

Safety Data Sheet

Version 1.0
Revision Date 03/01/2019

SDS Number 300000078671
Print Date 05/07/2019

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Dynastrip™ DL9150B

Product Use Description : Photoresist Stripper and Residue Remover

Manufacturer/Importer/Distributor : Versum Materials US, LLC
8555 South River Parkway
Tempe, AZ 85284-2601
Exporter EIN No. 47-5632014
www.versummaterials.com

Telephone : 800 837 2724

Emergency telephone number (24h) : 1-800-424-9300
(+1) 703-741-5970 (CHEMTREC)

2. HAZARDS IDENTIFICATION

GHS classification

Flammable liquids - Category 4
Skin Corrosion/Irritation - Category 1C
Serious Eye Damage/Eye Irritation - Category 1
Specific Target Organ Toxicity - Single Exposure - Category 3

GHS label elements

Hazard pictograms/symbols



Signal Word: Danger

Hazard Statements:

H227: Combustible liquid.
H314: Causes severe skin burns and eye damage.
H335: May cause respiratory irritation.

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Precautionary Statements:

- Prevention : P210:Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280:Wear protective gloves/protective clothing/eye protection/face protection.
P260:Do not breathe dust/fume/gas/mist/vapors/spray.
P264:Wash thoroughly after handling.
P271:Use only outdoors or in a well-ventilated area.
- Response : P301+P330+P331 :IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 :IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338 :IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340 :IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310 :Immediately call a POISON CENTER/doctor.
P321 :Specific treatment (see on this label).
P363 :Wash contaminated clothing before reuse.
P370+P378 :In case of fire, use recommended extinguishing media for extinction.
- Storage : P403+P235:Store in a well-ventilated place. Keep cool.
P405:Store locked up.
- Disposal : P501:Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazards not otherwise classified

Product may be easily absorbed by skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Concentration (Weight)
Methane, sulfinylbis-	67-68-5	70% - 90 %
Organic Diol	Not Available	5% - 15 %
Ethanolamine	141-43-5	2.5% - 10 %
Dimethyldipropylammonium hydroxide	836597-65-0	1.5% - 3.5 %

4. FIRST AID MEASURES

- General advice : Seek medical advice. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately.

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Eye contact	: Hold eyelids apart, initiate and maintain gentle and continuous irrigation care is not promptly available, continue to irrigate for one hour.
Skin contact	: Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay. Flush immediately with copious amounts of water. Initiate and maintain continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour. Cover wound with sterile dressing.
Ingestion	: If a person vomits when lying on his back, place him in the recovery position. Never give anything by mouth to an unconscious person. Prevent aspiration of vomit. Turn victim's head to the side.
Inhalation	: If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately. Move to fresh air.
Most important symptoms/effects - acute and delayed	: Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause: Sore throat.Asthma. Eye disease. Skin disorders and Allergies.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	: Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemical. Dry sand. Limestone powder.
Specific hazards	: Incomplete combustion may form carbon monoxide. May generate ammonia gas. May generate toxic nitrogen oxide gases. Flash back possible over considerable distance. In the event of fire, cool tanks with water spray . Fire or intense heat may cause violent rupture of packages. Burning produces noxious and toxic fumes. May form explosive mixtures in air. Downwind personnel must be evacuated.
Special protective equipment for fire-fighters	: Avoid contact with the skin. A face shield should be worn. Use personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures	: Remove all sources of ignition. Use self-contained breathing apparatus and chemically protective clothing. Evacuate personnel to safe areas.
Environmental precautions	: Shut off or remove all ignition sources. Construct a dike to prevent spreading.

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Methods for cleaning up : Absorb with inert absorbent materials such as: Dry sand. Vermiculite. Activated charcoal. Approach suspected leak areas with caution. Call Emergency Response number for advice. Place in appropriate chemical waste container.

Additional advice : If possible, stop flow of product.

7. HANDLING AND STORAGE

Handling

Use only in well-ventilated areas. Avoid contact with skin and eyes. Avoid breathing vapors and/or aerosols. Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations. See "Flammable and Combustible Liquid Code" NFPA No. 30, National Fire Protection Association, Boston, MA. Use personal protective equipment. When using, do not eat, drink or smoke.

Storage

Do not store near acids. Keep away from heat and sources of ignition. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from oxidizers.

Technical measures/Precautions

Keep away from open flames, hot surfaces and sources of ignition.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures

Provide readily accessible eye wash stations and safety showers.
Provide natural or explosion-proof ventilation adequate to ensure concentrations are kept below exposure limits.

Personal protective equipment

Respiratory protection : Wear appropriate respirator when ventilation is inadequate.

