

SAFETY DATA SHEET

High Performance Water White Conversion Varnish - Flat
Safety Data Sheet according to GB/T 16483-2008 and GB/T 17519-2013

Section 1. Identification

Product code : MC127021
GHS product identifier : High Performance Water White Conversion Varnish
Flat
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.
May cause an allergic skin reaction.
Causes serious eye damage.
May cause drowsiness or dizziness.
May cause cancer.
Harmful to aquatic life.
Harmful to aquatic life with long lasting effects.

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 skin irritation or rash occurs: Get medical advice or attention. 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
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 1A
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
AQUATIC HAZARD (ACUTE) - Category 3
AQUATIC HAZARD (LONG-TERM) - Category 3

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : Highly flammable liquid and vapor.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye damage.
May cause drowsiness or dizziness.
May cause cancer.
Harmful to aquatic life.
Harmful 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. Avoid breathing vapor. Wash thoroughly after handling.

Response : 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 skin irritation or rash occurs: Get medical advice or attention. 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.

Section 2. Hazards identification

Health hazards : Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. May cause drowsiness or dizziness. May cause cancer.

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

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

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. Harmful 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.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Hazardous ingredients

Ingredient name	%	CAS number	EC number	Hazard classification

Section 3. Composition/information on ingredients

n-Butyl Acetate	≥25 - ≤50	123-86-4	204-658-1	H226, H315, H319, H336, H402
Methylated Melamine-Formaldehyde Polymer	≤10	68002-20-0		H412
1-Butanol	≤10	71-36-3	200-751-6	H226, H302, H313, H315, H318, H335, H336
Ethyl Acetate	≤10	141-78-6	205-500-4	H225, H319, H336
Ethanol	≤5	64-17-5	200-578-6	H225, H315, H319, H350, H401, H412
2-Methyl-1-propanol	≤5	78-83-1	201-148-0	H226, H303 + H313, H315, H318, H332, H335, H336
Butylated Urea-Formaldehyde Polymer	≤3	68002-19-7		H413
1-Methoxy-2-propanol	≤3	107-98-2	203-539-1	H226, H316, H320, H336
Isobutylated Urea-Formaldehyde Polymer	≤3	68002-18-6		H319, H413
Methyl n-Amyl Ketone	≤2.9	110-43-0	203-767-1	H226, H302, H316
UV Light Absorber	<1	104810-48-2		H317, H401, H411
Benzotriazole Hydroxyphenyl Polymer	<1	104810-47-1		H317, H401, H411
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 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- 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

Section 4. First aid measures

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. Wash with plenty of soap and 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. In the event of any complaints or symptoms, avoid further exposure. 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. May cause an allergic skin reaction.
- 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
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Ingestion** : Adverse symptoms may include the following:
stomach pains

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.

Section 4. First aid measures

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 harmful 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
metal oxide/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.

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".

Section 6. Accidental release measures

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.

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). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. 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.

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
n-butyl acetate	GBZ 2.1 (China, 8/2019). PC-TWA: 200 mg/m ³ 8 hours. PC-STEL: 300 mg/m ³ 15 minutes.
n-butanol	GBZ 2.1 (China, 8/2019). PC-TWA: 100 mg/m ³ 8 hours.
ethyl acetate	GBZ 2.1 (China, 8/2019). PC-TWA: 200 mg/m ³ 8 hours. PC-STEL: 300 mg/m ³ 15 minutes.
alcohol [Dry]	ACGIH TLV (United States, 3/2020). STEL: 1000 ppm 15 minutes.
2-methylpropan-1-ol	ACGIH TLV (United States, 3/2020). TWA: 50 ppm 8 hours. TWA: 152 mg/m ³ 8 hours.
1-Methoxy-2-propanol	ACGIH TLV (United States, 3/2020). TWA: 50 ppm 8 hours. TWA: 184 mg/m ³ 8 hours. STEL: 100 ppm 15 minutes. STEL: 369 mg/m ³ 15 minutes.
heptan-2-one	ACGIH TLV (United States, 3/2020). TWA: 50 ppm 8 hours. TWA: 233 mg/m ³ 8 hours.
formaldehyde solution	GBZ 2.1 (China, 8/2019). Skin sensitizer. MAC: 0.5 mg/m ³

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.

