



Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 07.12.2024

Page 1 of 17

VOLTERA NORMAL HARDENER

SECTION 1: Identification

Product Identifier

Product Name: VOLTERA NORMAL HARDENER

Product code: VC702

Recommended Use of the Product and Restriction on Use

Relevant Identified Uses: Not determined or not applicable.

Uses Advised Against: Not determined or not applicable.

Reasons Why Uses Advised Against: Not determined or not applicable.

Manufacturer or Supplier Details

Manufacturer:

United States

Collision Quest Inc.

394 Kilburn Street

Fall River, MA 02724

833-272-6274

Emergency Telephone Number:

United States

Chemtrec

800-424-9300 (24 hours)

SECTION 2: Hazard(s) Identification

GHS Classification:

Flammable liquids, category 3

Skin irritation, category 2

Eye irritation, category 2A

Respiratory sensitization, category 1

Skin sensitization, category 1

Germ cell mutagenicity, category 1B

Carcinogenicity, category 1B

Specific target organ toxicity - single exposure, category 3, respiratory tract irritation

Specific target organ toxicity - single exposure, category 3, narcotic effects

Label elements

Hazard Pictograms:



Signal Word: Danger

Hazard statements:

H226 Flammable liquid and vapor

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 07.12.2024

Page 2 of 17

VOLTERA NORMAL HARDENER

H315 Causes skin irritation
H319 Causes serious eye irritation
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
H317 May cause an allergic skin reaction
H340 May cause genetic defects.
H350 May cause cancer.
H335 May cause respiratory irritation
H336 May cause drowsiness or dizziness

Precautionary Statements:

P210 Keep away from sparks, open flames and hot surfaces. No smoking.
P233 Keep container tightly closed
P240 Ground/bond container and receiving equipment
P241 Use explosion-proof electrical, ventilating, and lighting equipment.
P242 Use only non-sparking tools
P243 Take precautionary measures against static discharge
P280 Wear protective gloves/protective clothing/eye protection/face protection
P264 Wash skin thoroughly for 15 minutes after handling.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P284 Wear respiratory protection.
P272 Contaminated work clothing must not be allowed out of the workplace
P201 Obtain special instructions before use
P202 Do not handle until all safety precautions have been read and understood
P271 Use only outdoors or in a well-ventilated area
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P370+P378 In case of fire: Use agents recommended in Section 5 to extinguish.
P302+P352 IF ON SKIN: Wash with plenty of water.
P321 Specific treatment (see Sections 4-8 of this SDS and any supplemental information on the product label).
P332+P313 If skin irritation occurs: Get medical advice or attention.
P362 Take off contaminated clothing and wash it before reuse
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.
P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or physician.
P333+P313 If skin irritation or rash occurs: Get medical advice or attention.
P363 Wash contaminated clothing before reuse
P308+P313 If exposed or concerned: Get medical advice or attention.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P312 Call a POISON CENTER if you feel unwell.
P403+P235 Store in a well-ventilated place. Keep cool
P405 Store locked up
P403+P233 Store in a well-ventilated place. Keep container tightly closed
P501 Dispose of contents and container in accordance with federal, state and local regulations.

Hazards Not Otherwise Classified: None

SECTION 3: Composition/Information on Ingredients

Identification	Name	Weight %
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Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 07.12.2024

Page 3 of 17

VOLTERA NORMAL HARDENER

CAS Number: 28182-81-2	Hexamethylene diisocyanate, oligomers	20-40
CAS Number: 98-56-6	4-Chloro- α,α,α -trifluorotoluene	10-30
CAS Number: 110-43-0	Heptan-2-one	10-30
CAS Number: 53880-05-0	1,5-diisocyanato-1,3,3-trimethylcyclohexane	10-20
CAS Number: 64742-95-6	Solvent naphtha (petroleum), light arom.	3-5
CAS Number: 123-86-4	n-Butyl acetate	1-3
CAS Number: 822-06-0	Hexamethylene diisocyanate	1-3
CAS Number: 4098-71-9	5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane	1-3

Additional Information:

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of the OSHA Hazard Communication Standard (29 CFR §1910.1200).

