

SAFETY DATA SHEET

Section 1. Identification

Product identifier : UP2391
Product name : SYSTEM 20 STANDARD HARDENER 2.1 VOC
Other means of identification : UP2392; UP2393; UP2395
Date of issue : 2/19/2026
Version : 2.23

Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Coating component.
Uses advised against : Not for sale to or use by consumers.

Supplier's details : U-POL CANADA LIMITED
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Product information : (855) 6-AXALTA

Emergency telephone number : CHEMTREC: +44 (0) 870 8200418 (24 hrs)

Section 2. Hazard identification

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 2
SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

GHS label elements

Hazard pictograms :



Signal word : Danger

Section 2. Hazard identification

Hazard statements	: H225 - Highly flammable liquid and vapor. H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation. H335 - May cause respiratory irritation. H336 - May cause drowsiness or dizziness. H351 - Suspected of causing cancer. H370 - Causes damage to organs.
Precautionary statements	
Prevention	: P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P271 - Use only outdoors or in a well-ventilated area. P260 - Do not breathe vapor. P270 - Do not eat, drink or smoke when using this product. P264 - Wash hands thoroughly after handling. P272 - Contaminated work clothing should not be allowed out of the workplace. P280 - Wear protective gloves, protective clothing and eye or face protection.
Response	: P308 + P311 - IF exposed or concerned: Call a POISON CENTER or doctor. P304 + P340, P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. 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 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
Storage	: P405 - Store locked up. P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
Disposal	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	: None known.

Section 3. Composition/information on ingredients

Substance/mixture	: Mixture
Other means of identification	: UP2392; UP2393; UP2395

Ingredient name	Synonyms	% (w/w)	Identifiers	
Hexamethylene diisocyanate, oligomers	Hexane, 1,6-diisocyanato-, homopolymer; Hexamethylene diisocyanate, homopolymer; Hexamethylene diisocyanate polymer; Isocyanic acid, hexamethylene ester; Hexamethylene diisocyanate (HDI) homopolymer; Poly(hexamethylene	≥15 - ≤40	CAS: 28182-81-2	

Section 3. Composition/information on ingredients

	diisocyanate); Polymer of 1,6-diisocyanatohexane; Trimer of isocyanate monomer (including crude tolylene diisocyanate, polymethylene polyphenyl polyisocyanate), and polymer thereof (i.e. isocyanurate-containing isocyanate).; Polymer (i.e. urethodione group bearing isocyanate) of isocyanate monomer; Condensate (i.e. carbodiimide group-bearing isocyanate) or isocyanate monomer; 1,6-Diisocyanatohexane homopolymer			
methyl acetate	Acetic acid, methyl ester; Methyl ester of acetic acid; Methyl ethanoate; Acetic acid methyl ester; ACETATE, METHYL; Acetic methylester	≥15 - ≤40	CAS: 79-20-9	
4-chloro- α,α,α -trifluorotoluene	Benzene, 1-chloro-4-(trifluoromethyl)-; Benzene, 1-chloro-4-trifluoromethyl)-; 4-Chlorobenzotrifluoride; 1-chloro-4-(trifluoromethyl)benzene; Toluene, p-chloro-alpha, alpha, alpha-trifluoro-; p-chloro- α,α,α -trifluorotoluene; para-chlorobenzotrifluoride; PCBTF; 4-trifluoromethylchlorobenzene; p-chlorobenzotrifluoride; parachlorobenzotrifluoride	≥15 - ≤40	CAS: 98-56-6	
n-butyl acetate	Acetic acid, butyl ester; Butyl Acetate; n-Butyl-acetate; Butyl ethanoate; n-Butyl ester of acetic acid; product composed of hydrocarbons (predominantly paraffinic and naphthenic) and n-butyl acetate; 1-butyl acetate; 1-Acetoxybutane; Butyl ester, Acetic acid; normal butyl acetate; Acetic acid, n-butyl ester	≥1 - ≤5	CAS: 123-86-4	
solvent naphtha (petroleum), light aromatic	Low boiling point naphtha - unspecified; Solvent naphtha (petroleum), light arom; Solvent naphtha, petroleum, light aromatic; Aromatic hydrocarbon solvents - medium flashpoint; Light aromatic solvent naphtha; Solvent naphtha, light aromatic; Solvent naphtha (petroleum), light aromatic; Light aromatic solvent naphtha (petroleum) (C8 to C10); Solvent naphtha, petroleum, light arom.; AROMATIC PETROLUEM DISTILLATE; SOLVENT, AROMATIC PETROLEUM	≥0.5 - ≤1.5	CAS: 64742-95-6	

