lungs may cause pneumatocele (lung cavity) formation and chronic lung dysfunction. This material (or a component) may cause harm to the human fetus based on tests with laboratory animals. Prolonged or repeated overexposure to toluene, a component of this product, has been associated with reproductive effects in experimental animals and in long-term chemical abuse situations. Long-term overexposure to toluene has been associated with impaired color vision. Long-term overexposures to toluene in occupational environments have been associated with hearing damage.

### 12. ECOLOGICAL INFORMATION

**Ecotoxicological Information:** No data available.

**Chemical Fate Information:** No data available.

### 13. DISPOSAL CONSIDERATIONS

**TOLUOL****Product ID: AA200403****Hazardous Waste Number:** U220; D001**Note:** An additional EPA Hazardous Waste Number may include: D018. When toluene is a spent solvent, it is classified as a hazardous waste from a nonspecific source (F005), as stated in 40 CFR 261.31.**Disposal Method:** Dispose of in a permitted hazardous waste management facility following all local, state and federal regulations. DO NOT pressurize, cut, weld, solder, drill, grind or expose empty containers to heat, flame, sparks or other sources of ignition.**14. TRANSPORT INFORMATION****DOT (Department of Transportation):**

**Identification Number:** UN1294  
**Proper Shipping Name:** Toluene  
**Hazard Class:** 3  
**Packing Group:** II  
**Label Required:** FLAMMABLE  
**Reportable Quantity (RQ):** 1000# (Toluene)

**15. REGULATORY INFORMATION****TSCA Inventory Status:** This product or all components of this product are listed on the EPA/TSCA Inventory of Chemical Substances.**SARA Title III Section 311/312 Category Hazards:**

<u>Immediate (Acute)</u>	<u>Delayed (Chronic)</u>	<u>Fire Hazard</u>	<u>Pressure Release</u>	<u>Reactive</u>			
Yes	Yes	Yes	No	No			
<b>Regulated Components:</b>	<b>CAS</b>	<b>CERCLA</b>	<b>SARA</b>	<b>SARA</b>	<b>U.S.</b>	<b>WI</b>	<b>Prop</b>
<b><u>Component</u></b>	<b><u>Number</u></b>	<b><u>RQ</u></b>	<b><u>EHS</u></b>	<b><u>313</u></b>	<b><u>HAP</u></b>	<b><u>HAP</u></b>	<b><u>65</u></b>
Toluene	108-88-3	Yes	No	Yes	Yes	Yes	Yes

**\*Prop 65 - May Contain the Following Trace Components:**

This product may contain a detectable level of (a) chemical(s) subject to California proposition 65.

**16. OTHER INFORMATION****Hazard Rating System****Health:** 2\***Flammability:** 3**Reactivity:** 0

\* = Chronic Health Hazard

**NFPA Rating System****Health:** 2**Flammability:** 3**Reactivity:** 0**Special Hazard:** None**SDS Abbreviations****N.A. = Not Applicable****N.D. = Not Determined****HAP = Hazardous Air Pollutant****VOC = Volatile Organic Compound****C = Ceiling Limit****N.E./Not Estab. = Not Established****SDS Prepared by:** csh

**TOLUOL**

**Product ID: AA200403**

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**Reason for Revision:** New format.

**Revised:** 06-08-2016

**Replaces:** 10-29-2013

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The data in this Safety Data Sheet relates to the specific material designated and does not relate to its use in combination with any other material or process. The data contained is believed to be correct. However, since conditions of use are outside our control it should not be taken as warranty or representation for which HYDRITE CHEMICAL CO. assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.



## 1. Identification

**Product identifier** Santicizer® 160

**Other means of identification**

**Product code** 1303508, 1034074, 1355383, 1034075, 1110368, 1500025, 1001979, 1034483, 1034365

**Recommended use** Polymer.

**Recommended restrictions** None known.

**Manufacturer/Importer/Supplier/Distributor information**

**Manufacturer**

**Company name** Valtris Specialty Chemicals

**Address** 170 U.S.Route 130 South  
Bridgeport, NJ 08014  
United States

**Telephone** Customer Service (216) 875-7284

**Website** www.valtris.com

**E-mail** sdsquestions@valtris.com

**Contact person** Valtris Technical Center

**Emergency phone number** CHEMTREC: 1-800-424-9300

## 2. Hazard(s) identification

**Physical hazards** Not classified.

**Health hazards** Reproductive toxicity Category 1B

**Environmental hazards** Hazardous to the aquatic environment, acute hazard Category 1

Hazardous to the aquatic environment, long-term hazard Category 1

**OSHA defined hazards** Not classified.

**Label elements**



**Signal word** Danger

**Hazard statement** May damage fertility or the unborn child. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

**Precautionary statement**

**Prevention** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

**Response** If exposed or concerned: Get medical advice/attention. Collect spillage.

**Storage** Store locked up.

**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations.

**Hazard(s) not otherwise classified (HNOC)** None known.

**Supplemental information** None.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	Common name and synonyms	CAS number	%
butyl benzyl phthalate		85-68-7	90 - 100

Byproducts	Common name and synonyms	CAS number	%
Chemical name			
	Dibenzyl phthalate	523-31-9	0 - 0.9
*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.			
Composition comments	Additional compounds which may be formed during processing are listed in Section 8.		
4. First-aid measures			
Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.		
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.		
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.		
Ingestion	Rinse mouth. Get medical attention if symptoms occur.		
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.		
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.		
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.		
5. Fire-fighting measures			
Suitable extinguishing media	Alcohol resistant foam. Powder. Carbon dioxide (CO2).		
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.		
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.		
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.		
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.		
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.		
General fire hazards	No unusual fire or explosion hazards noted.		
6. Accidental release measures			
Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.		
Methods and materials for containment and cleaning up	Use water spray to reduce vapors or divert vapor cloud drift. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.  Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.  Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.		
Environmental precautions	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.		

## 7. Handling and storage

### Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Provide adequate ventilation. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

### Conditions for safe storage, including any incompatibilities

Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Dibutyl phthalate (CAS 84-74-2)	PEL	5 mg/m3

#### US. ACGIH Threshold Limit Values

Components	Type	Value
Dibutyl phthalate (CAS 84-74-2)	TWA	5 mg/m3

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Dibutyl phthalate (CAS 84-74-2)	TWA	5 mg/m3

### Biological limit values

No biological exposure limits noted for the ingredient(s).

### Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

### Individual protection measures, such as personal protective equipment

#### Eye/face protection

If contact is likely, safety glasses with side shields are recommended.

#### Skin protection

##### Hand protection

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

##### Other

Use of an impervious apron is recommended.

#### Respiratory protection

Chemical respirator with organic vapor cartridge and full facepiece.

#### Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

### General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Observe any medical surveillance requirements.

## 9. Physical and chemical properties

### Appearance

#### Physical state

Liquid.

#### Form

Liquid.

#### Color

Clear colorless or nearly colorless

### Odor

Not available.

### Odor threshold

Not available.

### pH

Not available.

### Melting point/freezing point

< -31 °F (< -35 °C) / -31 °F (-35 °C) estimated

### Initial boiling point and boiling range

464 °F (240 °C)

### Flash point

390.2 °F (199.0 °C) Cleveland Open Cup

### Evaporation rate

< 1

### Flammability (solid, gas)

Not applicable.



