

# SAFETY DATA SHEET

## KLEARVAR - Gloss

Safety Data Sheet according to GB/T 16483-2008 and GB/T 17519-2013

### Section 1. Identification

**Product code** : C116628  
**GHS product identifier** : KLEARVAR  
Gloss  
**Product use** : Industrial applications, Used by spraying.  
**Material uses** : Paint or paint related material.

#### **Details of the supplier of the safety data sheet**

Mfg. in the U.S.A. and exported by:  
THE SHERWIN-WILLIAMS COMPANY  
101 W. Prospect Avenue  
Cleveland, OH 44115

Imported by:  
Sherwin Williams Asia Pacific  
Building 11, Shibe One Center, No1401 Jiangchang  
Road  
Jing'an District, Shanghai 200436, China  
Phone: +86 21 61937965  
regulatory.asia@sherwin.com

**Supplier Telephone number** : (216) 566-2902  
**e-mail address of person responsible for this SDS** : MSDS@sherwin.com

**Emergency telephone number (with hours of operation)** : 400-6267911 (24/7)  
**Hours of operation** : Emergency contact available 24 hours a day

### Section 2. Hazards identification

Classification of the substance or mixture according to GB 13690-2009 and GB 30000-2013

#### **Emergency overview**

Liquid.  
Highly flammable liquid and vapor.  
Causes skin irritation.  
Causes serious eye damage.  
May cause drowsiness or dizziness.  
Suspected of causing cancer.  
May damage fertility or the unborn child.  
May cause damage to organs through prolonged or repeated exposure.  
Harmful to aquatic life.  
Toxic to aquatic life with long lasting effects.

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## Section 2. Hazards identification

IF exposed or concerned: Get medical advice or attention. IF INHALED: Call a POISON CENTER or doctor if you feel unwell. IF IN EYES: Immediately call a POISON CENTER or doctor.

See Section 12 for environmental precautions.

**Classification of the substance or mixture** : FLAMMABLE LIQUIDS - Category 2  
SKIN CORROSION/IRRITATION - Category 2  
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1  
CARCINOGENICITY - Category 2  
TOXIC TO REPRODUCTION - Category 1B  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2  
AQUATIC HAZARD (ACUTE) - Category 3  
AQUATIC HAZARD (LONG-TERM) - Category 2

### GHS label elements

**Hazard pictograms** :



**Signal word** :

Danger

**Hazard statements** :

Highly flammable liquid and vapor.  
Causes skin irritation.  
Causes serious eye damage.  
May cause drowsiness or dizziness.  
Suspected of causing cancer.  
May damage fertility or the unborn child.  
May cause damage to organs through prolonged or repeated exposure.  
Harmful to aquatic life.  
Toxic to aquatic life with long lasting effects.

### Precautionary statements

**Prevention** :

Obtain special instructions before use. Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating or lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Avoid release to the environment. Do not breathe vapor. Wash thoroughly after handling.

**Response** :

Collect spillage. IF exposed or concerned: Get medical advice or attention. IF INHALED: Call a POISON CENTER or doctor if you feel unwell. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

**Storage** :

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

**Disposal** :

Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Physical and chemical hazards** :

Highly flammable liquid and vapor.

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## Section 2. Hazards identification

**Health hazards** : Causes skin irritation. Causes serious eye damage. May cause drowsiness or dizziness. Suspected of causing cancer. May damage fertility or the unborn child.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness

**Inhalation** : Adverse symptoms may include the following:  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Ingestion** : Adverse symptoms may include the following:  
stomach pains  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Environmental hazards** : Harmful to aquatic life. Toxic to aquatic life with long lasting effects.

**Other hazards which do not result in classification** : Please refer to the SDS for additional information. Risk of spontaneous combustion. Spraydust, cloth and other contaminated organic material should be wetted and placed in a sealed metal container. Store in a fire-proof place.