SECTION 4: First Aid Measures

Description of First Aid Measures

General Notes:

Show this Safety Data Sheet to the doctor in attendance.

After Inhalation:

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If symptoms develop or persist, seek medical advice/attention.

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If experiencing respiratory symptoms, seek medical advice/attention.

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If exposed, seek medical advice/attention.

After Skin Contact:

Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several minutes. Launder contaminated clothing before reuse. If symptoms develop or persist, seek medical advice/attention.

After Eye Contact:

Rinse eyes with plenty of water for several minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. If symptoms develop or persist, seek medical advice/attention.

Rinse eyes with plenty of gently flowing lukewarm water for 15 minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. If symptoms develop or persist, seek medical advice/attention.

After Swallowing:

If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center. Rinse mouth with water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs. If symptoms

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 07.12.2024

Page 4 of 17

VOLTERA NORMAL HARDENER

develop or persist, seek medical advice/attention.

Most Important Symptoms and Effects, Both Acute and Delayed

Acute Symptoms and Effects:

Product is flammable. Exposure to sources of ignition may cause physical injury.

Skin contact may result in redness, pain, burning and inflammation.

Eye contact may result in irritation, redness, pain, inflammation, itching, burning and tearing.

Inhalation exposure may cause allergy, asthma symptoms or breathing difficulties. Symptoms may include cough, chronic phlegm, shortness of breath, wheezing and chest tightness. Symptoms may be delayed.

Dermal exposure may cause an allergic skin reaction. Symptoms may include irritation, redness, pain, rash, inflammation, itching, burning and dermatitis.

Inhalation may have adverse effects on the respiratory tract. Symptoms may include cough, breathing difficulties, sore throat and inflammation of the mucous membrane lining the respiratory tract.

Inhalation may have adverse effects on the central nervous system. Symptoms may include drowsiness, dizziness, headache, nausea and lowering of consciousness. Acute overexposure via inhalation may result in respiratory distress, confusion and unconsciousness.

Delayed Symptoms and Effects:

Effects are dependent on exposure (dose, concentration, contact time).

Exposure may cause genetic defects. Effects are dependent on exposure (dose, concentration, contact time).

Exposure may cause cancer. Effects are dependent on exposure (dose, concentration, contact time).

Immediate Medical Attention and Special Treatment

Specific Treatment:

Skin/eye burns require immediate treatment.

If respiratory symptoms persist, seek medical attention.

Overexposure via inhalation requires urgent medical treatment.

Notes for the Doctor:

Treat symptomatically.

SECTION 5: Firefighting Measures

Extinguishing Media

Suitable Extinguishing Media:

Dry chemical, CO₂, water spray or alcohol-resistant foam.

Water mist/fog, carbon dioxide, dry chemical or alcohol resistant foam.

Unsuitable Extinguishing Media:

Do not use water jet.

Specific Hazards During Fire-Fighting:

Flammable liquid. Will be easily ignitable by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapor explosion hazard indoors, outdoors or in sewers. Runoff to sewer may create fire or explosion hazard. Containers may explode when heated. Inhalation or contact with material may irritate or burn skin and eyes. Fire may produce irritating, corrosive and/or toxic gases. Vapors may cause dizziness or suffocation.

Thermal decomposition may produce irritating/toxic fumes/gases.

Special Protective Equipment for Firefighters:

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

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 07.12.2024

Page 5 of 17

VOLTERA NORMAL HARDENER

Special precautions:

Evacuate non-essential personnel. Ventilate closed spaces before entering. Consider initial evacuation for 300 meters in all directions. If tank/rail car is involved in the fire, ISOLATE for 800 meters in all directions. Fight fire from a maximum distance. Move containers from fire area if you can do it without risk. Use water spray/fog for cooling fire exposed containers. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Always stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles. If this is impossible, withdraw from area and let fire burn. Stand by, at a safe distance, with extinguisher ready for possible re-ignition. A vapor-suppressing foam may be used to reduce vapors. Avoid unnecessary run-off of extinguishing media which may cause pollution. Do not handle damaged containers unless specialized to do so.