Hand protection : Butyl-rubber
Nitrile rubber.
Neoprene gloves.
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.

Eye protection : Full face shield with goggles underneath.

Skin and body protection : Impervious clothing.
Rubber or plastic boots.
Slicker Suit.

Environmental exposure : Shut off or remove all ignition sources.

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controls

Special instructions for protection and hygiene

: Discard contaminated leather articles. Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Wash hands at the end of each workshift and before eating, smoking or using the toilet. Launder or discard contaminated clothing. Provide readily accessible eye wash stations and safety showers.

Exposure limit(s)

Methane, sulfinylbis-	Time Weighted Average (TWA): WEEL	250 ppm	-
Organic Diol	Time Weighted Average (TWA): WEEL	-	10 mg/m3
Ethanolamine	Time Weighted Average (TWA): ACGIH	3 ppm	-
Ethanolamine	Short Term Exposure Limit (STEL): ACGIH	6 ppm	-
Ethanolamine	Recommended exposure limit (REL): NIOSH	3 ppm	8 mg/m3
Ethanolamine	Short Term Exposure Limit (STEL): NIOSH	6 ppm	15 mg/m3
Ethanolamine	Permissible exposure limit: OSHA Z1	3 ppm	6 mg/m3

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid. Color Amber

Odor : No data available.

Odor threshold : No data available.

pH : No data available.

Melting point/range : No data available.

Boiling point/range : 369 °F (187 °C)

Flash point : 194 °F (90 °C)

Evaporation rate : No data available.

Flammability (solid, gas) : Not applicable.

Upper/lower explosion/flammability limit : Not applicable.

Vapor pressure : 0.39 mmHg

Water solubility : Miscible with water.

Relative vapor density : Not applicable.

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Relative density	: 1.08 (water = 1)
Partition coefficient: n-octanol/water [log Kow]	: No data available.
Auto-ignition temperature	: No data available.
Decomposition temperature	: No data available.
Viscosity	: No data available.
Density	: No data available. : 67.422 lb/ft ³ (1.08 g/cm ³)

10. STABILITY AND REACTIVITY

Chemical Stability	: Stable under normal conditions.
Conditions to avoid	: Heat, flames and sparks.
Materials to avoid	: Reactive metals (e.g. sodium, calcium, zinc etc.). Materials reactive with hydroxyl compounds. Dehydrating Agents. Strong acids. Organic acids (i.e. acetic acid, citric acid etc.). Mineral acids. Sodium hypochlorite. Oxidizing agents. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion. Metals. Product slowly corrodes copper, aluminum, zinc and galvanized surfaces.
Hazardous decomposition products	: Nitric acid. Ammonia Nitrogen oxides (NO _x). Nitrogen oxide can react with water vapors to form corrosive nitric acid. Carbon monoxide. Carbon dioxide (CO ₂). Aldehydes Flammable hydrocarbon fragments. Sulphur oxides. Gives off hydrogen by reaction with metals.
Possibility of hazardous Reactions/Reactivity	: No data available.

11. TOXICOLOGICAL INFORMATION

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11.1. Information on toxicological effects

Likely routes of exposure

- Effects on Eye : Causes eye burns. May cause blindness.
- Effects on Skin : Product may be easily absorbed by skin. Toxic or irritant substances can easily be taken into the body, if they are dissolved in DMSO. Causes skin burns. If absorbed through the skin, may cause central nervous system effects, such as headache, nausea, dizziness, confusion, breathing difficulties.
- Inhalation Effects : Can cause severe eye, skin and respiratory tract burns. Inhalation of aerosol may cause irritation to the upper respiratory tract. May cause central nervous system effects, such as headache, nausea, dizziness, confusion, breathing difficulties. Severe cases of overexposure can result in respiratory failure.
- Ingestion Effects : If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.
- Symptoms : Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause: Sore throat. Asthma., Eye disease., Skin disorders and Allergies.

Acute toxicity

Acute Oral Toxicity : No data is available on the product itself.

Acute Oral Toxicity - Components

Methane, sulfinylbis-	LD50 : 14,500 mg/kg	Species : Rat
Organic Diol	LD50 : 21,000 mg/kg	Species : Rat
Ethanolamine	LD50 : 1,720 mg/kg	Species : Rat

Inhalation : No data is available on the product itself.

Inhalation - Components

Organic Diol	LC50 (8 h) : > 105 ppm	Species : Rat
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Acute Dermal Toxicity : No data is available on the product itself.

Acute Dermal Toxicity - Components

Methane, sulfinylbis-	LD50 : 40,000 mg/kg	Species : Rat
Organic Diol	LD50 : 20,800 mg/kg	Species : Rabbit
Ethanolamine	LD50 : 1,020 mg/kg	Species : Rabbit

Skin corrosion/irritation : Causes skin burns.