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## Section 3. Composition/information on ingredients

Substance/mixture : Mixture

**Hazardous ingredients**

Ingredient name	%	CAS number	EC number	Hazard classification
Ethyl Acetate	≥10 - ≤25	141-78-6	205-500-4	H225, H319, H336
2-Methyl-1-propanol	≤10	78-83-1	201-148-0	H226, H303 + H313, H315, H318, H332, H335, H336
n-Butyl Acetate	≤10	123-86-4	204-658-1	H226, H315, H319, H336, H402
Acetone	≤10	67-64-1	200-662-2	H225, H316, H319, H336, H410
1-Butanol	≤6.6	71-36-3	200-751-6	H226, H302, H313, H315, H318, H335, H336
Isobutylated Urea-Formaldehyde Polymer	≤10	68002-18-6		H319, H413
Lt. Aliphatic Hydrocarbon Solvent	≤4.9	64742-89-8	265-192-2	H225, H304
Toluene	≤3.9	108-88-3	203-625-9	H225, H302, H304, H315, H319, H336, H361, H373, H401, H412
2-methoxy-1-methylethyl acetate	≤3	108-65-6	203-603-9	H226, H336
Xylene, mixed isomers	≤1	1330-20-7	215-535-7	H226, H303, H304, H312 + H332, H315, H319, H335, H336, H373, H401
Dibutyl Phthalate	≤0.3	84-74-2	201-557-4	H360, H400, H410
Ethylbenzene	≤0.3	100-41-4	202-849-4	H225, H303, H304, H316, H319, H351, H373, H401
Formaldehyde (max.)	<0.1	50-00-0	200-001-8	H225, H301 + H311 + H331, H314, H317, H318, H335, H341, H350, H401, H410

*See Section 16 for the full text of the H statements declared above.*

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

### Section 3. Composition/information on ingredients

- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

#### **Most important symptoms/effects, acute and delayed**

##### **Potential acute health effects**

- Eye contact** : Causes serious eye damage.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression.

##### **Over-exposure signs/symptoms**

- Eye contact** : Adverse symptoms may include the following:  
 pain  
 watering  
 redness
- Inhalation** : Adverse symptoms may include the following:  
 nausea or vomiting  
 headache  
 drowsiness/fatigue  
 dizziness/vertigo  
 unconsciousness  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations

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## Section 4. First aid measures

- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
stomach pains  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Recommended: alcohol-resistant foam, carbon dioxide, powders.
- Unsuitable extinguishing media** : Do not use water jet.

**Specific hazards arising from the chemical** : Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides

### **Advice for firefighters**

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

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## Section 5. Fire-fighting measures

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

### Methods and materials for containment and cleaning up

**Spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

**Reference to other sections** : See Section 7 of the safety data sheet (technical measures). See Section 8 for information on appropriate personal protective equipment.

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

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## Section 7. Handling and storage

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
ethyl acetate	<b>GBZ 2.1 (China, 8/2019).</b> PC-TWA: 200 mg/m <sup>3</sup> 8 hours. PC-STEL: 300 mg/m <sup>3</sup> 15 minutes.
2-methylpropan-1-ol	<b>ACGIH TLV (United States, 3/2020).</b> TWA: 50 ppm 8 hours. TWA: 152 mg/m <sup>3</sup> 8 hours.
n-butyl acetate	<b>GBZ 2.1 (China, 8/2019).</b> PC-TWA: 200 mg/m <sup>3</sup> 8 hours. PC-STEL: 300 mg/m <sup>3</sup> 15 minutes.
acetone	<b>GBZ 2.1 (China, 8/2019).</b> PC-TWA: 300 mg/m <sup>3</sup> 8 hours. PC-STEL: 450 mg/m <sup>3</sup> 15 minutes.
n-butanol	<b>GBZ 2.1 (China, 8/2019).</b> PC-TWA: 100 mg/m <sup>3</sup> 8 hours.
toluene	<b>GBZ 2.1 (China, 8/2019). Absorbed through skin.</b> PC-TWA: 50 mg/m <sup>3</sup> 8 hours. PC-STEL: 100 mg/m <sup>3</sup> 15 minutes.
xylene isomers mixture	<b>GBZ 2.1 (China, 8/2019).</b> PC-TWA: 50 mg/m <sup>3</sup> 8 hours. PC-STEL: 100 mg/m <sup>3</sup> 15 minutes.
Dibutyl Phthalate	<b>GBZ 2.1 (China, 8/2019).</b> PC-TWA: 2.5 mg/m <sup>3</sup> 8 hours.
ethylbenzene	<b>GBZ 2.1 (China, 8/2019).</b> PC-TWA: 100 mg/m <sup>3</sup> 8 hours. PC-STEL: 150 mg/m <sup>3</sup> 15 minutes.
formaldehyde solution	<b>GBZ 2.1 (China, 8/2019). Skin sensitizer.</b> MAC: 0.5 mg/m <sup>3</sup>

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.