Avoid contact with skin, eyes, hair and clothing. Do not breathe fumes/gas/mists/aerosols/vapors/dusts. Move containers from fire area if safe to do so. Use water spray/fog for cooling fire exposed containers. Avoid unnecessary run-off of extinguishing media which may cause pollution.

SECTION 6: Accidental Release Measures

Personal Precautions, Protective Equipment, and Emergency Procedures:

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. All equipment used when handling the product must be grounded. Wear recommended personal protective equipment (see Section 8). Avoid contact with skin, eyes and clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling.

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Avoid contact with skin, eyes and clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling.

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Do not get on skin, eyes or on clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling. Remove contaminated clothing and launder before reuse.

Environmental Precautions:

Prevent further leakage or spillage if safe to do so. Prevent from reaching drains, sewers and waterways. Discharge into the environment must be avoided.

Methods and Material for Containment and Cleaning Up:

Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Stop leak if you can do it without risk. A vapor-suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Avoid breathing dust, mist, fumes, vapors or spray. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Reference to Other Sections:

For personal protective equipment see Section 8. For disposal see Section 13.

SECTION 7: Handling and Storage

Precautions for Safe Handling:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating and lighting equipment. Take action to prevent static discharges.

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 07.12.2024

Page 6 of 17

VOLTERA NORMAL HARDENER

Handle containers with caution. Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with skin, eyes and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with skin, eyes and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

Conditions for Safe Storage, Including Any Incompatibilities:

Store in cool, dry, well-ventilated location out of direct sunlight. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Keep container tightly sealed. Store away from incompatible materials (See Section 10).

SECTION 8: Exposure Controls/Personal Protection

Only those substances with limit values have been included below.

Occupational Exposure Limit Values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
ACGIH	Heptan-2-one	110-43-0	8-Hour TWA: 50 ppm
	n-Butyl acetate	123-86-4	TLV-TWA: 50 ppm
	n-Butyl acetate	123-86-4	15-Minute STEL: 150 ppm
	5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane	4098-71-9	8-Hour TWA: 0.005 ppm
	Hexamethylene diisocyanate	822-06-0	8-Hour TWA: 0.005 ppm
NIOSH	Heptan-2-one	110-43-0	REL-TWA: 465 mg/m ³ (100 ppm [up to 10 hr])
	Heptan-2-one	110-43-0	IDLH: 800 ppm
	n-Butyl acetate	123-86-4	REL-TWA: 710 mg/m ³ (150 ppm)
	n-Butyl acetate	123-86-4	STEL: 950 mg/m ³ (200 ppm)
	n-Butyl acetate	123-86-4	IDLH: 1700 ppm
	5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane	4098-71-9	REL-TWA: 0.045 mg/m ³ (0.005 ppm [10-hour workday])
	5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane	4098-71-9	15-Minute STEL: 0.18 mg/m ³ (0.02 ppm)
	Hexamethylene diisocyanate	822-06-0	Ceiling Limit: 0.14 mg/m ³ (0.02 ppm [10-min])
	Hexamethylene diisocyanate	822-06-0	REL-TWA: 0.035 mg/m ³ (0.005 ppm [up to 10 hr])
OSHA	Heptan-2-one	110-43-0	8-Hour TWA-PEL: 465 mg/m ³ (100 ppm)
	n-Butyl acetate	123-86-4	8-Hour TWA-PEL: 710 mg/m ³ (150 ppm)
	n-Butyl acetate	123-86-4	STEL: 950 mg/m ³ (200 ppm)
United States(California)	Heptan-2-one	110-43-0	8-Hour TWA-PEL: 235 mg/m ³ (50 ppm)
	n-Butyl acetate	123-86-4	8-Hour TWA-PEL: 710 mg/m ³ (150 ppm)
	n-Butyl acetate	123-86-4	15-Minute STEL: 0 mg/m ³ (200 ppm)