**Upper/lower flammability or explosive limits**

Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	0.00001 hPa estimated
Vapor density	10.8
Relative density	Not available.
Solubility(ies)	
Solubility (water)	2.82 ppm
Partition coefficient (n-octanol/water)	3.57 - 4.91
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	42 cP
Other information	
Density	1.11 g/cm3 estimated
Explosive properties	Not explosive.
Flammability class	Combustible IIIB estimated
Oxidizing properties	Not oxidizing.
Percent volatile	0.15 % estimated
Specific gravity	1.12
VOC (Weight %)	2.6 %

**10. Stability and reactivity**

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

**11. Toxicological information****Information on likely routes of exposure**

Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

**Information on toxicological effects****Acute toxicity**

Components	Species	Test Results
butyl benzyl phthalate (CAS 85-68-7)		
<u>Acute</u>		
Dermal		
LD50	Mouse	6700 mg/kg

Components	Species	Test Results
	Rat	6700 mg/kg
<b>Oral</b>		
LD50	Rat	13500 mg/kg
Dibutyl phthalate (CAS 84-74-2)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	4200 mg/kg
		20 ml/kg
<b>Inhalation</b>		
LC50	Mouse	25 mg/l, 2 Hours
	Rat	15.68 mg/l, 4 Hours
<b>Oral</b>		
LD50	Guinea pig	10000 mg/kg
	Mouse	4840 mg/kg
	Rat	6300 mg/kg

\* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation** Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye irritation** Direct contact with eyes may cause temporary irritation.

#### Respiratory or skin sensitization

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** This product is not expected to cause skin sensitization.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

#### IARC Monographs. Overall Evaluation of Carcinogenicity

butyl benzyl phthalate (CAS 85-68-7) 3 Not classifiable as to carcinogenicity to humans.

#### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

#### US. National Toxicology Program (NTP) Report on Carcinogens

Not available.

**Reproductive toxicity** May damage fertility or the unborn child.

**Specific target organ toxicity - single exposure** Not classified.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** Not an aspiration hazard.

**Chronic effects** Prolonged inhalation may be harmful.

## 12. Ecological information

**Ecotoxicity** Very toxic to aquatic life with long lasting effects.

Components	Species	Test Results
butyl benzyl phthalate (CAS 85-68-7)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea (Daphnia magna) > 0.96 mg/l, 48 hours
Fish	LC50	Shiner perch (Cymatogaster aggregata) 0.47 - 0.56 mg/l, 96 hours
Dibutyl phthalate (CAS 84-74-2)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea (Daphnia magna) 2.99 mg/l, 48 hours

Components	Species	Test Results
Fish	LC50	Channel catfish ( <i>Ictalurus punctatus</i> )
		0.4 - 0.53 mg/l, 96 hours

\* Estimates for product may be based on additional component data not shown.

**Persistence and degradability** No data is available on the degradability of this product.

#### Bioaccumulative potential

##### Partition coefficient n-octanol / water (log Kow)

Santicizer® 160	3.57 - 4.91
butyl benzyl phthalate	4.91
Dibutyl phthalate	4.9

**Mobility in soil** No data available.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

### 13. Disposal considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

### 14. Transport information

#### DOT

<b>UN number</b>	UN3082
<b>UN proper shipping name</b>	RQ, Environmentally hazardous substances, liquid, n.o.s. (butyl benzyl phthalate RQ = 103 LBS), MARINE POLLUTANT
<b>Transport hazard class(es)</b>	
Class	9
Subsidiary risk	-
Label(s)	9
<b>Packing group</b>	III
<b>Environmental hazards</b>	
Marine pollutant	YES
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Special provisions</b>	8, 146, 335, IB3, T4, TP1, TP29
<b>Packaging exceptions</b>	155
<b>Packaging non bulk</b>	203
<b>Packaging bulk</b>	241

#### IATA

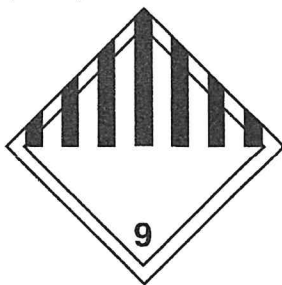
<b>UN number</b>	UN3082
<b>UN proper shipping name</b>	Environmentally hazardous substance, liquid, n.o.s. (butyl benzyl phthalate)
<b>Transport hazard class(es)</b>	
Class	9
Subsidiary risk	-
<b>Packing group</b>	III
<b>Environmental hazards</b>	YES
<b>ERG Code</b>	9L
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Other information</b>	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.



**IMDG**

<b>UN number</b>	UN3082
<b>UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (butyl benzyl phthalate), MARINE POLLUTANT
<b>Transport hazard class(es)</b>	
Class	9
Subsidiary risk	-
<b>Packing group</b>	III
<b>Environmental hazards</b>	
Marine pollutant	YES
<b>EmS</b>	F-A, S-F
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not established.

DOT; IATA; IMDG



Marine pollutant



General information

IMDG Regulated Marine Pollutant. DOT Regulated Marine Pollutant.

**15. Regulatory information****US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**TSCA Chemical Action Plans, Chemicals of Concern**

butyl benzyl phthalate (CAS 85-68-7)

Phthalates Action Plan

Dibutyl phthalate (CAS 84-74-2)

Phthalates Action Plan

**CERCLA Hazardous Substance List (40 CFR 302.4)**

butyl benzyl phthalate (CAS 85-68-7)

Listed.

Dibutyl phthalate (CAS 84-74-2)

Listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories**  
 Immediate Hazard - No  
 Delayed Hazard - Yes  
 Fire Hazard - No  
 Pressure Hazard - No  
 Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
DIBUTYL PHTHALATE	84-74-2	0.1 - 1

**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Dibutyl phthalate (CAS 84-74-2)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**US state regulations****US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**

Not listed.

**US. Massachusetts RTK - Substance List**

butyl benzyl phthalate (CAS 85-68-7)

Dibutyl phthalate (CAS 84-74-2)

**US. New Jersey Worker and Community Right-to-Know Act**

butyl benzyl phthalate (CAS 85-68-7)

Dibutyl phthalate (CAS 84-74-2)

**US. Pennsylvania Worker and Community Right-to-Know Law**

butyl benzyl phthalate (CAS 85-68-7)

Dibutyl phthalate (CAS 84-74-2)

**US. Rhode Island RTK**

butyl benzyl phthalate (CAS 85-68-7)

Dibutyl phthalate (CAS 84-74-2)

**US. California Proposition 65**

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

**US - California Proposition 65 - CRT: Listed date/Developmental toxin**

butyl benzyl phthalate (CAS 85-68-7) Listed: December 2, 2005

Dibutyl phthalate (CAS 84-74-2) Listed: December 2, 2005

**US - California Proposition 65 - CRT: Listed date/Female reproductive toxin**

Dibutyl phthalate (CAS 84-74-2) Listed: December 2, 2005

**US - California Proposition 65 - CRT: Listed date/Male reproductive toxin**

Dibutyl phthalate (CAS 84-74-2) Listed: December 2, 2005

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)  
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	08-24-2015
Revision date	09-14-2015
Version #	02
Disclaimer	Valtris Specialty Chemicals cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.
Revision Information	Product and Company Identification: Product Codes Composition / Information on Ingredients: Ingredients Accidental release measures: Methods and materials for containment and cleaning up Exposure controls/personal protection: General hygiene considerations Exposure controls/personal protection: Eye/face protection Exposure controls/personal protection: PPE Symbols Physical and chemical properties: Color Transport Information: Material Transportation Information Transport information: General information Regulatory Information: Regulatory Information



## PARALOID™ B-44 100% Solid Grade Thermoplastic Acrylic Resin

### Description

PARALOID B-44 solid grade acrylic resin provides an outstanding combination of hardness, flexibility, and adhesion to various substrates. It also permits wider latitude in formulating in solvents that are suitable for specific applications. The resin is slightly softer and more flexible than PARALOID A-21 acrylic resin and has excellent adhesion to various substrates.