Section 3. Composition/information on ingredients

Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

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

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

- Eye contact** : 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. Get medical attention. If necessary, call a poison center or physician.
- Inhalation** : 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. Get medical attention. If necessary, call a poison center or physician. 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** : 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. Get medical attention. If necessary, call a poison center or physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. 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. Get medical attention. If necessary, call a poison center or 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 irritation.
- Inhalation** : Causes damage to organs following a single exposure if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes damage to organs following a single exposure in contact with skin. Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : Causes damage to organs following a single exposure if swallowed. Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

Section 4. First-aid measures

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : No specific data.

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** : Use dry chemical, CO₂, water spray (fog) or foam.
- 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.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds
carbonyl halides

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.

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. Avoid breathing 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).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. 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.

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. 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.

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.

Storage code : IA

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Hexamethylene diisocyanate, oligomers	CA Quebec Provincial (Canada, 2/2024) [Isocyanate oligomers] Sensitizer.
methyl acetate	CA Saskatchewan Provincial (Canada, 4/2021) STEL 15 minutes: 250 ppm. TWA 8 hours: 200 ppm. CA British Columbia Provincial (Canada, 9/2024) TWA 8 hours: 200 ppm. STEL 15 minutes: 250 ppm. CA Ontario Provincial (Canada, 6/2019) TWA 8 hours: 200 ppm. STEL 15 minutes: 250 ppm. CA Quebec Provincial (Canada, 2/2024) TWAEV 8 hours: 200 ppm. TWAEV 8 hours: 606 mg/m ³ . STEV 15 minutes: 250 ppm. STEV 15 minutes: 757 mg/m ³ . CA Alberta Provincial (Canada, 3/2023) OEL 8 hours: 606 mg/m ³ . OEL 15 minutes: 757 mg/m ³ . OEL 15 minutes: 250 ppm. OEL 8 hours: 200 ppm.
n-butyl acetate	CA Saskatchewan Provincial (Canada, 4/2021) STEL 15 minutes: 200 ppm. TWA 8 hours: 150 ppm. CA British Columbia Provincial (Canada, 9/2024) [butyl acetate, all isomers] STEL 15 minutes: 150 ppm. TWA 8 hours: 50 ppm.

Section 8. Exposure controls/personal protection

CA Ontario Provincial (Canada, 6/2019)
[butyl acetates, all isomers]
 STEL 15 minutes: 150 ppm.
 TWA 8 hours: 50 ppm.
CA Quebec Provincial (Canada, 2/2024)
[butyl acetates]
 STEV 15 minutes: 150 ppm.
 TWAEV 8 hours: 50 ppm.
CA Alberta Provincial (Canada, 3/2023)
 OEL 15 minutes: 200 ppm.
 OEL 15 minutes: 950 mg/m³.
 OEL 8 hours: 150 ppm.
 OEL 8 hours: 713 mg/m³.

Biological exposure indices

No exposure indices known.

