

Revision Date 12-Nov-2021

Version 6

1. IDENTIFICATION

Product identifier

Product Name ISOLATION HARDENER

Other means of identification

Product Code CG0275-100

UN/ID no UN1263

SKU(s) CG0275-100

Recommended use of the chemical and restrictions on use

Recommended Use No information available.

Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address

Diamond Vogel
1020 Albany Place SE
Orange City, IA 51041
Phone: (712) 737-4993
Fax: (712) 737-4997

Emergency telephone number

Emergency Telephone Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation	Category 2
Respiratory sensitization	Category 1
Skin sensitization	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Flammable liquids	Category 2

Emergency Overview

Danger

Hazard statements

Causes serious eye irritation
May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause an allergic skin reaction
Suspected of causing cancer
May cause respiratory irritation. May cause drowsiness or dizziness
Highly flammable liquid and vapor

**Appearance** No information available**Physical state** Liquid**Odor** No information available**Precautionary Statements - Prevention**

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Use personal protective equipment as required
 Wash face, hands and any exposed skin thoroughly after handling
 Avoid breathing dust/fume/gas/mist/vapors/spray
 In case of inadequate ventilation wear respiratory protection
 Contaminated work clothing should not be allowed out of the workplace
 Wear protective gloves
 Use only outdoors or in a well-ventilated area
 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
 Keep container tightly closed
 Ground/bond container and receiving equipment
 Use only non-sparking tools
 Take precautionary measures against static discharge
 Keep cool
 Use explosion-proof electrical/ ventilating/ lighting/ equipment

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If eye irritation persists: Get medical advice/attention
 If skin irritation or rash occurs: Get medical advice/attention
 Wash contaminated clothing before reuse
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 In case of fire: Use CO₂, dry chemical, or foam for extinction

Precautionary Statements - Storage

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

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)**Other Information**

• May be harmful if swallowed
 Unknown acute toxicity 24.21% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%	Trade Secret
Toluene Diisocyanate Homopolymer	26006-20-2	10 - 30	*
Butyl Acetate	123-86-4	10 - 30	*
Methyl Isobutyl Ketone	108-10-1	7 - 13	*
Ethyl Acetate	141-78-6	5 - 10	*
Toluene-2,4-diisocyanate	584-84-9	0.1 - 1	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin Contact	In the case of skin irritation or allergic reactions see a physician. Wash contaminated clothing before reuse.
Inhalation	May cause allergic respiratory reaction.
Ingestion	Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed

Symptoms	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization by inhalation and skin contact. Treat symptomatically. Symptoms may be delayed. May cause sensitization by skin contact.
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5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

Flammable.

Hazardous combustion products Carbon monoxide. Carbon dioxide (CO₂). Nitrogen oxides (NO_x).

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	Remove all sources of ignition. Use personal protective equipment as required.
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Environmental precautions

Environmental precautions	Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information.
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Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
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Methods for cleaning up	Soak up with inert absorbent material.
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7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).

Incompatible materials Strong bases. Water. Alcohols. Amines. Copper. Incompatible with oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Butyl Acetate 123-86-4	STEL: 150 ppm TWA: 50 ppm	TWA: 150 ppm TWA: 710 mg/m ³ (vacated) TWA: 150 ppm (vacated) TWA: 710 mg/m ³ (vacated) STEL: 200 ppm (vacated) STEL: 950 mg/m ³	IDLH: 1700 ppm TWA: 150 ppm TWA: 710 mg/m ³ STEL: 200 ppm STEL: 950 mg/m ³
Methyl Isobutyl Ketone 108-10-1	STEL: 75 ppm TWA: 20 ppm	TWA: 100 ppm TWA: 410 mg/m ³ (vacated) TWA: 50 ppm (vacated) TWA: 205 mg/m ³ (vacated) STEL: 75 ppm (vacated) STEL: 300 mg/m ³	IDLH: 500 ppm TWA: 50 ppm TWA: 205 mg/m ³ STEL: 75 ppm STEL: 300 mg/m ³
Ethyl Acetate 141-78-6	TWA: 400 ppm	TWA: 400 ppm TWA: 1400 mg/m ³ (vacated) TWA: 400 ppm (vacated) TWA: 1400 mg/m ³	IDLH: 2000 ppm TWA: 400 ppm TWA: 1400 mg/m ³
Toluene-2,4-diisocyanate 584-84-9	STEL: 0.005 ppm inhalable fraction and vapor TWA: 0.001 ppm inhalable fraction and vapor S*	(vacated) TWA: 0.005 ppm (vacated) TWA: 0.04 mg/m ³ (vacated) STEL: 0.02 ppm (vacated) STEL: 0.15 mg/m ³ Ceiling: 0.02 ppm Ceiling: 0.14 mg/m ³	IDLH: 2.5 ppm

NIOSH *Immediately Dangerous to Life or Health*

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection No special technical protective measures are necessary.