## Section 8. Exposure controls/personal protection

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Use safety eyewear designed to protect against splash of liquids.

### Skin protection

#### **Hand protection**

#### **Gloves**

: Wear suitable gloves tested to EN374.

: Short Term Exposure less than 10 minutes Continuous use Nitrile gloves. Hazardous ingredients Section 3 For more than 4 hours of protection in the presence of Ethyl methyl ketone or Methyl ethyl ketone Acetone or Methyl isobutyl ketone Butyl gloves 0.7mm For more than 4 hours of protection in the presence of Aromatic solvent use polyvinyl alcohol (PVA) gloves.

Long Term Exposure Spill / For prolonged or repeated handling, use PE / PE Laminate gloves > 8 hours (breakthrough time) .

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/ chemical damage and poor maintenance.

Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

#### **Body protection**

: Personnel should wear antistatic clothing made of natural fibers or of high-temperature-resistant synthetic fibers.

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

#### **Other skin protection**

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

#### **Respiratory protection**

: If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators.

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## Section 9. Physical and chemical properties

### Appearance

Physical state	: Liquid.
Color	: Not available.
Odor	: Solvent.
Odor threshold	: Not available.
pH	: Not applicable.
Melting point	: Not available.
Boiling point	: 55°C (131°F)
Flash point	: Closed cup: 16°C (60.8°F) [Pensky-Martens Closed Cup]
Evaporation rate	: 5.6 (butyl acetate = 1)
Lower and upper explosive (flammable) limits	: Lower: 0.9% Upper: 13.1%
Vapor pressure	: 24 kPa (180 mm Hg) [at 20°C]
Vapor density	: 2 [Air = 1]
Relative density	: 0.94
Solubility	: Not available.
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Kinematic (40°C (104°F)): <0.205 cm <sup>2</sup> /s (<20.5 cSt)
VOC content	: 566 g/L

### Aerosol product

Heat of combustion : 18.104 kJ/g

## Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas. : Avoid high temperature. Avoid static electricity.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.**

## Section 11. Toxicological information

### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
ethyl acetate	LD50 Oral	Rat	5620 mg/kg	-
	LC50 Inhalation Vapor	Rat	19200 mg/m <sup>3</sup>	4 hours
2-methylpropan-1-ol	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	2460 mg/kg	-
n-butyl acetate	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LD50 Oral	Rat	10768 mg/kg	-
acetone	LD50 Oral	Rat	5800 mg/kg	-
	LC50 Inhalation Vapor	Rat	24000 mg/m <sup>3</sup>	4 hours
n-butanol	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	790 mg/kg	-
Isobutylated Urea- Formaldehyde Polymer	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	>5 g/kg	-
toluene	LC50 Inhalation Vapor	Rat	49 g/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	636 mg/kg	-
2-methoxy-1-methylethyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	8532 mg/kg	-
xylene isomers mixture	LC50 Inhalation Gas.	Rat	6700 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
Dibutyl Phthalate	LD50 Oral	Rat	7499 mg/kg	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-
ethylbenzene	LD50 Oral	Rat	3500 mg/kg	-
	LC50 Inhalation Gas.	Rat	250 ppm	4 hours
formaldehyde solution	LD50 Dermal	Rabbit	270 mg/kg	-
	LD50 Oral	Rat	100 mg/kg	-

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
n-butyl acetate	Eyes - Moderate irritant	Rabbit	-	100 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
acetone	Eyes - Mild irritant	Human	-	186300 ppm	-
	Eyes - Mild irritant	Rabbit	-	10 uL	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Eyes - Severe irritant	Rabbit	-	20 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
n-butanol	Skin - Mild irritant	Rabbit	-	395 mg	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 mg	-
	Eyes - Severe irritant	Rabbit	-	0.005 MI	-
Isobutylated Urea- Formaldehyde Polymer	Skin - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Eyes - Severe irritant	Rabbit	-	24 hours 100 uL	-
toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes	-
	Eyes - Mild irritant	Rabbit	-	100 mg	-
	Eyes - Severe irritant	Rabbit	-	870 ug	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 mg	-
	Skin - Mild irritant	Pig	-	24 hours 250 mg	-