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 07.12.2024

Page 7 of 17

VOLTERA NORMAL HARDENER

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane	4098-71-9	8-Hour TWA-PEL: 0.045 mg/m ³ (0.005 ppm)
	5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane	4098-71-9	15-Minute STEL: 0.02 ppm
	Hexamethylene diisocyanate	822-06-0	8-Hour TWA-PEL: 0.034 mg/m ³ (0.005 ppm)

Biological Limit Values:

Country (Legal Basis)	Substance	Identifier	Determinant	Specimen	Sampling time	Permissible limits
ACGIH	Hexamethylene diisocyanate	822-06-0	Hexamethylenediamine (with hydrolysis)	Creatinine in urine	End of shift	15 µg/g

Information on Monitoring Procedures:

Not determined or not applicable.

Appropriate Engineering Controls:

Use explosion-proof local exhaust, mechanical ventilation or additional engineering controls to maintain airborne concentrations below any occupational exposure limits. Ensure that eyewash stations and safety showers are close to the workstation location.

Emergency eye wash stations and safety showers should be available in the immediate vicinity of use or handling. Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).

Personal Protection Equipment

Eye and Face Protection:

Safety glasses or goggles. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

Skin and Body Protection:

Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and contaminated clothing. 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. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent).

Respiratory Protection:

If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn.

If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

General Hygienic Measures:

When handling chemical products, do not eat, drink or smoke. Wash hands after handling, before breaks, and at the end of the workday. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse. Perform routine housekeeping.

SECTION 9: Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 07.12.2024

Page 8 of 17

VOLTERA NORMAL HARDENER

Odor threshold	Not determined or not available.
pH	Not determined or not available.
Melting point/freezing point	Not determined or not available.
Initial boiling point/range	Not determined or not available.
Flash point (closed cup)	Not determined or not available.
Evaporation rate	Not determined or not available.
Flammability (solid, gas)	Not determined or not available.
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	Not determined or not available.
Vapor density	Not determined or not available.
Density	Not determined or not available.
Relative density	Not determined or not available.
Solubilities	Not determined or not available.
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	Not determined or not available.
Decomposition temperature	Not determined or not available.
Dynamic viscosity	Not determined or not available.
Kinematic viscosity	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

SECTION 10: Stability and Reactivity

Reactivity:

Not reactive under recommended handling and storage conditions.

Chemical Stability:

Stable under recommended handling and storage conditions.

Possibility of Hazardous Reactions:

Hazardous reactions are not anticipated under recommended conditions of handling and storage.

Conditions to Avoid:

Extreme heat, open flames, hot surfaces, sparks, ignition sources, static electricity and incompatible materials. Vapor accumulation in low or confined areas.

Extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

Incompatible Materials:

None known.

Hazardous Decomposition Products:

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological Information

Acute Toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data: No data available.

Substance Data:

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 07.12.2024

Page 9 of 17

VOLTERA NORMAL HARDENER

Name	Route	Result
Heptan-2-one	inhalation	LC50 Rat: 16.7 mg/L (4 hr [Vapor])
	oral	LD50 Rat: 1600 mg/kg
	dermal	LD50 Rabbit: > 2000 mg/kg
n-Butyl acetate	oral	LD50 Rat: 10,760 mg/kg
	dermal	LD50 Rabbit: > 14,112 mg/kg
Hexamethylene diisocyanate, oligomers	dermal	LD50 Rabbit: > 2000 mg/kg
	Inhalation ATE	LC50 Rat: 11 mg/L
5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane	inhalation	LC50 Rat: 0.135 mg/L (4 hr [mist])
	oral	LD50 Rat: 1097 mg/kg
	dermal	LD50 Rabbit: 1060 - 4780 mg/kg
1,5-diisocyanato-1,3,3-trimethylcyclohexane	oral	LD50 Rat: > 14,000 mg/kg
	inhalation	LC50 Rat: > 5.01 mg/L (4 hr [aerosol])
Solvent naphtha (petroleum), light arom.	oral	LD50 Rat: >5000 mg/kg
	dermal	LD50 Rabbit: >2000 mg/kg
	inhalation	LC50 Rat: >4.96 mg/L (4 hr [vapor])
Hexamethylene diisocyanate	oral	LD50 Rat: 959 mg/m ³
	inhalation	LC50 Rat: 0.124 mg/L (4 hr [Vapor])
	dermal	LD50 Rat: >7000 mg/kg
4-Chloro- α,α,α -trifluorotoluene	oral	LD50 Rat: 5546 mg/kg
	inhalation	LC50 Rat: > 32.03 mg/L (4 hr [Aerosol])
	dermal	LD50 Rabbit: >3300 mg/kg