PARALOID B-44 acrylic resin can be dissolved in toluene, xylene, selected esters, acetone, and methyl ethyl ketone. PARALOID B-44 is not soluble in most alcohols and aliphatic hydrocarbons as the sole solvent. It is well suited for a variety of applications, including treated metal, copper, zinc, brass, treated aluminum, concrete floors, and certain plastics.

### Solubility

Information about the solvent compatibility of PARALOID B-44 acrylic resin can be found in Rohm and Haas brochure 82A114--*Paraloid Solid Grade Resins, Solvent Selection Chart*.

### Typical Properties

These properties are typical but do not constitute specifications.

Physical Form	Pellets
Chemical Composition	MMA Copolymer
Tg, °C	60
Bulk Density, 25°C, lb/gal	9.8
Solubility Parameter	9.4
Ultimate Hardness of Clear Films, KHN	15 to 16

### Properties in White Lacquers<sup>1</sup>

Tukon Hardness		Whiteness (K color low numbers best)		Cross Hatch <sup>3</sup>	
30 min. at 180°F	6.5	30 min. at 300°F	7.6	30 min. at 180°F	0
30 min. at 300°F	18.2	16 hrs. at 350°F	9.0	30 min. at 300°F	0
Pencil Hardness		Flexibility <sup>2</sup> , 1/8, 1/4, 1/2 inch mandrels		Mustard Staining (30 minute exposure)	
30 min. at 180°F	2H	30 min. at 180°F	2, 2, 1	30 min. at 180°F	None
30 min. at 300°F	5H	30 min. at 300°F	3, 3, 2	30 min. at 300°F	Trace
Gloss, 20°		Printing, 2 psi for 1 hour at 140°F		Gasoline Resistance (15 minute exposure)	
30 min. at 180°F	71	30 min. at 180°F	Moderate	30 min. at 180°F	OK
30 min. at 300°F	78	30 min. at 300°F	Trace	30 min. at 300°F	OK
Gloss, 60°		Knife Adhesion		Spray Conditions	
30 min. at 180°F	92	30 min. at 180°F	Excellent	Viscosity, No. 4 Ford Cup, sec.	15
30 min. at 300°F	93	30 min. at 300°F	Excellent	Solids Content, %	24.0

Note: Drying the coatings at 300°F for 30 minutes simulates final properties of the resin.

<sup>1</sup> The white lacquers were formulated at a titanium dioxide/binder ratio (solids basis) of 30/70. The properties were determined after coatings were sprayed on Bonderite 1000.

<sup>2</sup> The degree of cracking at the bend over each mandrel is rated on a 0 (no failure) to 10 (complete flaking) scale.

<sup>3</sup> The degree of flaking at the scribed cross hatch is rated on a 0 (no failure) to 5 (complete lift off) scale.

## Safe Handling Information

Rohm and Haas Material Safety Data Sheets (MSDS) contain pertinent information that you may need to protect your employees and customers against any known health or safety hazards associated with our products. Under the OSHA Hazard Communication Standard, workers must have access to and understand MSDS on all hazardous substances to which they are exposed. Thus, it is important that you provide appropriate training and information to your employees and make sure they have available to them MSDS on any hazardous products in their workplace. Rohm and Haas Company sends MSDS on non-OSHA-hazardous as well as OSHA-hazardous products to its customers upon initial shipment (including samples) of all its products (whether or not they are considered OSHA-hazardous). If you do not have access to one of these MSDS, please contact your local Rohm and Haas representative for an additional copy. Updated MSDS are sent upon revision to all customers of record. MSDS should be obtained from your suppliers of other materials recommended in this bulletin.

Rohm and Haas Company is a member of the American Chemistry Council (ACC) and is committed to ACC's Responsible Care® Program.

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PARALOID is a trademark of Rohm and Haas Company or of its subsidiaries or affiliates.

These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use of our products are beyond our control. We recommend that the prospective user determine the suitability of our materials and suggestions before adopting them on a commercial scale.

Suggestions for uses of our products or the inclusion of descriptive material from patents and the citation of specific patents in this publication should not be understood as recommending the use of our products in violation of any patent or as permission or license to use any patents of the Rohm and Haas Company.





## SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY

Product name: PARALOID™ B-82 100% Resin

Issue Date: 04/29/2016

Print Date: 05/02/2016

THE DOW CHEMICAL COMPANY encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

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### 1. IDENTIFICATION

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Product name: PARALOID™ B-82 100% Resin

Recommended use of the chemical and restrictions on use  
Identified uses: Coatings product

#### COMPANY IDENTIFICATION

THE DOW CHEMICAL COMPANY  
2030 WILLARD H DOW CENTER  
MIDLAND MI 48674-0000  
UNITED STATES

Customer Information Number:

800-258-2436  
SDSQuestion@dow.com

#### EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: CHEMTREC +1 703-527-3887  
Local Emergency Contact: 800-424-9300

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### 2. HAZARDS IDENTIFICATION

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#### Hazard classification

This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.  
Reproductive toxicity - Category 2

#### Label elements

Hazard pictograms



Signal word: **WARNING!**



**Hazards**

Suspected of damaging fertility or the unborn child.

**Precautionary statements****Prevention**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Use personal protective equipment as required.

**Response**

IF exposed or concerned: Get medical advice/ attention.

**Storage**

Store locked up.

**Disposal**

Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

If converted to small particles during further handling, processing, or by other means, may form combustible dust concentrations in air.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

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**Chemical nature:** Acrylic copolymer

This product is a mixture.

Component	CASRN	Concentration
Acrylic polymer(s)	Nonhazardous	>= 99.0 - 100.0 %
Individual residual monomers	Not Required	< 0.2 %
Toluene	108-88-3	<= 0.6 %
2-Methylacrylic acid	79-41-4	<= 0.1 %

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**4. FIRST AID MEASURES**

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**Description of first aid measures**

**Inhalation:** Move to fresh air.

**Skin contact:** Wash with water and soap as a precaution. If skin irritation persists, call a physician.

**Eye contact:** Flush eyes with water as a precaution. If eye irritation persists, consult a specialist.

**Ingestion:** Drink 1 or 2 glasses of water. Consult a physician if necessary. Never give anything by mouth to an unconscious person.

**Most important symptoms and effects, both acute and delayed:** Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

**Indication of any immediate medical attention and special treatment needed**

**Notes to physician:** Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

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## **5. FIREFIGHTING MEASURES**

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**Suitable extinguishing media:** Use the following extinguishing media when fighting fires involving this material: Carbon dioxide (CO<sub>2</sub>) Dry chemical Water spray

**Unsuitable extinguishing media:** No data available

**Special hazards arising from the substance or mixture**

**Hazardous combustion products:** No data available

**Unusual Fire and Explosion Hazards:** Material as sold is combustible; burns vigorously with intense heat.

**Advice for firefighters**

**Fire Fighting Procedures:** Use water spray to cool unopened containers. Remain upwind. Avoid breathing smoke.

**Special protective equipment for firefighters:** Wear self-contained breathing apparatus and protective suit.

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## **6. ACCIDENTAL RELEASE MEASURES**

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**Personal precautions, protective equipment and emergency procedures:** Appropriate protective equipment must be worn when handling a spill of this material. See SECTION 8, Exposure Controls/Personal Protection, for recommendations. If exposed to material during clean-up operations, see SECTION 4, First Aid Measures, for actions to follow.

**Environmental precautions:** CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

**Methods and materials for containment and cleaning up:** Floor may be slippery; use care to avoid falling. Eliminate all ignition sources. Ventilate the area. Transfer spilled material to suitable containers for recovery or disposal.

