

# SAFETY DATA SHEET

Spray Equipment and Coatings, Inc.

**Product name:** Expandothane HD Polyol

**Issue Date:** 09/18/2021

**Print Date:** 03/01/2022

Spray Equipment and Coatings, Inc. encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

## 1. IDENTIFICATION

**Product name:** Expandothane HD Polyol

### **Recommended use of the chemical and restrictions on use**

**Identified uses:** For industrial use. Component(s) for the manufacture of urethane polymers. We recommend that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact your sales or technical service representative.

### **COMPANY IDENTIFICATION**

Spray Equipment and Coatings, Inc.  
850709 US Hwy 17  
Yulee, FL 32097

**CUSTOMER CONTACT:** 1-877-772-9629

### **EMERGENCY TELEPHONE NUMBER**

**24-Hour Emergency Contact:** CHEMTREC +1 800-424-9300

## 2. HAZARDS IDENTIFICATION

### **Hazard classification**

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Category 4 - Oral

Skin corrosion - Category 1C

Serious eye damage - Category 1

Skin sensitisation - Category 1

Reproductive toxicity - Category 1B

Specific target organ toxicity - repeated exposure - Category 2 - Oral

### **Label elements**

#### **Hazard pictograms**



Signal word: **DANGER!**

**Hazards**

Harmful if swallowed.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

May damage fertility or the unborn child.

May cause damage to organs through prolonged or repeated exposure if swallowed.

**Precautionary statements****Prevention**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

Wash skin thoroughly after handling.

Do not eat, drink or smoke when using this product.

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

Wear protective gloves, protective clothing, eye protection and/or face protection.

**Response**

IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER and/or doctor.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER and/or doctor.

IF exposed or concerned: Get medical advice/ attention.

If skin irritation or rash occurs: Get medical advice/ attention.

Wash contaminated clothing before reuse.

**Storage**

Store locked up.

**Disposal**

Dispose of contents and/or container to an approved waste disposal plant.

**Other hazards**

No data available

---

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

---

This product is a mixture.

Component	CASRN	Concentration
Poly(oxypropylene) diamine	9046-10-0	> 30.0 - < 60.0 %
Alkoxylate	Trade secret	> 10.0 - < 30.0 %

Ethanol, 2-((2-aminoethyl)amino)- polymer with methyloxirane	31568-06-6	> 10.0 - < 30.0 %
Diethyltoluenediamine (DETDA)	68479-98-1	> 5.0 - < 10.0 %
Dibutylbis(dodecylthio)stannane	1185-81-5	> 0.1 - < 1.0 %
Carbon black	1333-86-4	> 0.1 - < 1.0 %

---

## 4. FIRST AID MEASURES

---

### Description of first aid measures

#### General advice:

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

**Skin contact:** Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing. Seek medical attention if symptoms occur or irritation persists. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands. Suitable emergency safety shower facility should be immediately available.

**Eye contact:** Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

**Ingestion:** Do not induce vomiting. Give one cup (8 ounces or 240 ml) of water or milk if available and transport to a medical facility. Do not give anything by mouth unless the person is fully conscious.

#### Most important symptoms and effects, both acute and delayed:

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

#### Indication of any immediate medical attention and special treatment needed

**Notes to physician:** Maintain adequate ventilation and oxygenation of the patient. May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives and corticosteroids may be of help. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist. If burn is present, treat as any thermal burn, after decontamination. Due to irritant properties, swallowing may result in burns and/or ulceration of mouth, stomach and lower gastrointestinal tract with subsequent stricture. Aspiration of vomitus may cause lung injury. Suggest

endotracheal or esophageal control if lavage is done. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

---

## 5. FIREFIGHTING MEASURES

---

### Extinguishing media

**Suitable extinguishing media:** Water fog or fine spray.. Dry chemical fire extinguishers.. Carbon dioxide fire extinguishers.. Foam.. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective..

**Unsuitable extinguishing media:** Do not use direct water stream.. May spread fire..

### Special hazards arising from the substance or mixture

**Hazardous combustion products:** During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.. Combustion products may include and are not limited to:. Nitrogen oxides.. Carbon monoxide.. Carbon dioxide..

**Unusual Fire and Explosion Hazards:** Container may rupture from gas generation in a fire situation.. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids..

### Advice for firefighters

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry.. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed.. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles.. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container.. Do not use direct water stream. May spread fire.. Move container from fire area if this is possible without hazard.. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage.. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS..

**Special protective equipment for firefighters:** Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves).. Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location.. For protective equipment in post-fire or non-fire clean-up situations, see Section 8 of the safety data sheet..

---

## 6. ACCIDENTAL RELEASE MEASURES

---

**Personal precautions, protective equipment and emergency procedures:** Evacuate area. Refer to section 7, Handling, for additional precautionary measures. Spilled material may cause a slipping hazard. Only trained and properly protected personnel must be involved in clean-up operations. Keep upwind of spill. Ventilate area of leak or spill. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**Environmental precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. Spills or discharge to natural waterways is likely to kill aquatic organisms.