Serious eye damage/eye irritation : Risk of serious damage to eyes.

Sensitization. : No data available.

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Chronic toxicity or effects from long term exposures

- Carcinogenicity : No data available.
- Reproductive toxicity : No data is available on the product itself.
- Germ cell mutagenicity : No data is available on the product itself.
- Specific target organ systemic toxicity (single exposure) : May cause respiratory irritation.
- Specific target organ systemic toxicity (repeated exposure) : No data available.
- Aspiration hazard : No data available.

Delayed and Immediate Effects and Chronic Effects from Short and Long Term Exposure

This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater. Asthma., Eye disease., Skin disorders and Allergies.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Aquatic toxicity : No data is available on the product itself.

Toxicity to fish - Components

Methane, sulfinylbis-	LC50 (96 h) : 34,000 mg/l	Species : Fathead minnow (Pimephales promelas)
Methane, sulfinylbis-	LC50 (96 h) : > 400,000 mg/l	Species : Bluegill (Lepomis macrochirus)
Methane, sulfinylbis-	LC50 (96 h) : 35,000 mg/l	Species : Rainbow Trout
Organic Diol	LC50 (96 h) : 55,770 mg/l	Species : Fathead minnow (Pimephales promelas)
Ethanolamine	LC50 (96 h) : 150 - 200 mg/l	Species : Rainbow Trout
Ethanolamine	LC50 (96 h) : 2,070 mg/l	Species : Fathead minnow (Pimephales promelas)

Toxicity to daphnia - Components

Organic Diol	EC 50 (48 h) : > 10,000 mg/l	Species : Daphnia
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Ethanolamine

EC 50 (48 h) : 65 mg/l

Species : Daphnia

Toxicity to other organisms : No data available.

Persistence and degradability

Biodegradability : No data is available on the product itself.

Mobility : No data available.

Bioaccumulation : No data is available on the product itself.

Bioaccumulation - Components

Methane, sulfinylbis-

Negligible bioaccumulation potential.

Organic Diol

Negligible bioaccumulation potential.

Ethanolamine

Negligible bioaccumulation potential.

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products : Contact supplier if guidance is required.

Contaminated packaging : Dispose of container and unused contents in accordance with federal, state, and local requirements.

14. TRANSPORT INFORMATION

DOT

UN/ID No. : UN3267
Proper shipping name : Corrosive liquid, basic, organic, n.o.s., (Ethanolamine, Dimethyldipropylammonium hydroxide)
Class or Division : 8
Packing group : III
Label(s) : 8
Marine Pollutant : No

IATA

UN/ID No. : UN3267
Proper shipping name : Corrosive liquid, basic, organic, n.o.s., (Ethanolamine, Dimethyldipropylammonium hydroxide)
Class or Division : 8
Packing group : III
Label(s) : 8
Marine Pollutant : No

IMDG

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UN/ID No. : UN3267
Proper shipping name : CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S., (Ethanolamine, Dimethyldipropylammonium hydroxide)
Class or Division : 8
Packing group : III
Label(s) : 8
Marine Pollutant : No

TDG

UN/ID No. : UN3267
Proper shipping name : CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S., (Ethanolamine, Dimethyldipropylammonium hydroxide)
Class or Division : 8
Packing group : III
Label(s) : 8
Marine Pollutant : No

Further Information

The transportation information is not intended to convey all specific regulatory data relating to this material. For complete transportation information, contact customer service.

15. REGULATORY INFORMATION

Toxic Substance Control Act (TSCA) 12(b) Component(s):

None.

Country	Regulatory list	Notification
USA	TSCA	Included on Inventory.
EU	EINECS	Not on Inventory.
Canada	DSL	Not on Inventory.
Australia	AICS	Not on Inventory.
Japan	ENCS	Not on Inventory.
South Korea	ECL	Not on Inventory.
China	SEPA	Not on Inventory.
Philippines	PICCS	Not on Inventory.

EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification
Fire Hazard. Acute Health Hazard

EPA SARA Title III Section 313 (40 CFR 372) Component(s) above 'de minimus' level
None.

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)
WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

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Methyl alcohol

16. OTHER INFORMATION

HMIS Rating

Health : 3
Flammability : 2
Physical hazard : 0

Prepared by : Versum Materials, Product Regulatory Department

Telephone : 800 837 2724

Preparation Date : 05/07/2019

For additional information, please visit Versum Materials' Product Stewardship web site.
<http://www.versummaterials.com/productstewardship/>