## 7. HANDLING AND STORAGE

**Precautions for safe handling:** Store in a cool, dry, well ventilated place. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container tightly closed. Do not breathe vapours/dust. Static charges can accumulate: use bonding and grounding between transfer equipment and receiving containers and for anyother operations capable of generating static electricity.

**Conditions for safe storage:** Material can burn; limit indoor storage to approved areas equipped with automatic sprinklers. Ground all metal containers during storage and handling.

**Other data:** Monomer vapors can be evolved when material is heated during processing operations. See SECTION 8, for types of ventilation required.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Toluene	ACGIH	TWA	20 ppm
	OSHA Z-2	TWA	200 ppm
	ACGIH	TWA	BEI
	OSHA Z-2	CEIL	300 ppm
	OSHA Z-2	Peak	500 ppm
	CAL PEL	PEL	37 mg/m3 10 ppm
	CAL PEL	C	500 ppm
	CAL PEL	STEL	560 mg/m3 150 ppm
2-Methylacrylic acid	Dow IHG	TWA	4 ppm
	Dow IHG	TWA	SKIN
	Dow IHG	STEL	10 ppm
	Dow IHG	STEL	SKIN
	ACGIH	TWA	20 ppm
	CAL PEL	PEL	70 mg/m3 20 ppm

### Exposure controls

**Engineering controls:** Use local exhaust ventilation with a minimum capture velocity of 150 ft/min. (0.75 m/sec.) at the point of dust or mist evolution. Refer to the current edition of "Industrial Ventilation: A Manual of Recommended Practice" published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

**Protective measures:** Facilities storing or utilizing this material should be equipped with an eyewash facility.

### Individual protection measures

**Eye/face protection:** Use safety glasses with side shields (ANSI Z87.1 or approved equivalent). Eye protection worn must be compatible with respiratory protection system employed.

#### Skin protection

**Hand protection:** Cotton or canvas gloves.

**Respiratory protection:** A respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements or equivalent must be followed whenever workplace conditions warrant a respirator's use. None required under normal operating conditions. When dusty conditions



are encountered, wear a properly fitted NIOSH approved (or equivalent) half-mask, air-purifying respirator. Air-purifying respirators should be equipped with NIOSH approved (or equivalent) organic vapor cartridges and N95 filters. If oil mist is present, use R95 or P95 filters.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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### Appearance

Physical state	pellets
Color	clear
Odor	Acrylic odor
Odor Threshold	No data available
pH	Not Applicable
Melting point/range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	Not applicable
Flash point	Not applicable
Evaporation Rate (Butyl Acetate = 1)	Not Applicable
Flammability (solid, gas)	Not expected to form explosive dust-air mixtures.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor Pressure	Not Applicable
Relative Vapor Density (air = 1)	Not Applicable
Relative Density (water = 1)	No data available
Water solubility	practically insoluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	393.00 °C (739.40 °F) estimated
Decomposition temperature	No data available
Dynamic Viscosity	Not Applicable
Kinematic Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Liquid Density	0.66 g/cm <sup>3</sup> Bulk density
Molecular weight	No data available
Percent volatility	1.00 % maximum

NOTE: The physical data presented above are typical values and should not be construed as a specification.

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## 10. STABILITY AND REACTIVITY

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Reactivity: No data available

**Chemical stability:** No data available

**Possibility of hazardous reactions:** None known.

Product will not undergo polymerization.

This material is considered stable.

**Conditions to avoid:** No data available

**Incompatible materials:** There are no known materials which are incompatible with this product.

**Hazardous decomposition products:** Thermal decomposition may yield acrylic monomers.

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## **11. TOXICOLOGICAL INFORMATION**

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*Toxicological information appears in this section when such data is available.*

### **Acute toxicity**

#### **Acute oral toxicity**

LD50, Rat, > 5,000 mg/kg

#### **Acute dermal toxicity**

LD50, Rabbit, > 3,000 mg/kg

#### **Acute inhalation toxicity**

Product test data not available. Refer to component data.

### **Skin corrosion/irritation**

slight irritation

### **Serious eye damage/eye irritation**

slight irritation

### **Sensitization**

Product test data not available. Refer to component data.

### **Specific Target Organ Systemic Toxicity (Single Exposure)**

Product test data not available. Refer to component data.

### **Specific Target Organ Systemic Toxicity (Repeated Exposure)**

Product test data not available. Refer to component data.

### **Carcinogenicity**

Product test data not available. Refer to component data.

### **Teratogenicity**

Product test data not available. Refer to component data.

### **Reproductive toxicity**

Product test data not available. Refer to component data.

**Mutagenicity**

Product test data not available. Refer to component data.

**Aspiration Hazard**

Product test data not available. Refer to component data.

**Additional information**

No data are available for this material. The information shown is based on profiles of compositionally similar materials.

**COMPONENTS INFLUENCING TOXICOLOGY:**

**Acrylic polymer(s)**

**Acute inhalation toxicity**

The LC50 has not been determined.

**Toluene**

**Acute inhalation toxicity**

LC50, Rat, male and female, 4 Hour, vapour, > 20 mg/l

**Sensitization**

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

May cause drowsiness or dizziness.

Route of Exposure: Inhalation

Target Organs: Central nervous system

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

In animals, effects have been reported on the following organs:

central nervous system (CNS) effects

Excessive exposure may cause neurologic signs and symptoms.

Toluene has caused hearing loss in laboratory animals upon exposure to high concentrations.

Intentional misuse by deliberately inhaling toluene may cause nervous system damage, hearing loss, liver and kidney effects and death.

**Carcinogenicity**

Did not cause cancer in laboratory animals.

**Teratogenicity**

In laboratory animals, toluene has been toxic to the fetus at doses toxic to the mother; it has caused birth defects in mice when administered orally, but not by inhalation.

**Reproductive toxicity**

In animal studies, did not interfere with reproduction.

**Mutagenicity**

The majority and most reliable of the many genetic toxicity studies on toluene, both in vitro and in animals, indicate that it is not genetically toxic.

**Aspiration Hazard**



May be fatal if swallowed and enters airways.

### **2-Methylacrylic acid**

#### **Acute inhalation toxicity**

LC50, Rat, 4 Hour, dust/mist, > 1 mg/l OECD Test Guideline 403

#### **Sensitization**

For skin sensitization:

Did not cause allergic skin reactions when tested in guinea pigs.

Did not cause allergic skin reactions when tested in humans.

For respiratory sensitization:

No relevant data found.

#### **Specific Target Organ Systemic Toxicity (Single Exposure)**

May cause respiratory irritation.

Route of Exposure: Inhalation

Target Organs: Respiratory Tract

#### **Specific Target Organ Systemic Toxicity (Repeated Exposure)**

Repeated excessive exposures may cause

Respiratory effects.

#### **Carcinogenicity**

Did not cause cancer in laboratory animals.

#### **Teratogenicity**

Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

#### **Reproductive toxicity**

In animal studies, did not interfere with reproduction. In animal studies, did not interfere with fertility.

#### **Mutagenicity**

In vitro genetic toxicity studies were negative in some cases and positive in other cases.

Animal genetic toxicity studies were negative.

#### **Aspiration Hazard**

No aspiration toxicity classification

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## **12. ECOLOGICAL INFORMATION**

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*Ecotoxicological information appears in this section when such data is available.*

#### **General Information**

There is no data available for this product.

#### **Toxicity**

##### **Acrylic polymer(s)**

Acute toxicity to fish

No relevant data found.