**Methods and materials for containment and cleaning up:** Contain spilled material if possible. Absorb with materials such as: Dirt. Sand. Sawdust. Collect in suitable and properly labeled containers. Wash the spill site with water. See Section 13, Disposal Considerations, for additional information.

---

## 7. HANDLING AND STORAGE

---

**Precautions for safe handling:** Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion. Do not swallow. Do not get on skin or clothing. Avoid breathing vapor. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling. Use with adequate ventilation. Keep container closed. This material is hygroscopic in nature. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

**Conditions for safe storage:** Protect from atmospheric moisture. Store in a dry place. Avoid prolonged exposure to heat and air. Store in the following material(s): Carbon steel. Stainless steel. Polypropylene. Polyethylene-lined container. Teflon. Glass-lined container. Aluminum. Plasite 3066 lined container. Plasite 3070 lined container. 316 stainless steel. See Section 10 for more specific information.

**Storage stability**

<b>Storage temperature:</b>	<b>Storage Period:</b>
10 - 40 °C (50 - 104 °F)	12 Month

---

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

---

**Control parameters**

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value
Dibutylbis(dodecylthio)stannane	OSHA Z-1	TWA	0.1 mg/m3 , Tin
	ACGIH	TWA	0.1 mg/m3 , Tin
	Further information: A4: Not classifiable as a human carcinogen; Skin: Danger of cutaneous absorption		
	ACGIH	STEL	0.2 mg/m3 , Tin
	Further information: A4: Not classifiable as a human carcinogen; Skin: Danger of cutaneous absorption		

Carbon black	ACGIH	TWA Inhalable particulate matter	3 mg/m3
	Further information: A3: Confirmed animal carcinogen with unknown relevance to humans		
	OSHA Z-1	TWA	3.5 mg/m3

**Exposure controls**

**Engineering controls:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

**Individual protection measures**

**Eye/face protection:** Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

**Skin protection**

**Hand protection:** Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Butyl rubber. Neoprene. Polyvinyl chloride ("PVC" or "vinyl"). Avoid gloves made of: Chlorinated polyethylene. Polyvinyl alcohol ("PVA"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Other protection:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

**Respiratory protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

---

## 9. PHYSICAL AND CHEMICAL PROPERTIES

---

**Appearance****Physical state**

liquid

**Color**

black

**Odor**

Amine

**Odor Threshold**

No test data available

**pH**

No test data available

**Melting point/range**

No test data available

**Freezing point**

No test data available

<b>Boiling point (760 mmHg)</b>	>100 °C ( 212 °F) <i>Estimated.</i>
<b>Flash point</b>	<b>closed cup</b> >100 °C ( 212 °F) <i>Estimated.</i>
<b>Evaporation Rate (Butyl Acetate = 1)</b>	No test data available
<b>Flammability (solid, gas)</b>	Not Applicable
<b>Flammability (liquids)</b>	Not expected to be a static-accumulating flammable liquid.
<b>Lower explosion limit</b>	No test data available
<b>Upper explosion limit</b>	No test data available
<b>Vapor Pressure</b>	<1 mmHg at 25 °C (77 °F)
<b>Relative Vapor Density (air = 1)</b>	No test data available
<b>Relative Density (water = 1)</b>	1.0156 at 25 °C (77 °F) / 25 °C <i>ASTM D891</i>
<b>Water solubility</b>	slightly soluble
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Auto-ignition temperature</b>	No test data available
<b>Decomposition temperature</b>	No test data available
<b>Dynamic Viscosity</b>	820 cP at 25 °C (77 °F) <i>ASTM D4287</i>
<b>Kinematic Viscosity</b>	No test data available
<b>Explosive properties</b>	Not explosive
<b>Oxidizing properties</b>	No
<b>Molecular weight</b>	No test data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

---

## 10. STABILITY AND REACTIVITY

---

**Reactivity:** No data available

**Chemical stability:** Stable under recommended storage conditions. See Storage, Section 7.

**Possibility of hazardous reactions:** Will not occur by itself.

**Conditions to avoid:** Product can oxidize at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

**Incompatible materials:** Avoid contact with oxidizing materials. Avoid contact with: Strong acids. Strong bases. Avoid contact with metals such as: Brass. Zinc. Copper. Avoid unintended contact with isocyanates. The reaction of polyols and isocyanates generates heat.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials.. Decomposition products can include and are not limited to: Carbon dioxide.. Alcohols.. Ethers.. Hydrocarbons.. Ketones.. Polymer fragments..

---

## 11. TOXICOLOGICAL INFORMATION

---

*Toxicological information appears in this section when such data is available.*

**Information on likely routes of exposure**

Ingestion, Inhalation, Skin contact, Eye contact.