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. Contaminated work clothing should not be allowed out of the workplace. 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

: Wear suitable gloves tested to EN374.

Gloves

:

Section 8. Exposure controls/personal protection

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.

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** : 70°C (158°F)
- Flash point** : Closed cup: 16°C (60.8°F) [Pensky-Martens Closed Cup]
- Evaporation rate** : 3.91 (butyl acetate = 1)
- Lower and upper explosive (flammable) limits** : Lower: 1.1%
Upper: 19%

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Section 9. Physical and chemical properties

Vapor pressure	: 11.5 kPa (86 mm Hg) [at 20°C]
Vapor density	: 1.5 [Air = 1]
Relative density	: 0.95
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 ² /s (>20.5 cSt)
VOC content	: 615 g/L
Aerosol product	
Heat of combustion	: 19.066 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
n-butyl acetate	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LD50 Oral	Rat	10768 mg/kg	-
n-butanol	LC50 Inhalation Vapor	Rat	24000 mg/m ³	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
ethyl acetate	LD50 Oral	Rat	790 mg/kg	-
	LD50 Oral	Rat	5620 mg/kg	-
alcohol [Dry]	LC50 Inhalation Vapor	Rat	124700 mg/m ³	4 hours
	LD50 Oral	Rat	7 g/kg	-
2-methylpropan-1-ol	LC50 Inhalation Vapor	Rat	19200 mg/m ³	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-

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1-Methoxy-2-propanol	LD50 Oral	Rat	2460 mg/kg	-
	LD50 Dermal	Rabbit	13 g/kg	-
Isobutylated Urea- Formaldehyde Polymer	LD50 Oral	Rat	6600 mg/kg	-
	LD50 Dermal	Rabbit	>5 g/kg	-
heptan-2-one	LD50 Oral	Rat	>5 g/kg	-
formaldehyde solution	LD50 Oral	Rat	1600 mg/kg	-
	LC50 Inhalation Gas.	Rat	250 ppm	4 hours
	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	-
n-butanol	Eyes - Severe irritant	Rabbit	-	24 hours 2 mg	-
	Eyes - Severe irritant Skin - Moderate irritant	Rabbit Rabbit	- -	0.005 MI 24 hours 20 mg	- -
alcohol [Dry]	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes 100 mg	-
1-Methoxy-2-propanol	Eyes - Moderate irritant	Rabbit	-	100 UI	-
	Eyes - Severe irritant	Rabbit	-	500 mg	-
	Skin - Mild irritant	Rabbit	-	400 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 mg	-
Isobutylated Urea- Formaldehyde Polymer	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
heptan-2-one	Eyes - Severe irritant	Rabbit	-	24 hours 100 UI	-
	Skin - Mild irritant	Rabbit	-	24 hours 14 mg	-
formaldehyde solution	Eyes - Mild irritant	Human	-	6 minutes 1 ppm	-
	Eyes - Severe irritant	Rabbit	-	24 hours 750 ug	-
	Eyes - Severe irritant	Rabbit	-	750 ug	-
	Skin - Mild irritant	Human	-	72 hours 150 ug l	-
	Skin - Severe irritant	Human	-	0.01 %	-
	Skin - Mild irritant Skin - Moderate irritant	Rabbit Rabbit	- -	540 mg 24 hours 50 mg	- -
	Skin - Severe irritant	Rabbit	-	24 hours 2 mg	-

Sensitization

Not available.

Mutagenicity

Section 11. Toxicological information

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
n-butyl acetate	Category 3	-	Narcotic effects
n-butanol	Category 3	-	Respiratory tract irritation
ethyl acetate	Category 3	-	Narcotic effects
2-methylpropan-1-ol	Category 3	-	Respiratory tract irritation
1-Methoxy-2-propanol	Category 3	-	Narcotic effects
formaldehyde solution	Category 3	-	Narcotic effects Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

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. May cause an allergic skin reaction.