**Toluene**

**Acute toxicity to fish**

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, 5.8 mg/l

LC50, Fish, flow-through test, 96 Hour, 5.5 mg/l

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), static test, 24 Hour, 7 mg/l, OECD Test Guideline 202

LC50, water flea Ceriodaphnia dubia, semi-static test, 48 Hour, 3.78 mg/l

**Acute toxicity to algae/aquatic plants**

EbC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Biomass, 12.5 mg/l, OECD Test Guideline 201

**Toxicity to bacteria**

IC50, Bacteria, 16 Hour, 29 mg/l

**Chronic toxicity to fish**

NOEC, Fish, flow-through test, 40 d, growth, 1.4 mg/l

**Chronic toxicity to aquatic invertebrates**

NOEC, Ceriodaphnia dubia (water flea), 7 d, number of offspring, 0.74 mg/l

NOEC, Daphnia magna (Water flea), 21 day, number of offspring, 2 mg/l

**Toxicity to soil-dwelling organisms**

LC50, Eisenia fetida (earthworms), 150 - 280 mg/kg

**2-Methylacrylic acid**

**Acute toxicity to fish**

Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).

LC50, Oncorhynchus mykiss (rainbow trout), flow-through test, 96 Hour, 85 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), flow-through test, 48 Hour, > 130 mg/l

**Acute toxicity to algae/aquatic plants**

ErC50, Scenedesmus capricornutum (fresh water algae), static test, 72 Hour, Growth rate, 45 mg/l, OECD Test Guideline 201 or Equivalent

**Toxicity to bacteria**

EC50, Pseudomonas putida, static test, 17 Hour, Respiration rates., 100 mg/l

**Chronic toxicity to fish**

NOEC, Danio rerio (zebra fish), flow-through test, 35 d, number of offspring, 10 mg/l

**Chronic toxicity to aquatic invertebrates**

NOEC, Daphnia magna (Water flea), flow-through test, 21 d, number of offspring, 53 mg/l

**Persistence and degradability**

Acrylic polymer(s)

**Biodegradability:** No relevant data found.

Toluene

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Not applicable

**Biodegradation:** 100 %

**Exposure time:** 14 d

**Method:** OECD Test Guideline 301C or Equivalent

**Theoretical Oxygen Demand:** 3.13 mg/mg Calculated.

**Photodegradation**

**Test Type:** Half-life (indirect photolysis)

**Sensitizer:** OH radicals

**Atmospheric half-life:** 2 d

**Method:** Estimated.

2-Methylacrylic acid

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Pass

**Biodegradation:** 86 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301D or Equivalent

**Photodegradation**

**Test Type:** Half-life (indirect photolysis)

**Sensitizer:** OH radicals

**Atmospheric half-life:** 6.884 Hour

**Method:** Estimated.

**Photodegradation**

**Test Type:** Half-life (indirect photolysis)

**Sensitizer:** Ozone.

**Atmospheric half-life:** 1.007 d

**Method:** Estimated.

**Bioaccumulative potential**

Acrylic polymer(s)

**Bioaccumulation:** No relevant data found.

Toluene

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** 2.73 Measured

**Bioconcentration factor (BCF):** 13.2 - 90 Fish Measured

2-Methylacrylic acid



**Bioaccumulation:** No bioconcentration is expected because of the relatively high water solubility.

**Partition coefficient: n-octanol/water(log Pow):** 0.93 Measured

**Bioconcentration factor (BCF):** 3.16 Estimated.

#### Mobility in soil

##### Acrylic polymer(s)

No relevant data found.

##### Toluene

Potential for mobility in soil is very high (Koc between 0 and 50).

**Partition coefficient (Koc):** 37 - 178 Estimated.

##### 2-Methylacrylic acid

Potential for mobility in soil is very high (Koc between 0 and 50).

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### 13. DISPOSAL CONSIDERATIONS

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**Disposal methods:** For disposal, incinerate this material at a facility that complies with local, state, and federal regulations.

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### 14. TRANSPORT INFORMATION

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#### DOT

Not regulated for transport

#### Classification for SEA transport (IMO-IMDG):

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

Not regulated for transport

Consult IMO regulations before transporting ocean bulk

#### Classification for AIR transport (IATA/ICAO):

Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

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**15. REGULATORY INFORMATION**

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**OSHA Hazard Communication Standard**

This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312**

This product is not a hazardous chemical under 29CFR 1910.1200, and therefore is not covered by Title III of SARA.

**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**Pennsylvania**

Any material listed as "Not Hazardous" in the CAS REG NO. column of SECTION 2, Composition/Information On Ingredients, of this MSDS is a trade secret under the provisions of the Pennsylvania Worker and Community Right-to-Know Act.

The following chemicals are listed because of the additional requirements of Pennsylvania law:

**Components****CASRN**

Ethyl acrylate

140-88-5

**California (Proposition 65)**

This product contains trace levels of a component or components known to the state of California to cause cancer:

**Components****CASRN**

Ethyl acrylate

140-88-5

**California (Proposition 65)**

This product contains trace levels of a component or components known to the state of California to cause cancer and birthdefects or other reproductive harm:

**Components****CASRN**

Benzene

71-43-2

**California (Proposition 65)**

This product contains a component or components known to the state of California to cause birth defects or other reproductive harm:

**Components****CASRN**

Toluene

108-88-3

**United States TSCA Inventory (TSCA)**

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

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**16. OTHER INFORMATION**

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**Hazard Rating System****HMIS**

Health	Flammability	Physical Hazard
1	1	0

**Revision**

Identification Number: 101083242 / A001 / Issue Date: 04/29/2016 / Version: 4.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

**Legend**

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
BEI	Biological Exposure Indices
C	Ceiling
CAL PEL	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
CEIL	Acceptable ceiling concentration
Dow IHG	Dow Industrial Hygiene Guideline
OSHA Z-2	USA. Occupational Exposure Limits (OSHA) - Table Z-2
Peak	Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift
PEL	Permissible exposure limit
SKIN	Absorbed via skin
STEL	Short term exposure limit
TWA	Time weighted average

**Information Source and References**

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

THE DOW CHEMICAL COMPANY urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.



## SAFETY DATA SHEET

XYLOL

Product ID: AA200503

Revised: 06-15-2016

Replaces: 06-10-2016

### 1. IDENTIFICATION

**Product Identifier:** XYLOL  
**Other Identifiers:** Xylene; Mixed Xylenes and Ethylbenzene; Dimethyl Benzenes and Ethylbenzene  
**CAS Number:** Mixture  
**Recommended Use:** No data available.  
**Restrictions on Use:** No data available.

Hydrite Chemical Co.  
300 N. Patrick Blvd.  
Brookfield, WI 53008-0948  
(262) 792-1450

**EMERGENCY RESPONSE NUMBERS:**  
**24 Hour Emergency #:** (414) 277-1311  
**CHEMTREC Emergency #:** (800) 424-9300

### 2. HAZARD(S) IDENTIFICATION

**GHS Classification(s):** Aspiration Hazard Category 1  
Skin Corrosion/Irritation Category 2  
Serious Eye Damage/Eye Irritation Category 2A  
Carcinogenicity Category 2  
Reproductive Toxicity Category 2  
Specific Target Organ Systemic Toxicity (STOT) - Repeated Exposure Category 2  
Flammable Liquid Category 3  
Specific Target Organ Systemic Toxicity (STOT) - Single Exposure Category 3  
Acute Toxicity - Inhalation Dust / Mist Category 4  
Acute Toxicity - Dermal Category 4

**GHS Label Elements:**

**GHS Hazard Symbols:**



**Signal Word:** Danger

**Hazard Statements:** Flammable liquid and vapour.  
May be fatal if swallowed and enters airways.  
Harmful in contact with skin or if inhaled.  
Causes skin irritation.  
Causes serious eye irritation.  
May cause respiratory irritation.  
Suspected of causing cancer.  
Suspected of damaging fertility or the unborn child.  
May cause damage to organs (central nervous system, kidneys, liver) through prolonged or repeated exposure.