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## Section 11. Toxicological information

xylene isomers mixture	Skin - Mild irritant	Rabbit	-	uL	-
	Skin - Moderate irritant	Rabbit	-	435 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20	-
	Eyes - Mild irritant	Rabbit	-	mg	-
ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 mg	-
	Skin - Mild irritant	Rabbit	-	87 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 5	-
	Skin - Moderate irritant	Rabbit	-	mg	-
formaldehyde solution	Skin - Mild irritant	Rat	-	8 hours 60 uL	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500	-
	Skin - Moderate irritant	Rabbit	-	mg	-
	Eyes - Severe irritant	Rabbit	-	100 %	-
formaldehyde solution	Eyes - Severe irritant	Rabbit	-	500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 15	-
	Eyes - Mild irritant	Human	-	mg	-
	Eyes - Severe irritant	Rabbit	-	6 minutes 1	-
formaldehyde solution	Eyes - Severe irritant	Rabbit	-	ppm	-
	Skin - Mild irritant	Human	-	24 hours 750	-
	Skin - Severe irritant	Rabbit	-	ug	-
	Skin - Mild irritant	Human	-	750 ug	-
formaldehyde solution	Skin - Severe irritant	Human	-	72 hours 150	-
	Skin - Mild irritant	Rabbit	-	ug l	-
	Skin - Moderate irritant	Rabbit	-	0.01 %	-
	Skin - Severe irritant	Rabbit	-	540 mg	-
formaldehyde solution	Skin - Moderate irritant	Rabbit	-	24 hours 50	-
	Skin - Severe irritant	Rabbit	-	mg	-
formaldehyde solution	Skin - Severe irritant	Rabbit	-	24 hours 2	-
	Skin - Severe irritant	Rabbit	-	mg	-

### Sensitization

Not available.

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
ethyl acetate 2-methylpropan-1-ol	Category 3	-	Narcotic effects
	Category 3	-	Respiratory tract irritation
n-butyl acetate acetone	Category 3	-	Narcotic effects
	Category 3	-	Narcotic effects
n-butanol	Category 3	-	Narcotic effects
	Category 3	-	Respiratory tract irritation
	Category 3	-	Narcotic effects

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## Section 11. Toxicological information

toluene	Category 3	-	Narcotic effects
2-methoxy-1-methylethyl acetate	Category 3	-	Narcotic effects
xylene isomers mixture	Category 3	-	Respiratory tract irritation
formaldehyde solution	Category 3	-	Narcotic effects
	Category 3	-	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
toluene	Category 2	-	-
xylene isomers mixture	Category 2	-	-
ethylbenzene	Category 2	-	-

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression.

### Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
stomach pains  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

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## Section 11. Toxicological information

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Potential chronic health effects

Not available.

**General** : May cause damage to organs through prolonged or repeated exposure.

**Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : May damage the unborn child.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : Suspected of damaging fertility.

### Numerical measures of toxicity

#### Acute toxicity estimates

Route	ATE value
Oral	5639.16 mg/kg
Dermal	12243.55 mg/kg
Inhalation (gases)	361100.8 ppm
Inhalation (vapors)	112.94 mg/l

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
ethyl acetate	Acute EC50 2500000 µg/l Fresh water	Algae - Selenastrum sp.	96 hours
	Acute LC50 750000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours
	Acute LC50 154000 µg/l Fresh water	Daphnia - Daphnia cucullata	48 hours
	Acute LC50 212500 µg/l Fresh water	Fish - Heteropneustes fossilis	96 hours
	Chronic NOEC 2400 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 75.6 mg/l Fresh water	Fish - Pimephales promelas - Embryo	32 days
2-methylpropan-1-ol	Acute LC50 600 mg/l Marine water	Crustaceans - Artemia salina	48 hours
	Acute LC50 1030000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
n-butyl acetate	Acute LC50 1330000 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 4000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Acute LC50 32 mg/l Marine water	Crustaceans - Artemia salina	48 hours
acetone	Acute LC50 18000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute EC50 7200000 µg/l Fresh water	Algae - Selenastrum sp.	96 hours
	Acute LC50 4.42589 ml/L Marine water	Crustaceans - Acartia tonsa -	48 hours