Skin Corrosion/Irritation

Assessment:

Causes skin irritation.

Product Data:

No data available.

Substance Data:

Name	Result
5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane	Causes skin irritation.
Hexamethylene diisocyanate	Causes skin irritation.
4-Chloro- α,α,α -trifluorotoluene	Causes skin irritation.

Serious Eye Damage/Irritation

Assessment:

Causes serious eye irritation.

Product Data:

No data available.

Substance Data:

Name	Result
5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane	Causes serious eye irritation.

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 07.12.2024

Page 10 of 17

VOLTERA NORMAL HARDENER

Name	Result
Hexamethylene diisocyanate	Causes serious eye irritation.
4-Chloro- α,α,α -trifluorotoluene	Causes serious eye irritation.

Respiratory or Skin Sensitization

Assessment:

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

Product Data:

No data available.

Substance Data:

Name	Result
Hexamethylene diisocyanate, oligomers	May cause an allergic skin reaction.
5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane	May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
1,5-diisocyanato-1,3,3-trimethylcyclohexane	May cause an allergic skin reaction.
Hexamethylene diisocyanate	May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
4-Chloro- α,α,α -trifluorotoluene	May cause an allergic skin reaction.

Carcinogenicity

Assessment:

May cause cancer.

Product Data: No data available.

Substance Data:

Name	Species	Result
Solvent naphtha (petroleum), light arom.	Not applicable.	May cause cancer. Animals exposed to high levels of some petroleum products have developed liver and kidney tumors. Occupationally exposed people in the petroleum refining industry have an increased risk of skin cancer and leukemia.

International Agency for Research on Cancer (IARC):

Name	Classification
Heptan-2-one	Not Applicable
n-Butyl acetate	Not Applicable
Hexamethylene diisocyanate, oligomers	Not Applicable
5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane	Not Applicable
1,5-diisocyanato-1,3,3-trimethylcyclohexane	Not Applicable
Solvent naphtha (petroleum), light arom.	Group 3
Hexamethylene diisocyanate	Not Applicable

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 07.12.2024

Page 11 of 17

VOLTERA NORMAL HARDENER

Name	Classification
4-Chloro- α,α,α -trifluorotoluene	Group 2B

National Toxicology Program (NTP):

Name	Classification
Heptan-2-one	Not Applicable
n-Butyl acetate	Not Applicable
Hexamethylene diisocyanate, oligomers	Not Applicable
5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane	Not Applicable
1,5-diisocyanato-1,3,3-trimethylcyclohexane	Not Applicable
Solvent naphtha (petroleum), light arom.	Not Applicable
Hexamethylene diisocyanate	Not Applicable
4-Chloro- α,α,α -trifluorotoluene	Not Applicable

OSHA Carcinogens: Not applicable

Germ Cell Mutagenicity

Assessment:

May cause genetic defects.

Product Data:

No data available.

Substance Data:

Name	Result
Solvent naphtha (petroleum), light arom.	May cause genetic defects.

Reproductive Toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data:

No data available.

Substance Data: No data available.

Specific Target Organ Toxicity (Single Exposure)

Assessment:

May cause respiratory irritation.

May cause drowsiness or dizziness.

Product Data:

No data available.

Substance Data:

Name	Result
Heptan-2-one	May cause drowsiness or dizziness.
n-Butyl acetate	May cause drowsiness or dizziness.
Hexamethylene diisocyanate, oligomers	May cause respiratory irritation.