Skin and body protection Wear protective gloves and protective clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid	Odor	No information available
Appearance	No information available	Odor threshold	No information available
Color	No information available		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No information available	
Melting point / freezing point	No information available	
Boiling point / boiling range	>= 72 °C / 161 °F	
Flash point	6 °C / 42 °F	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific Gravity	1.06	
Water solubility	No information available	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
Liquid Density	8.86 lbs/gal
Bulk density	No information available
Percent solids by weight	51.5%
Percent volatile by weight	48.5%
Percent solids by volume	40.0%
Actual VOC (lbs/gal)	4.3
Actual VOC (grams/liter)	514.9
EPA VOC (lbs/gal)	4.3
EPA VOC (grams/liter)	514.9
EPA VOC (lb/gal solids)	10.7

10. STABILITY AND REACTIVITY**Reactivity**

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

Extremes of temperature and direct sunlight.

Incompatible materials

Strong bases. Water. Alcohols. Amines. Copper. Incompatible with oxidizing agents.

Hazardous decomposition products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Product Information	No data available
Inhalation	May cause sensitization by inhalation.
Eye contact	May cause irritation.
Skin Contact	May cause irritation. May cause sensitization by skin contact.
Ingestion	No data available.

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Toluene Diisocyanate Homopolymer 26006-20-2	> 5000 mg/kg (Rat)	-	-
Butyl Acetate 123-86-4	= 10768 mg/kg (Rat)	> 17600 mg/kg (Rabbit)	= 390 ppm (Rat) 4 h
Methyl Isobutyl Ketone 108-10-1	= 2080 mg/kg (Rat)	= 3000 mg/kg (Rabbit)	2000 - 4000 ppm (Rat) 4 h
Ethyl Acetate 141-78-6	= 5620 mg/kg (Rat)	> 18000 mg/kg (Rabbit) > 20 mL/kg (Rabbit)	= 4000 ppm (Rat) 4 h
Toluene-2,4-diisocyanate 584-84-9	= 5800 mg/kg (Rat)	> 16 mL/kg (Rabbit)	= 14 ppm (Rat) 4 h

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization May cause sensitization by inhalation and skin contact.
Germ cell mutagenicity No information available.
Carcinogenicity No information available.

Chemical name	ACGIH	IARC	NTP	OSHA
Methyl Isobutyl Ketone 108-10-1	A3	Group 2B	-	X
Toluene-2,4-diisocyanate 584-84-9	A3	Group 2B	-	X

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Chronic toxicity May cause adverse liver effects.
Target organ effects Central nervous system, Eyes, kidney, liver, Respiratory system, Skin.
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document mg/kg mg/l

12. ECOLOGICAL INFORMATION**Ecotoxicity**

51.26% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical name	Algae/aquatic plants	Fish	Crustacea
Butyl Acetate 123-86-4	674.7: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50	100: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 17 - 19: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through 62: 96 h <i>Leuciscus idus</i> mg/L LC50 static	72.8: 24 h <i>Daphnia magna</i> mg/L EC50
Methyl Isobutyl Ketone 108-10-1	400: 96 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50	496 - 514: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through	170: 48 h <i>Daphnia magna</i> mg/L EC50
Ethyl Acetate 141-78-6	3300: 48 h <i>Desmodesmus subspicatus</i> mg/L EC50	220 - 250: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through 484: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 flow-through 352 - 500: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 semi-static	560: 48 h <i>Daphnia magna</i> mg/L EC50 Static

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Chemical name	Partition coefficient
Butyl Acetate 123-86-4	1.81
Methyl Isobutyl Ketone 108-10-1	1.19
Ethyl Acetate 141-78-6	0.6

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods**Disposal of wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging

Do not reuse container.

US EPA Waste Number

D001 U112 U161

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Methyl Isobutyl Ketone 108-10-1	-	Included in waste stream: F039	-	U161
Ethyl Acetate 141-78-6	-	Included in waste stream: F039	-	U112

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste Status
Butyl Acetate 123-86-4	Toxic
Ethyl Acetate 141-78-6	Toxic Ignitable

14. TRANSPORT INFORMATION

DOT

UN/ID no

UN1263

Proper shipping name	Paint related material
Hazard class	3
Packing Group	II
Reportable Quantity (RQ)	(Methyl Isobutyl Ketone: RQ (kg)= 2270.00, Butyl Acetate: RQ (kg)= 2270.00)
Special Provisions	149, B52, IB2, T4, TP1, TP8, TP28
Description	UN1263, Paint related material, 3, II
Emergency Response Guide Number	128