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## Section 12. Ecological information

n-butanol	Acute LC50 7460000 µg/l Fresh water	Copepodid	
	Acute LC50 5600 ppm Fresh water	Daphnia - Daphnia cucullata	48 hours
Lt. Aliphatic Hydrocarbon Solvent toluene	Chronic NOEC 4.95 mg/l Marine water	Fish - Poecilia reticulata	96 hours
	Chronic NOEC 0.016 ml/L Fresh water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.1 ml/L Fresh water	Crustaceans - Daphniidae	21 days
		Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 5 µg/l Marine water	Fish - Gasterosteus aculeatus - Larvae	42 days
	Acute EC50 1983 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1730000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 >100000 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
xylene isomers mixture	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
Dibutyl Phthalate	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute EC50 3.4 µg/l Marine water	Algae - Karenia brevis	96 hours
	Acute LC50 0.87 mg/l Marine water	Crustaceans - Americamysis bahia	48 hours
	Acute LC50 2.55 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 480 µg/l Fresh water	Fish - Lepomis macrochirus - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 0.1 mg/l	Algae - Pseudokirchneriella subcapitata	72 hours
ethylbenzene	Chronic NOEC 0.07 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 25 µg/l Fresh water	Fish - Danio rerio - Embryo	5 weeks
	Acute EC50 4600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 3600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 6.53 mg/l Marine water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 2.93 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
formaldehyde solution	Acute LC50 4200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute EC50 3.48 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 0.442 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 12.98 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute EC50 3.26 mg/l Fresh water	Daphnia - Daphnia magna - Embryo	48 hours
	Acute LC50 1.41 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 0.005 mg/l Marine water	Algae - Isochrysis galbana - Exponential growth phase	96 hours
	Chronic NOEC 3000 ppm Fresh water	Crustaceans - Astacus astacus -	21 days

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## Section 12. Ecological information

	Chronic NOEC 1.56 mg/l Fresh water	Egg Fish - Oreochromis niloticus - Fingerling	12 weeks
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### Persistence/degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
ethyl acetate	-	-	Readily
2-methylpropan-1-ol	-	-	Readily
n-butyl acetate	-	-	Readily
acetone	-	-	Readily
n-butanol	-	-	Readily
toluene	-	-	Readily
xylene isomers mixture	-	-	Readily
ethylbenzene	-	-	Readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
ethyl acetate	-	30	low
Lt. Aliphatic Hydrocarbon Solvent	-	10 to 2500	high
toluene	-	90	low
xylene isomers mixture	-	8.1 to 25.9	low
Dibutyl Phthalate	-	165.96	low

### Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : Not available.

Other adverse effects : No known significant effects or critical hazards.

**Do not allow to enter drains or watercourses.**





## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Do not incinerate closed container. Incinerate in a licensed, high-temperature, hazardous-waste incinerator.



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## Section 14. Transport information

	China	ADR	IMDG	IATA
UN number	UN1263	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT	PAINT
Transport Hazard Class(es)/Label(s)	3 	3 	3 	3 
Packing group	II	II	II	II
Environmental hazards/Marine pollutant	No.	No.	No.	No.

### Additional information

China : **Emergency schedules** F-E, S-E

ADR : **Special provisions** 640 (C)  
**Tunnel code** D/E

IMDG : **Emergency schedules** F-E, S-E

-

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

### Extinguishing media

**Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.

**Unsuitable extinguishing media** : Do not use water jet.

**Incompatible materials** : Reactive or incompatible with the following materials:  
oxidizing materials

**Transport in bulk according to IMO instruments** : Not available.

**Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.**

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## Section 15. Regulatory information

**National inventory** : **Australia inventory (AIC)**: Not determined.  
**Canada inventory**: Not determined.  
**China inventory (IECSC)**: Not determined.  
**Europe inventory**: Not determined.  
**Japan inventory (CSCL)**: Not determined.  
**Japan inventory (ISHL)**: Not determined.  
**Korea inventory**: Not determined.  
**Mexico inventory**: Not determined.  
**New Zealand Inventory of Chemicals (NZIoC)**: Not determined.  
**Philippines inventory (PICCS)**: Not determined.  
**Thailand inventory**: Not determined.  
**Turkey inventory**: Not determined.  
**Taiwan Chemical Substances Inventory (TCSI)**: Not determined.  
**United States inventory (TSCA 8b)**: Not determined.  
**Vietnam inventory**: Not determined.