**Precautionary Statements:**

**Prevention:** Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Keep away from heat, sparks, open flames and hot surfaces. – No smoking.  
Ground and bond container and receiving equipment.  
Use explosion-proof electrical, ventilating, and lighting equipment.

- Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Do not breathe dust/fume/gas/mist/vapours/spray.  
Wash thoroughly after handling.  
Use only outdoors or in a well-ventilated area.  
Wear protective gloves/protective clothing/eye protection/face protection.
- Response:** IF SWALLOWED: Immediately call a POISON CENTER or doctor.  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
IF exposed or concerned: Get medical advice or attention.  
Call a POISON CENTER or doctor if you feel unwell.  
Specific treatment (see First Aid on SDS or on this label).  
Do NOT induce vomiting.  
If skin irritation occurs: Get medical advice or attention.  
If eye irritation persists: Get medical advice or attention.  
Take off contaminated clothing and wash before reuse.  
In case of fire: Use foam, dry chemical, carbon dioxide to extinguish.
- Storage:** Store in a well-ventilated place. Keep container tightly closed.  
Store in a well-ventilated place. Keep cool.  
Store in a secure manner.
- Disposal:** Dispose of in accordance with local, regional and international regulations.
- Hazards Not Otherwise Classified:** Breathing high concentrations can cause irregular heartbeats which may be fatal. Prolonged or repeated exposure may cause effects on liver and kidneys.

**Percentage of Components with Unknown Acute Toxicity:**

Oral: 100 %  
Inhalation Vapor: 100 %

**3. COMPOSITION/INFORMATION ON INGREDIENTS****Substances/Mixtures:**

<u>Chemical or Common Name/Synonyms</u>	<u>CAS Number</u>	<u>% by Wt.</u>
Xylene (Mixed Isomers)	1330-20-7	< 100 %
Ethylbenzene	100-41-4	< 40 %
Cumene	98-82-8	< 5 %
Toluene	108-88-3	< 1.0 %

Note: Any chemical identity and/or exact percentage not expressly stated is being withheld as a trade secret or is due to batch variation.

**4. FIRST-AID MEASURES****Description of Necessary Measures:**

**Eye Contact:** If in eyes: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Tilt head to avoid contaminating unaffected eye. Get immediate medical attention. Remove contact lens if easy to do. Do not use eye ointment unless under the advice of a physician. Do not use eye ointment.

**Skin Contact:** If on skin: Immediately flush skin with plenty of water while removing contaminated clothing and shoes. Do not reuse clothing or shoes until cleaned. If irritation develops or persists, get medical attention. If skin surface is not damaged, wash thoroughly with soap and water. Do not apply oils or ointments unless ordered by the physician. Discard contaminated leather articles such as shoes and belt. Injection injuries may not appear



serious at first but within a few hours, without proper treatment, the area will become swollen, discolored and extremely painful.

**Inhalation:** If inhaled: Remove to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration, preferably mouth-to-mouth. GET MEDICAL ATTENTION IMMEDIATELY.

**Ingestion:** If swallowed: Call a physician immediately. DO NOT induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. If victim is drowsy or unconscious, place on the left side with head down. Do not leave victim unattended.

**Most Important Symptoms/Effects, Acute and Delayed:**

**Eye Contact:** Causes moderate to severe irritation. Liquid contact may cause: redness. tearing. swelling. stinging. burning sensation. blurred vision. Prolonged or repeated contact may cause more serious effects.

**Skin Contact:** Causes moderate irritation. Contact may cause: redness. itching. burning sensation. Prolonged and repeated contact with skin can cause defatting and drying of the skin which may result in skin irritation and dermatitis. Prolonged or repeated contact may cause more serious effects.

**Skin Absorption:** May be harmful if absorbed through skin. May be absorbed through the skin and cause effects similar to inhalation or ingestion.

**Inhalation:** May cause moderate to severe irritation. Harmful if inhaled. Vapors or mists may irritate: respiratory tract. Inhalation overexposure may lead to central nervous system depression producing effects such as: headache. nausea. dizziness. drowsiness. anesthesia. fatigue. paralysis. unconsciousness. Extreme exposures may cause other central nervous system effects including death. Prolonged or repeated contact may cause: kidney and liver damage. Breathing high concentrations of this material, for example, in an enclosed space or by intentional abuse, can cause irregular heartbeats which can cause death.

**Ingestion:** May cause mild to severe irritation. Harmful or fatal if swallowed. May cause irritation of the: mouth. throat. stomach. May cause: pain. nausea. vomiting. central nervous system effects. dizziness. incoordination. unconsciousness. coma. death. May cause effects similar to inhalation. Liquid ingestion may result in vomiting; aspiration (breathing of liquid into the lungs) must be avoided as liquid contact with the lungs can result in chemical pneumonitis and pulmonary edema/hemorrhage. Aspiration can result in severe lung damage or death.

**Indication of Immediate Medical Attention and Special Treatment Needed:** Inhalation overexposure can produce toxic effects. Monitor for respiratory distress. If cough or difficulty in breathing develops, evaluate for upper respiratory tract inflammation, bronchitis, and pneumonitis. Administer supplemental oxygen with assisted ventilation, as required. This material (or a component) sensitizes the heart to the effects of sympathomimetic amines. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in individuals exposed to this material. Administration of sympathomimetic drugs should be avoided. Following injection, prompt debridement of the wound is necessary to minimize necrosis and tissue loss.

## 5. FIRE-FIGHTING MEASURES

**Extinguishing Media:** Dry chemical. Carbon dioxide. Foam. Water may be ineffective but should be used to cool fire-exposed structures and vessels. DO NOT USE: Direct water stream.

**Specific Hazards Arising from the Chemical:**

**Fire and Explosion Hazards:** FLAMMABLE LIQUID. Vapors are heavier than air. Vapors may settle in low or confined areas, or travel long distances along the ground or surface to an ignition source where they may ignite, flashback, or explode. Keep away from heat, sparks, flames or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment). **PROCESS HAZARD:** Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into hot equipment under a vacuum, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated-temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions. Containers exposed to intense heat from fires should be cooled with water to prevent vapor pressure buildup.



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which could result in container rupture. Container areas exposed to direct flame should be cooled with large quantities of water as needed to prevent weakening of container structure. This material releases vapors at or below ambient temperatures.

**Hazardous Combustion Products:** Carbon dioxide. Carbon monoxide. Smoke. Fumes. Unburned hydrocarbons. Aldehydes. Products of incomplete combustion.

**Special Protective Equipment and Precautions for Fire-Fighters:** Evacuate area of unprotected personnel. Wear protective clothing including NIOSH-approved self-contained breathing apparatus. Remain upwind of fire to avoid hazardous vapors and decomposition products. Use water spray to cool fire-exposed containers and disperse vapors. If a leak or spill has not ignited, use water spray to disperse the vapors. If container is not properly cooled, it can rupture in the heat of a fire. Avoid water accumulation. Product may reignite and burn on the water's surface. Do not use direct water stream. May spread fire. Avoid spraying water directly into storage containers due to danger of boil over. This liquid is volatile and gives off invisible vapors. Run-off from fire control may cause pollution.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment, Emergency Procedures:** FLAMMABLE LIQUID. Eliminate all sources of ignition. Evacuate unprotected personnel from area. Maintain adequate ventilation. Follow personal protective equipment recommendations found in Section 8. Never exceed any occupational exposure limit.