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 07.12.2024

Page 12 of 17

VOLTERA NORMAL HARDENER

Name	Result
5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane	May cause respiratory irritation.
1,5-diisocyanato-1,3,3-trimethylcyclohexane	May cause respiratory irritation.
Hexamethylene diisocyanate	May cause respiratory irritation.
4-Chloro- α,α,α -trifluorotoluene	May cause respiratory irritation.

Specific Target Organ Toxicity (Repeated Exposure)

Assessment: Based on available data, the classification criteria are not met.

Product Data:

No data available.

Substance Data: No data available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data:

No data available.

Substance Data:

Name	Result
Solvent naphtha (petroleum), light arom.	May be fatal if swallowed and enters airways.

Information on Likely Routes of Exposure:

No data available.

Symptoms Related to the Physical, Chemical, and Toxicological Characteristics:

No data available.

Other Information:

No data available.

SECTION 12: Ecological Information

Acute (Short-Term) Toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data: No data available.

Substance Data:

Name	Result
Heptan-2-one	Fish LC50 Pimephales promelas: 131 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: > 90.1 mg/L (48 hr [mobility])
	Aquatic Plants EC50 Raphidocelis subcapitata: 75.5 mg/L (72 hr [biomass])
n-Butyl acetate	Fish LC50 Pimephales promelas: 18 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia sp.: 44 mg/L (48 hr [mobility])
5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane	Fish LC50 Danio rerio: > 72 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: 27 mg/L (48 hr [mobility])
	Aquatic Plants EC50 Desmodium subspicatus: > 70 mg/L (72 hr [growth rate & biomass])

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 07.12.2024

Page 13 of 17

VOLTERA NORMAL HARDENER

Name	Result
1,5-diisocyanato-1,3,3-trimethylcyclohexane	Aquatic Invertebrates EC50 Daphnia magna: > 3.36 mg/L (48 hr [mobility])
	Fish LC50 Cyprinus carpio: > 1.51 mg/L (96 hr)
	Aquatic Plants EC50 Desmodemus subspicatus: > 3.1 mg/L (72 hr [growth rate & cell number])
Solvent naphtha (petroleum), light arom.	Fish LC50 Pimephales promelas: 8.2 mg/L (96 hr [LL50])
	Aquatic Invertebrates EC50 Daphnia magna: 4.5 mg/L (48 hr [EL50])
	Aquatic Plants EC50 Pseudokirchneriella subcapitata: 3.1 mg/L (72 hr [EL50])
Hexamethylene diisocyanate	Fish LC50 Danio rerio: >82.8 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: >=89.1 mg/L (48 hr [mobility])
	Aquatic Plants EC50 Desmodemus subspicatus: >77.4 mg/L (72 hr [growth rate])
4-Chloro- α,α,α -trifluorotoluene	Aquatic Plants EC50 Green Algae: >= 0.41 mg/L (72 hr [biomass])
	Aquatic Invertebrates LC50 Daphnia magna: 2 mg/L (48 hr [mobility])
	Fish LC50 Zebra Fish: 3 mg/L (96 hr)

Chronic (Long-Term) Toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data: No data available.

Substance Data:

Name	Result
n-Butyl acetate	Aquatic Invertebrates NOEC Daphnia magna: 23.2 mg/L (21 d [reproduction])
	Aquatic Plants NOEC Raphidocelis subcapitata: 105 mg/L (72 hr [biomass])
Solvent naphtha (petroleum), light arom.	Aquatic Invertebrates EC50 Daphnia magna: 10 mg/L (21 d [EL50, reproduction])

Persistence and Degradability

Product Data: No data available.

Substance Data:

Name	Result
Heptan-2-one	Substance is Readily biodegradable. 69% degradation in water, measured by inorganic carbon analysis, after 28 days.
n-Butyl acetate	The substance is Readily biodegradable meeting the 10 day window. 83% degradation in water, measured by O2 consumption, after 28 days.
Hexamethylene diisocyanate, oligomers	The substance is not readily biodegradable. 1% degradation in water, measured by O2 consumption, after 28 days.
5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane	The substance is not readily biodegradable. 0% degradation in water, measured by O2 consumption, after 28 days.
1,5-diisocyanato-1,3,3-trimethylcyclohexane	The substance is not readily biodegradable. 0% degradation in water, measured by O2 consumption, after 28 days.
Solvent naphtha (petroleum), light arom.	This substance is a hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance.
Hexamethylene diisocyanate	The substance is not readily biodegradable. 42% degradation in water, measured by O2 consumption, after 28 days.