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

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- Skin contact** : Adverse symptoms may include the following:
 pain or irritation
 redness
 blistering may occur
- Ingestion** : Adverse symptoms may include the following:
 stomach pains

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** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	9314.33 mg/kg
Dermal	24930.21 mg/kg
Inhalation (vapors)	182.7 mg/l

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
n-butyl acetate	Acute LC50 32 mg/l Marine water	Crustaceans - Artemia salina	48 hours
	Acute LC50 18000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
n-butanol	Acute EC50 1983 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1730000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
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

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alcohol [Dry]	Chronic NOEC 75.6 mg/l Fresh water	Fish - Pimephales promelas - Embryo	32 days
	Acute EC50 17.921 mg/l Marine water	Algae - Ulva pertusa	96 hours
2-methylpropan-1-ol	Acute EC50 2000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - Artemia franciscana - Larvae	48 hours
	Acute LC50 42000 µg/l Fresh water	Fish - Oncorhynchus mykiss	4 days
	Chronic NOEC 4.995 mg/l Marine water	Algae - Ulva pertusa	96 hours
heptan-2-one formaldehyde solution	Chronic NOEC 100 µl/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 0.375 µl/L Fresh water	Fish - Gambusia holbrooki - Larvae	12 weeks
	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
	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 131000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute EC50 3.48 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 0.788 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 1.56 mg/l Fresh water	Fish - Oreochromis niloticus - Fingerling	12 weeks

Persistence/degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
n-butyl acetate	-	-	Readily
n-butanol	-	-	Readily
ethyl acetate	-	-	Readily
alcohol [Dry]	-	-	Readily
2-methylpropan-1-ol	-	-	Readily
heptan-2-one	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
ethyl acetate	-	30	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : 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.

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, CO₂, water spray (fog) or foam.
Unsuitable extinguishing media : Do not use water jet.

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Section 14. Transport information

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.

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
n-Butyl acetate	123-86-4	Listed	2657
n-butanol	71-36-3	Listed	2761
Ethyl acetate	141-78-6	Listed	2651
Ethanol	64-17-5	Listed	107 / 2568
Isobutanol	78-83-1	Listed	1033
2-Heptanone	110-43-0	Listed	829
Nitrocellulose	9004-70-0	Listed	2208
2-Propanol	67-63-0	Listed	111
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
Methyl benzene	108-88-3	Listed	1014
Formaldehyde solution	50-00-0	Listed	1173
Methanol	67-56-1	Listed	1022

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Section 15. Regulatory information

1,4-Dioxacyclohexane	123-91-1	Listed	647
Propylene oxide	75-56-9	Listed	979
Acetaldehyde	75-07-0	Listed	2627
Epoxyethane	75-21-8	Listed	981
Hydrochloric acid; Hydrogen chloride	7647-01-0	Listed	2507

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
Nitrocellulose	Listed
Benzene (containing benzol)	Listed
Toluene; Diphenyl methane	Listed
Methanol; Wood alcohol	Listed
Propylene oxide	Listed
Acetaldehyde	Listed
Ethylene oxide	Listed

Section 16. Other information

History

Date of printing : 2021/02/12.

Date of issue/Date of revision : 2021/02/12.

Date of previous issue : 2020/10/20.

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

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Section 16. Other information

Classification	Justification
FLAMMABLE LIQUIDS - Category 2 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SKIN SENSITIZATION - Category 1 CARCINOGENICITY - Category 1A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 AQUATIC HAZARD (ACUTE) - Category 3 AQUATIC HAZARD (LONG-TERM) - Category 3	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method 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
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 1A
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
AQUATIC HAZARD (ACUTE) - Category 3
AQUATIC HAZARD (LONG-TERM) - Category 3
- Full text of abbreviated H statements** : H225 - Highly flammable liquid and vapor.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H318 - Causes serious eye damage.
H336 - May cause drowsiness or dizziness.
H350 - May cause cancer.
H402 - Harmful to aquatic life.
H412 - Harmful to aquatic life with long lasting effects.
- 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.
P261 - Avoid breathing vapor.
P264 - Wash thoroughly after handling.
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.
P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.
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

Date of issue/Date of revision	: 2021/02/12.	Date of previous issue	: 2020/10/20.	Version	: 3.02 18/20
SHW-A4-AP-GH432-CN					

Section 16. Other information

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.

Section 16. Other information