### List of Goods banned for Importing

None of the components are listed.

### Inventory of Hazardous Chemicals

Ingredient name	CAS number	Status	Reference number
Ethyl acetate	141-78-6	Listed	2651
Isobutanol	78-83-1	Listed	1033
n-Butyl acetate	123-86-4	Listed	2657
Acetone	67-64-1	Listed	137
n-butanol	71-36-3	Listed	2761
Methyl benzene	108-88-3	Listed	1014
1,3,5-Trimethylbenzene	108-67-8	Listed	1801
1,2,4-Trimethyl benzene	95-63-6	Listed	1800
Xylene isomers mixture	1330-20-7	Listed	358
Isopropylbenzene	98-82-8	Listed	2688
1,2,3-Trimethyl benzene	526-73-8	Listed	1799
Ethyl benzene	100-41-4	Listed	2566
Naphthalene	91-20-3	Listed	1585
Benzene	71-43-2	Listed	1733 / 49
Formaldehyde solution	50-00-0	Listed	1173
1-Octene	111-66-0	Listed	2355

### List of Goods banned for Exporting

None of the components are listed.

### List of Toxic Chemicals Severely Restricted for Importing & Exporting by China

None of the components are listed.

### Inventory of Highly Toxic Articles

None of the components are listed.

### Catalogue of Hazardous Chemicals of Priority Management

Ethyl acetate	Listed
Toluene; Diphenyl methane; Methyl benzene	Listed
Benzene (containing benzol)	Listed

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## Section 16. Other information

### History

**Date of printing** : 2021/06/25.  
**Date of issue/Date of revision** : 2021/06/25.  
**Date of previous issue** : 2021/04/13.  
**Version** : 3.02  
**Key to abbreviations** : ATE = Acute Toxicity Estimate  
 BCF = Bioconcentration Factor  
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
 IATA = International Air Transport Association  
 IBC = Intermediate Bulk Container  
 IMDG = International Maritime Dangerous Goods  
 LogPow = logarithm of the octanol/water partition coefficient  
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
 N/A = Not available  
 SGG = Segregation Group  
 UN = United Nations

### Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 2	On basis of test data
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1	Calculation method
CARCINOGENICITY - Category 2	Calculation method
TOXIC TO REPRODUCTION - Category 1B	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
AQUATIC HAZARD (ACUTE) - Category 3	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 2	Calculation method

### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

**Full text of classifications [CLP/GHS]** : FLAMMABLE LIQUIDS - Category 2  
 SKIN CORROSION/IRRITATION - Category 2  
 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1  
 CARCINOGENICITY - Category 2  
 TOXIC TO REPRODUCTION - Category 1B  
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3  
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2  
 AQUATIC HAZARD (ACUTE) - Category 3  
 AQUATIC HAZARD (LONG-TERM) - Category 2

**Full text of abbreviated H statements** : H225 - Highly flammable liquid and vapor.  
 H315 - Causes skin irritation.  
 H318 - Causes serious eye damage.  
 H336 - May cause drowsiness or dizziness.  
 H351 - Suspected of causing cancer.  
 H360 - May damage fertility or the unborn child.  
 H373 - May cause damage to organs through prolonged or repeated exposure.  
 H402 - Harmful to aquatic life.  
 H411 - Toxic to aquatic life with long lasting effects.

## Section 16. Other information

**Precautionary statements** :

- P201 - Obtain special instructions before use.
- P280 - Wear protective gloves, protective clothing and eye or face protection.
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P241 - Use explosion-proof electrical, ventilating or lighting equipment.
- P242 - Use non-sparking tools.
- P243 - Take action to prevent static discharges.
- P273 - Avoid release to the environment.
- P260 - Do not breathe vapor.
- P264 - Wash thoroughly after handling.
- P391 - Collect spillage.
- P308 + P313 - IF exposed or concerned: Get medical advice or attention.
- P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
- P362 + P364 - Take off contaminated clothing and wash it before reuse.
- P302 + P352 - IF ON SKIN: Wash with plenty of water.
- P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
- P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
- P403 + P235 - Keep cool.
- P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

▀ Indicates information that has changed from previously issued version.

### Notice to reader

***It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by the manufacturer, including but not limited to the incorporation of products not specified by the manufacturer, or the use or addition of products in proportions not specified by the manufacturer. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.***

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## **Section 16. Other information**