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 07.12.2024

Page 14 of 17

VOLTERA NORMAL HARDENER

Name	Result
4-Chloro- α,α,α -trifluorotoluene	The substance is not readily biodegradable. 19.2% degradation in water, measured by O ₂ consumption after 28 days.

Bioaccumulative Potential

Product Data: No data available.

Substance Data:

Name	Result
Heptan-2-one	The substance is not expected to bioaccumulate (log Pow: 2.26)
n-Butyl acetate	The substance is not expected to bioaccumulate (log Pow=2.3).
Hexamethylene diisocyanate, oligomers	The substance has the potential to bioaccumulate (log Kow: 3.2, QSAR substance data).
5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane	The substance is not expected to bioaccumulate (log Pow= 0.99 at 23 °C, Read-across substance data).
1,5-diisocyanato-1,3,3-trimethylcyclohexane	The substance is insoluble in water and hydrolyses rapidly which results in a low potential for bioaccumulation due to absence of sufficient mobility.
Solvent naphtha (petroleum), light arom.	This substance is a hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance. Calculated BCF for constituents of this substance range between 3.16 - 71100 L/kg [QSAR].
Hexamethylene diisocyanate	The substance has low potential for bioaccumulation. BCF (aquatic species): 59.6 [QSAR]
4-Chloro- α,α,α -trifluorotoluene	The substance has a low potential for bioaccumulation. BCF (aquatic species): 121.8 dimensionless

Mobility in Soil

Product Data: No data available.

Substance Data:

Name	Result
Heptan-2-one	This substance is mobile; therefore, adsorption to soil is not expected (log Koc=1.45).
n-Butyl acetate	The substance is mobile, therefore, adsorption to soil is not expected (log Koc=1.27).
Hexamethylene diisocyanate, oligomers	The substance is slightly mobile, therefore, adsorption to soil and sediment is expected (log Koc:3.682, QSAR substance data)..
5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane	The substance is hardly mobile, therefore, adsorption to soil is expected (log Koc=4.562, QSAR data).
1,5-diisocyanato-1,3,3-trimethylcyclohexane	This substance and its relevant degradation products decompose rapidly, hence this parameter cannot be measured because of inhomogeneous composition and low mobility inhibiting equilibration.
Solvent naphtha (petroleum), light arom.	This substance is a hydrocarbon UVCB. Standard tests for this endpoint are intended for single substances and are not appropriate for this complex substance. Calculated log Koc for constituents of this substance range between 1.71 - 14.70 [QSAR]
Hexamethylene diisocyanate	The substance is moderately mobile then it has a moderate potential for adsorption to soil and sediment. [Calculated Koc at 20 °C: 598].
4-Chloro- α,α,α -trifluorotoluene	Moderately mobile in soil with a low affinity for adsorption. Koc at 20 °C: 420

Results of PBT and vPvB assessment

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 07.12.2024

Page 15 of 17

VOLTERA NORMAL HARDENER

Product Data:

PBT assessment: This product does not contain any substances that are assessed to be a PBT.

vPvB assessment: This product does not contain any substances that are assessed to be a vPvB.