TDG

UN/ID no	UN1263
Proper shipping name	Paint related material
Hazard class	3
Packing Group	II
Special Provisions	59, 83
Description	UN1263, Paint related material, 3, II

MEX

UN/ID no	UN1263
Proper shipping name	Paint related material
Hazard class	3
Special Provisions	163
Packing Group	II
Description	UN1263, Paint related material, 3, II

ICAO (air)

UN/ID no	UN1263
Proper shipping name	Paint related material
Hazard class	3
Packing Group	II
Special Provisions	A3, A72
Description	UN1263, Paint related material, 3, II

IATA

UN Number	UN1263
Proper shipping name	Paint related material
Transport hazard class(es)	3
Packing Group	II
ERG Code	3L
Special Provisions	A3, A72
Description	UN1263, Paint related material, 3, II

IMDG

UN Number	UN1263
Transport hazard class(es)	3
Packing Group	II
EmS-No	F-E, S-E
Special Provisions	163
Description	UN1263, Paint related material, 3, II, (6°C c.c.)

RID

UN/ID no	UN1263
Proper shipping name	Paint related material
Transport hazard class(es)	3
Packing Group	II
Classification code	F1
Special Provisions	163, 640C, 650
Description	UN1263, Paint related material, 3, II
Labels	3

ADR

UN Number	UN1263
Proper shipping name	Paint related material

Transport hazard class(es) 3
Packing Group II
Classification code F1
Tunnel restriction code (D/E)
Special Provisions 163, 640C, 650
Description UN1263, Paint related material, 3, II, (D/E)
Labels 3

ADN

Proper shipping name Paint related material
Transport hazard class(es) 3
Packing Group II
Classification code F1
Special Provisions 163, 640C, 650
Description UN1263, Paint related material, 3, II
Hazard label(s) 3
Limited quantity (LQ) 5 L
Ventilation VE01
Equipment Requirements PP, EX, A

15. REGULATORY INFORMATION

International Inventories

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory Complies
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List Complies *

* This product contains an unknown chemical, therefore, this product's compliance to the inventory list is NOT DETERMINED

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	SARA 313 - Threshold Values %
Methyl Isobutyl Ketone - 108-10-1	0.1
Toluene-2,4-diisocyanate - 584-84-9	0.1 1.0

SARA 311/312 Hazard Categories

Acute health hazard No
Chronic Health Hazard No
Fire hazard Yes
Sudden release of pressure hazard No
Reactive Hazard No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Butyl Acetate 123-86-4	5000 lb	-	-	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Butyl Acetate 123-86-4	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

Methyl Isobutyl Ketone 108-10-1	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ
Ethyl Acetate 141-78-6	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ
Toluene-2,4-diisocyanate 584-84-9	100 lb	100 lb	RQ 100 lb final RQ RQ 45.4 kg final RQ

US State Regulations**California Proposition 65**

This product contains the following Proposition 65 chemicals

Chemical name	California Proposition 65
Methyl Isobutyl Ketone - 108-10-1	Carcinogen Developmental
Ethanol - 64-17-5	Carcinogen Developmental

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts
Butyl Acetate 123-86-4	X	X
Methyl Isobutyl Ketone 108-10-1	X	X
Ethyl Acetate 141-78-6	X	X
Ethyl Orthoformate 122-51-0	X	X
Toluene-2,4-diisocyanate 584-84-9	X	X

Chemical name	Pennsylvania
Butyl Acetate 123-86-4	X
Methyl Isobutyl Ketone 108-10-1	X
Ethyl Acetate 141-78-6	X
Ethyl Orthoformate 122-51-0	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

Hazardous air pollutants (HAPS) content

LIST OF HAZARDOUS AIR POLLUTANTS SUBJECT TO THE PROVISIONS OF THE CLEAN AIR ACT, TITLE I SECTION 112 'National Emission Standards for Hazardous Air Pollutants' (present individually at 1% by weight, or greater):

Chemical name	Weight % of HAPS in Product	Pounds HAPS / Gal Product
Methyl Isobutyl Ketone 108-10-1	11.65%	1.03

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA Health hazards 2 Flammability 3 Instability 0 Physical and chemical properties -
HMIS Health hazards 2 * Flammability 3 Physical hazards 0 Personal protection X
*Chronic Hazard Star Legend * = Chronic Health Hazard*

Revision Date 12-Nov-2021

Revision Note

No information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release 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 or in any process, unless specified in the text. Shipping information may vary based upon container size and shipping destination. Each user of this material needs to evaluate the conditions of use and design the appropriate protective mechanisms to prevent employee exposures, property damage, or release to the environment. The manufacturer assumes no responsibility for injury to the recipient or third persons, or for any damages to any property resulting from misuse of the product.

End of Safety Data Sheet