- 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** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
 - Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Section 8. Exposure controls/personal protection

- Body protection** : 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.
- 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** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Liquid.
- Color** : Transparent.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not applicable.
- Melting point/freezing point** : Technically not possible to measure
- Boiling point or initial boiling point and boiling range** : 55 to 139.1°C (131 to 282.4°F)
- Flash point** : Closed cup: -3.889°C (25°F)
- Evaporation rate** : Not available.
- Flammability** : Not available.
- Lower and upper explosion limit/flammability limit** : Lower: 0.9%
Upper: 16%
- Vapor pressure** : 7 kPa (52.24 mm Hg)
- Relative vapor density** : Not available.
- Relative density** : Not available.
- Density** : 1.105 g/cm³
- Solubility in water** : Not available.
- Miscible with water** : Yes.
- Partition coefficient: n-octanol/water** : Not applicable.
- Auto-ignition temperature** : 280°C (536°F)
- Decomposition temperature** : Not applicable.
- Viscosity** : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): Not available.

Particle characteristics

- Median particle size** : Not applicable.

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.
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.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result
Hexamethylene diisocyanate, oligomers	Rat - Inhalation - LC50 Dusts and mists 18500 mg/m ³ [1 hours]
methyl acetate	Rat - Oral - LD50 >5 g/kg Rabbit - Dermal - LD50 >5 g/kg
4-chloro- α,α,α -trifluorotoluene	Rat - Oral - LD50 13 g/kg
n-butyl acetate	Rat - Oral - LD50 10768 mg/kg <u>Toxic effects:</u> Behavioral - Somnolence (general depressed activity) Lung, Thorax, or Respiration - Other changes Liver - Other changes Rabbit - Dermal - LD50 >17600 mg/kg
solvent naphtha (petroleum), light aromatic	Rat - Inhalation - LC50 Vapor 21.1 mg/l [4 hours] Rat - Oral - LD50 8400 mg/kg <u>Toxic effects:</u> Behavioral - Somnolence (general depressed activity) Behavioral - Tremor Lung, Thorax, or Respiration - Other changes Rabbit - Dermal - LD50 3492 mg/kg

Conclusion/Summary [Product] : Not available.

Skin corrosion/irritation

Product/ingredient name	Result
methyl acetate	Rabbit - Skin - Mild irritant <u>Duration of treatment/exposure:</u> 24 hours <u>Amount/concentration applied:</u> 500 mg Rabbit - Skin - Moderate irritant <u>Duration of treatment/exposure:</u> 24 hours <u>Amount/concentration applied:</u> 20 mg

Section 11. Toxicological information

Conclusion/Summary [Product] : Not available.

Serious eye damage/eye irritation

Product/ingredient name

methyl acetate

Result

Rabbit - Eyes - Moderate irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 100 mg

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Product/ingredient name

Hexamethylene diisocyanate, oligomers

Result

Mouse - skin

OECD [Skin Sensitization: Local Lymph Node Assay]

Result: Sensitizing

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Not available.

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Not available.

Conclusion/Summary [Product] : Not available.

Classification

Product/ingredient name	IARC	NTP	ACGIH
4-chloro- α,α,α -trifluorotoluene	2B	-	-

Reproductive toxicity

Not available.

Section 11. Toxicological information

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
Hexamethylene diisocyanate, oligomers	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
methyl acetate	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1
4-chloro- α,α,α -trifluorotoluene	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
n-butyl acetate	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
solvent naphtha (petroleum), light aromatic	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Product/ingredient name	Result
solvent naphtha (petroleum), light aromatic	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure

Not available.

Potential acute health effects

Eye contact	: Causes serious eye irritation.
Inhalation	: Causes damage to organs following a single exposure if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
Skin contact	: Causes damage to organs following a single exposure in contact with skin. Causes skin irritation. May cause an allergic skin reaction.
Ingestion	: Causes damage to organs following a single exposure if swallowed. 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 or irritation watering redness
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Section 11. Toxicological information

- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : No specific data.

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.

Conclusion/Summary [Product] : Not available.

- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
STANDARD HARDENER 2.1 VOC (OPTS39)	N/A	249126.2	N/A	N/A	12.4
Hexamethylene diisocyanate, oligomers	N/A	N/A	N/A	N/A	4.625
4-chloro- α,α,α -trifluorotoluene	13000	N/A	N/A	N/A	N/A
n-butyl acetate	10768	N/A	N/A	21.1	N/A
solvent naphtha (petroleum), light aromatic	8400	3492	N/A	N/A	N/A

Section 11. Toxicological information

Section 12. Ecological information

Toxicity

Product/ingredient name	Result
Hexamethylene diisocyanate, oligomers	Acute - LC50 Fish - <i>danio rerio</i> >100 mg/l [96 hours]
methyl acetate	Acute - EC50 Daphnia - <i>Daphnia magna</i> >100 mg/l [48 hours] Acute - LC50 - Fresh water Fish - Fathead minnow - <i>Pimephales promelas</i> <u>Age</u> : 28 to 32 days; <u>Size</u> : 17.5 mm; <u>Weight</u> : 0.087 g 320 mg/l [96 hours] <u>Effect</u> : Mortality
4-chloro- α,α,α -trifluorotoluene	Acute - LC50 - Fresh water OECD [Fish, Acute Toxicity Test] Fish 3 mg/l [96 hours]
n-butyl acetate	Acute - LC50 - Marine water Fish - Inland silverside - <i>Menidia beryllina</i> 185 ppm [96 hours] <u>Effect</u> : Mortality

Conclusion/Summary [Product] : Not available.

Persistence and degradability

Product/ingredient name	Result
Hexamethylene diisocyanate, oligomers	Aerobic 1% [28 days] - Not readily
4-chloro- α,α,α -trifluorotoluene	Aerobic OECD [Ready Biodegradability - Closed Bottle Test] 19.2% [28 days] - Not readily

Conclusion/Summary [Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Hexamethylene diisocyanate, oligomers	-	-	Not readily
4-chloro- α,α,α -trifluorotoluene	-	-	Not readily

Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
Hexamethylene diisocyanate, oligomers	5.54	367.7	Low
methyl acetate	0.18	-	Low
n-butyl acetate	2.3	-	Low
solvent naphtha (petroleum), light aromatic	-	10 to 2500	High

Mobility in soil

Soil/Water partition coefficient : Not available.






Other adverse effects

No known significant effects or critical hazards.

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.

Section 14. Transport information

	TDG Classification	DOT Classification	IMDG	IATA
UN number	UN1263	UN1263	UN1263	UN1263
UN proper shipping name	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL
Transport hazard class(es)	3 	3 	3  	3 
Packing group	II	II	II	II
Environmental hazards	No.	No.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Additional information

Section 14. Transport information

- TDG Classification** : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).
- IMDG** : The marine pollutant mark is not required when transported in sizes of ≤ 5 L or ≤ 5 kg.
- IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.

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.

The actual shipping description for this product may vary based several factors including, but not limited to, the volume of material, size of the container, mode of transport and use of exemptions or exceptions found in the applicable regulations. The information provided in Section 14 is one possible shipping description for this product. Consult your shipping specialist or supplier for appropriate assignment information.

Section 15. Regulatory information

Canadian lists

- Canadian NPRI** : The following components are listed: volatile organic compounds (total); butyl acetate (all isomers); light aromatic solvent naphtha
- CEPA Toxic substances** : None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

- Canada** : All components are listed or exempted.
- United States** : All components are listed or exempted.

Section 16. Other information

History

- Date of issue** : 2/19/2026
- Version** : 2.23
- Product stewardship and regulatory compliance.

Section 16. Other information

Key to abbreviations : ATE = Acute Toxicity Estimate
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)
UN = United Nations
HPR = Hazardous Products Regulations

✔ Indicates information that has changed from previously issued version.

Notice to reader

This product is intended for industrial use only.

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