**Methods and Materials for Containment and Clean Up:** Shut off source of leak if safe to do so. Contain spill, place into drums for proper disposal. Soak up residue with non-flammable absorbent material. DO NOT use sawdust or other cellulose-type material. Place in non-leaking containers for immediate disposal. Flush remaining area with water to remove trace residue and dispose of properly. Avoid direct discharge to sewers and surface waters. Notify authorities if entry occurs. Prevent entry into basements, low areas, or confined areas. Use non-sparking tools and equipment. A vapor suppressing foam may be used to reduce vapors. Water mist or spray may be used to reduce or disperse vapors; but, it may not prevent ignition in closed spaces. This material will float on water and its run-off may create an explosion or fire hazard.

### 7. HANDLING AND STORAGE

**Precautions for Safe Handling:** Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Do not swallow. Avoid breathing vapors, mists, or dust. Do not eat, drink, or smoke in work area. Wash thoroughly after handling. Empty containers retain product residue (vapor, dust, or liquid) and can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other source of ignition. They may explode and cause injury or death. Always open containers slowly to allow any excess pressure to vent. Launder contaminated clothing before reuse. Air-dry contaminated clothing in a well ventilated area before laundering. Use appropriate grounding and bonding practices. Use non-sparking tools and equipment.

**Conditions for Safe Storage, Including any Incompatibilities:** FLAMMABLE LIQUID. Store in a cool, well ventilated area away from all sources of ignition and out of direct sunlight. Store in a dry location away from heat. Keep away from incompatible materials. Keep containers tightly closed. Do not store in unlabeled or mislabeled containers. Static electricity may accumulate and create a fire hazard. Ground fixed equipment. Bond and ground transfer containers and equipment. Avoid contamination of food or feed. Protect containers against physical damage.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### OSHA Exposure Guidelines:

<u>Component</u>	<u>Limits</u>
Xylene (Mixed Isomers)	100 ppm TWA; 435 mg/m <sup>3</sup> TWA
Ethylbenzene	100 ppm TWA; 435 mg/m <sup>3</sup> TWA
Cumene	50 ppm TWA; 245 mg/m <sup>3</sup> TWA; (Skin)
Toluene	300 ppm Ceiling; 200 ppm TWA

**XYLOL****Product ID: AA200503****ACGIH Exposure Guidelines:**

<b>Component</b>	<b>Limits</b>
Xylene (Mixed Isomers)	100 ppm TWA; 150 ppm STEL
Ethylbenzene	20 ppm TWA
Cumene	50 ppm TWA
Toluene	20 ppm TWA

**Engineering Controls:** Local exhaust ventilation, process enclosures, or other engineering controls are imperative when handling or using this product to avoid overexposure. Maintain adequate ventilation. Do not use in closed or confined spaces. Use explosion-proof ventilation equipment. Keep levels below exposure limits. To determine exposure levels, monitoring should be performed regularly.

**Individual Protection Measures:**

**Eye/Face Protection:** Wear safety glasses with side shields while handling this product. Wear additional eye protection such as chemical safety goggles and/or face shield when the possibility exists for eye contact with splashing or spraying liquid, or airborne material. Do not wear contact lenses.

**Skin Protection:** Prevent contact with this product. Wear gloves and protective clothing depending on condition of use. Protective gloves: Chemical-resistant.

**Respiratory Protection:** Respiratory protection must be worn if ventilation does not eliminate symptoms or keep levels below recommended exposure limits. If exposure limits are exceeded, wear: NIOSH-Approved organic respirator. NIOSH-Approved positive pressure supplied air respirator. NIOSH-Approved self-contained breathing apparatus. DO NOT exceed limits established by the respirator manufacturer. All respiratory protection programs must comply with OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements and must be followed whenever workplace conditions require a respirator's use.

**Other Protective Equipment:** Eye-wash station. Safety shower. Rubber apron. Chemical safety shoes. Rubber boots. Protective clothing.

**General Hygiene Conditions:** Wash with soap and water before meal times and at the end of each work shift. Good manufacturing practices require gross amounts of any chemical be removed from skin as soon as practical, especially before eating or smoking.

<b>9. PHYSICAL AND CHEMICAL PROPERTIES</b>
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**Physical State:** Liquid.

**Color:** Clear. Colorless.

**Odor:** Aromatic hydrocarbon odor.

**Odor Threshold:** N.D.

**pH:** N.A.

**Freezing Point (deg. F):** N.D.

**Melting Point (deg. F):** N.D.

**Initial Boiling Point or Boiling Range:** 280 - 288 °F

**Flash Point:** 79 °F

**Flash Point Method:** TCC.

**Evaporation Rate (nBuAc = 1):** N.D.

**Flammability (solid, gas):** N.D.

**Lower Explosion Limit:** N.A.

**Upper Explosion Limit:** N.A.

**Vapor Pressure (mm Hg):** N.D.

**Vapor Density (air=1):** N.D.

**Specific Gravity or Relative Density:** 0.865 @ 25C

**Solubility in Water:** Very slightly soluble in cold water. (<0.1 % w/w)

**Partition Coefficient (n-octanol/water):** N.D.

**Autoignition Temperature:** 810 Deg. F. (Approximate)

**Decomposition Temperature:** N.D.

**Viscosity:** N.D.



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% Volatile (wt%): N.D.

VOC (wt%): N.D.

VOC (lbs/gal): N.D.

Fire Point: N.D.

## 10. STABILITY AND REACTIVITY

**Reactivity:** No data available.

**Chemical Stability:** Stable under normal conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur under normal conditions.

**Conditions to Avoid:** Avoid contact with heat, sparks, electric arcs, other hot surfaces, and open flames. Avoid static discharges. Avoid other ignition sources. Keep away from strong oxidizing conditions and agents.

**Incompatible Materials:** Strong alkalis. Halogens or halogen compounds. Molten sulfur. Nitric Acid. Sulfuric acid. Strong acids. Alkalies. Liquid chlorine. Hydrogen peroxide. Oxygen.

**Hazardous Decomposition Products:** Carbon dioxide. Carbon monoxide. Unidentifiable organic materials. Aldehydes. Hydrocarbons.

## 11. TOXICOLOGICAL INFORMATION

**Routes of Exposure:** Eyes. Skin. Inhalation. Ingestion. Absorption.

**Symptoms/Effects: Acute, Delayed and Chronic:**

**Eye Contact:** Causes moderate to severe irritation. Liquid contact may cause: redness. tearing. swelling. stinging. burning sensation. blurred vision. Prolonged or repeated contact may cause more serious effects.

**Skin Contact:** Causes moderate irritation. Contact may cause: redness. itching. burning sensation. Prolonged and repeated contact with skin can cause defatting and drying of the skin which may result in skin irritation and dermatitis. Prolonged or repeated contact may cause more serious effects.

**Skin Absorption:** May be harmful if absorbed through skin. May be absorbed through the skin and cause effects similar to inhalation or ingestion.

**Inhalation:** May cause moderate to severe irritation. Harmful if inhaled. Vapors or mists may irritate: respiratory tract. Inhalation overexposure may lead to central nervous system depression producing effects such as: headache. nausea. dizziness. drowsiness. anesthesia. fatigue. paralysis. unconsciousness. Extreme exposures may cause other central nervous system effects including death. Prolonged or repeated contact may cause: kidney and liver damage. Breathing high concentrations of this material, for example, in an enclosed space or by intentional abuse, can cause irregular heartbeats which can cause death.