Substance Data:

PBT assessment:

Heptan-2-one	The substance is not PBT.
n-Butyl acetate	The substance is not PBT.
5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane	This substance is not PBT.
1,5-diisocyanato-1,3,3-trimethylcyclohexane	This substance is not PBT.
Solvent naphtha (petroleum), light arom.	The substance is not PBT. This substance is a UVCB and does not contain constituents included in the SVHC candidate list as PBT/vPvB at concentrations above 0.1%.
Hexamethylene diisocyanate	The Substance is not PBT.
4-Chloro- α,α,α -trifluorotoluene	The substance is not PBT.

vPvB assessment:

Heptan-2-one	The substance is not vPvB.
n-Butyl acetate	The substance is not vPvB.
5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane	This substance is not vPvB.
1,5-diisocyanato-1,3,3-trimethylcyclohexane	This substance is not vPvB.
Solvent naphtha (petroleum), light arom.	The substance is not vPvB. This substance is a UVCB and does not contain constituents included in the SVHC candidate list as PBT/vPvB at concentrations above 0.1%.
Hexamethylene diisocyanate	The substance is not vPvB.
4-Chloro- α,α,α -trifluorotoluene	The substance is not vPvB.

Other Adverse Effects: No data available.

SECTION 13: Disposal Considerations

Disposal Methods:



It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

Contaminated packages:

Not determined or not applicable.

SECTION 14: Transport Information

United States Transportation of Dangerous Goods (49 CFR DOT)

UN Number	UN1263
UN Proper Shipping Name	Paint related material
UN Transport Hazard Class(es)	3  
Packing Group	II

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200



Initial Preparation Date: 07.12.2024

Page 16 of 17

VOLTERA NORMAL HARDENER

Environmental Hazards	Marine Pollutant
Special Precautions for User	None

International Maritime Dangerous Goods (IMDG)

UN Number	UN1263
UN Proper Shipping Name	Paint related material
UN Transport Hazard Class(es)	3  
Packing Group	II
Environmental Hazards	Marine Pollutant
Special Precautions for User	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN Number	Not regulated
UN Proper Shipping Name	Not regulated
UN Transport Hazard Class(es)	None
Packing Group	None
Environmental Hazards	None
Special Precautions for User	None

SECTION 15: Regulatory Information

United States Regulations

Inventory Listing (TSCA): All ingredients are listed-active or exempt.

Significant New Use Rule (TSCA Section 5): None of the ingredients are listed.

Export Notification under TSCA Section 12(b): None of the ingredients are listed.

SARA Section 302 Extremely Hazardous Substances:

4098-71-9	5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane	Listed
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SARA Section 313 Toxic Chemicals:

4098-71-9	5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane	Listed
822-06-0	Hexamethylene diisocyanate	Listed

CERCLA:

123-86-4	n-Butyl acetate	Listed	5000 lb
822-06-0	Hexamethylene diisocyanate	Listed	100 lbs

RCRA:

123-86-4	n-Butyl acetate	Listed	D001
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Section 112(r) of the Clean Air Act (CAA):

822-06-0	Hexamethylene diisocyanate	Listed
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Massachusetts Right to Know:

110-43-0	Heptan-2-one	Listed
123-86-4	n-Butyl acetate	Listed
4098-71-9	5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane	Listed
822-06-0	Hexamethylene diisocyanate	Listed

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 07.12.2024

Page 17 of 17

VOLTERA NORMAL HARDENER

New Jersey Right to Know:

110-43-0	Heptan-2-one	Listed
123-86-4	n-Butyl acetate	Listed
4098-71-9	5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane	Listed
822-06-0	Hexamethylene diisocyanate	Listed
98-56-6	4-Chloro- α,α,α -trifluorotoluene	Listed

New York Right to Know:

110-43-0	Heptan-2-one	Listed
123-86-4	n-Butyl acetate	Listed
4098-71-9	5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane	Listed
822-06-0	Hexamethylene diisocyanate	Listed
98-56-6	4-Chloro- α,α,α -trifluorotoluene	Listed

Pennsylvania Right to Know:

110-43-0	Heptan-2-one	Listed
123-86-4	n-Butyl acetate	Listed
4098-71-9	5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane	Listed

California Proposition 65:

⚠️WARNING: This product can expose you to 4-Chloro- α,α,α -trifluorotoluene; which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

Additional information: Not determined.

SECTION 16: Other Information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with OSHA HCS 2012 guidelines. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

Initial Preparation Date: 07.12.2024

End of Safety Data Sheet