**Ingestion:** May cause mild to severe irritation. Harmful or fatal if swallowed. May cause irritation of the: mouth. throat. stomach. May cause: pain. nausea. vomiting. central nervous system effects. dizziness. incoordination. unconsciousness. coma. death. May cause effects similar to inhalation. Liquid ingestion may result in vomiting; aspiration (breathing of liquid into the lungs) must be avoided as liquid contact with the lungs can result in chemical pneumonitis and pulmonary edema/hemorrhage. Aspiration can result in severe lung damage or death.

**Numerical Measures of Toxicity:**

<u>Component</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Inhalation LC50</u>
Xylene (Mixed Isomers)	No Data	Rabbit: > 4350 mg/kg	No Data
Ethylbenzene	No Data	Rabbit: 15400 mg/kg	No Data
Cumene	No Data	Rabbit: 12300 µL/kg	No Data
Toluene	No Data	Rabbit: 12000 mg/kg	No Data

**Cancer Information:**

This product contains 0.1% or more of the following chemicals listed by NTP, IARC or OSHA as known or possible carcinogens:  
ethylbenzene



## Cumene

**Medical Conditions Aggravated by Exposure to Product:** Eye disorders. Skin disorders. Liver disorders. Kidney disorders. Respiratory system disorders. Central nervous system disorders. Heart disorders. Auditory System Disorders.

**Other:** Prolonged or repeated overexposure to xylene, a component of this product, has been associated with hearing damage in laboratory animals.

Xylenes, mixed isomers: Overexposure to xylene may cause upper respiratory tract irritation, headache, cyanosis, blood serum changes, CNS damage and narcosis. Effects may be increased by the use of alcoholic beverages. Evidence of liver and kidney impairment were reported in workers recovering from a gross over-exposure. Suspected of damaging fertility or the unborn child. ETHYLBENZENE: Effects from Prolonged or Repeated Exposure: Findings from a 2-year inhalation study in rodents conducted by NTP were as follows: Effects were observed only at the highest exposure level (750 ppm). At this level the incidence of renal tumors was elevated in male rats (tubular carcinomas) and female rats (tubular adenomas). Also, the incidence of tumors was elevated in male mice (alveolar and bronchiolar carcinomas) and female mice (hepatocellular carcinomas). IARC has classified ethyl benzene as "possibly carcinogenic to humans" (Group 2B). Studies in laboratory animals indicate some evidence of post-implantation deaths following high levels of maternal exposure. The relevance of these findings to humans is not clear at this time. Studies in laboratory animals indicate limited evidence of renal malformations, resorptions, and developmental delays following high levels of maternal exposure. The relevance of these findings to humans is not clear at this time. Studies in laboratory animals indicate some evidence of adverse effects on the liver, kidney, thyroid, and pituitary gland. TOLUENE: Effects from Acute Exposure: Deliberate inhalation of toluene at high concentrations (e.g., glue sniffing and solvent abuse) has been associated with adverse effects on the liver, kidney and nervous system and can cause CNS depression, cardiac arrhythmias and death. Case studies of persons abusing toluene suggest isolated incidences of adverse effects on the fetus including birth defects. Effects from Repeated or Prolonged Exposure: Studies of workers indicate long-term exposure may be related to impaired color vision and hearing. Some studies of workers suggest long-term exposure may be related to neurobehavioral and cognitive changes. Some of these effects have been observed in laboratory animals following repeated exposure to high levels of toluene. Several studies of workers suggest long-term exposure may be related to small increase in spontaneous abortions and changes in some gonadotropic hormones. However, the weight of evidence does not indicate toluene is a reproductive hazard to humans. Studies in laboratory animals indicate some changes in reproductive organs following high levels of exposure, but no significant effects on mating performance or reproduction were observed. Case studies of persons abusing toluene suggest isolated incidences of adverse effects on the fetus including birth defects. Findings in laboratory animals were largely negative. Positive findings include small increases in minor skeletal and visceral malformations and developmental delays following very high levels of maternal exposure. Studies of workers indicate long-term exposures may be related to effects on the liver, kidney and blood, but these appear to be limited to changes in serum enzymes and decreased leukocyte counts. Studies in laboratory animals indicate some evidence of adverse effects on the liver, kidney, thyroid, and pituitary gland following very high levels of exposure. The relevance of these findings to humans is not clear at this time.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicological Information:** No data available.

**Chemical Fate Information:** No data available.

## 13. DISPOSAL CONSIDERATIONS

**Hazardous Waste Number:** D001

**Note:** When xylene and ethyl benzene are a spent solvent, they are classified as a hazardous waste from a nonspecific source (F003), as stated in 40 CFR 261.31. An additional EPA Hazardous Waste Number may include: D018.

**Disposal Method:** Dispose of in a permitted hazardous waste management facility following all local, state and federal regulations. DO NOT pressurize, cut, weld, solder, drill, grind or expose empty containers to heat, flame,

**XYLOL****Product ID: AA200503**

sparks or other sources of ignition. Since emptied containers retain product residue, follow label warnings even after container is emptied.

**14. TRANSPORT INFORMATION****DOT (Department of Transportation):**

**Identification Number:** UN1993  
**Proper Shipping Name:** FLAMMABLE LIQUID, N.O.S. (CONTAINS XYLENE, ETHYLBENZENE)  
**Hazard Class:** 3  
**Packing Group:** III  
**Label Required:** FLAMMABLE  
**Reportable Quantity (RQ):** 100# (Xylene-mixed isomers); 1000# (Ethyl Benzene); 5000# (Cumene); 1000# (Toluene)

**15. REGULATORY INFORMATION**

**TSCA Inventory Status:** This product or all components of this product are listed on the EPA/TSCA Inventory of Chemical Substances.

**SARA Title III Section 311/312 Category Hazards:**

<u>Immediate (Acute)</u>	<u>Delayed (Chronic)</u>	<u>Fire Hazard</u>	<u>Pressure Release</u>			<u>Reactive</u>	
Yes	Yes	Yes	No			No	
<b>Regulated Components:</b>	<b>CAS</b>	<b>CERCLA</b>	<b>SARA</b>	<b>SARA</b>	<b>U.S.</b>	<b>WI</b>	<b>Prop.</b>
<b><u>Component</u></b>	<b><u>Number</u></b>	<b><u>RQ</u></b>	<b><u>EHS</u></b>	<b><u>313</u></b>	<b><u>HAP</u></b>	<b><u>HAP</u></b>	<b><u>65</u></b>
Xylene (Mixed Isomers)	1330-20-7	Yes	No	Yes	Yes	Yes	No
Ethylbenzene	100-41-4	Yes	No	Yes	Yes	Yes	Yes
Cumene	98-82-8	Yes	No	Yes	Yes	Yes	Yes
Toluene	108-88-3	Yes	No	Yes	Yes	Yes	Yes

**\*Prop 65 - May Contain the Following Trace Components:**

This product may contain a detectable level of (a) chemical(s) subject to California proposition 65.

**16. OTHER INFORMATION****Hazard Rating System****Health:** 2\***Flammability:** 3**Reactivity:** 0

\* = Chronic Health Hazard

**NFPA Rating System****Health:** 2**Flammability:** 3**Reactivity:** 0**Special Hazard:** None**SDS Abbreviations**

N.A. = Not Applicable

N.D. = Not Determined

HAP = Hazardous Air Pollutant

VOC = Volatile Organic Compound

C = Ceiling Limit

N.E./Not Estab. = Not Established

SDS Prepared by: csh

**XYLOL**

**Product ID: AA200503**

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**Reason for Revision:** New format.

**Revised:** 06-15-2016

**Replaces:** 06-10-2016

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The data in this Safety Data Sheet relates to the specific material designated and does not relate to its use in combination with any other material or process. The data contained is believed to be correct. However, since conditions of use are outside our control it should not be taken as warranty or representation for which HYDRITE CHEMICAL CO. assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.