**Acute toxicity (represents short term exposures with immediate effects - no chronic/delayed effects known unless otherwise noted)**

**Acute oral toxicity**

Low toxicity if swallowed. Swallowing may result in gastrointestinal irritation or ulceration. Swallowing may result in burns of the mouth and throat.

As product: Single dose oral LD50 has not been determined.

Based on information for component(s):  
LD50, 500 mg/kg Estimated.

**Information for components:**

**Poly(oxypropylene) diamine**

LD50, Rat, 480 mg/kg

**Alkoxyate**

Typical for this family of materials. LD50, Rat, > 4,000 mg/kg Estimated. No deaths occurred at this concentration.

**Ethanol, 2-((2-aminoethyl)amino)- polymer with methyloxirane**

LD50, Rat, > 5,000 mg/kg

**Diethyltoluenediamine (DETDA)**

LD50, Rat, 500 - 1,000 mg/kg

**Dibutylbis(dodecylthio)stannane**

LD50, Rat, male and female, > 2,000 mg/kg Other guidelines No deaths occurred at this concentration.

**Carbon black**

LD50, Rat, > 8,000 mg/kg

**Acute dermal toxicity**

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined.

Based on information for component(s):  
LD50, > 2,000 mg/kg Estimated.

**Information for components:**

**Poly(oxypropylene) diamine**

LD50, Rabbit, 2,090 mg/kg

**Alkoxyate**

Typical for this family of materials. LD50, Rabbit, > 10,000 mg/kg



**Ethanol, 2-((2-aminoethyl)amino)- polymer with methyloxirane**

LD50, Rabbit, > 5,000 mg/kg

**Diethyltoluenediamine (DETDA)**

LD50, Rabbit, > 1,000 mg/kg

**Dibutylbis(dodecylthio)stannane**

May cause dizziness and drowsiness. May cause nausea and vomiting. LD50, Rabbit, female, > 1,000 - < 2,000 mg/kg OECD Test Guideline 402

**Carbon black**

LD50, Rabbit, > 3,000 mg/kg No deaths occurred at this concentration.

**Acute inhalation toxicity**

At room temperature, exposure to vapor is minimal due to low volatility; vapor from heated material may cause respiratory irritation. Excessive exposure may cause severe irritation to upper respiratory tract (nose and throat) and lungs.

As product: The LC50 has not been determined.

**Information for components:**

**Poly(oxypropylene) diamine**

The LC50 has not been determined.

**Alkoxyate**

The LC50 has not been determined.

**Ethanol, 2-((2-aminoethyl)amino)- polymer with methyloxirane**

The LC50 has not been determined.

**Diethyltoluenediamine (DETDA)**

The LC50 value is greater than the Maximum Attainable Concentration.

**Dibutylbis(dodecylthio)stannane**

The LC50 has not been determined.

**Carbon black**

LC50, Rat, 1 Hour, dust/mist, 27 mg/l No deaths occurred at this concentration.

**Skin corrosion/irritation**

Based on information for component(s):

Brief contact may cause skin burns. Symptoms may include pain, severe local redness and tissue damage.

**Information for components:**

**Poly(oxypropylene) diamine**

Brief contact may cause skin burns. Symptoms may include pain, severe local redness and tissue damage.

Classified as corrosive to the skin according to DOT guidelines.

**Alkoxyate**

Prolonged exposure not likely to cause significant skin irritation.

Material may be handled at elevated temperatures; contact with heated material may cause thermal burns.

**Ethanol, 2-((2-aminoethyl)amino)- polymer with methyloxirane**

Prolonged contact may cause slight skin irritation with local redness.

Material may be handled at elevated temperatures; contact with heated material may cause thermal burns.

**Diethyltoluenediamine (DETDA)**

Prolonged contact may cause slight skin irritation with local redness.

**Dibutylbis(dodecylthio)stannane**

Brief contact may cause severe skin irritation with pain and local redness.

Prolonged contact may cause skin burns. Symptoms may include pain, severe local redness, swelling, and tissue damage.

**Carbon black**

Prolonged exposure not likely to cause significant skin irritation.

**Serious eye damage/eye irritation**

Based on information for component(s):

May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

Mist may cause eye irritation.

Elevated temperatures may generate vapor levels sufficient to cause eye irritation. Effects may include discomfort and redness.

**Information for components:**

**Poly(oxypropylene) diamine**

May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

Vapor may cause eye irritation experienced as mild discomfort and redness.

**Alkoxyate**

May cause slight temporary eye irritation.

Corneal injury is unlikely.

**Ethanol, 2-((2-aminoethyl)amino)- polymer with methyloxirane**

May cause moderate eye irritation.

May cause slight corneal injury.

**Diethyltoluenediamine (DETDA)**

May cause moderate eye irritation.

May cause moderate corneal injury.

**Dibutylbis(dodecylthio)stannane**

May cause moderate eye irritation which may be slow to heal.

Corneal injury is unlikely.

**Carbon black**

Solid or dust may cause irritation or corneal injury due to mechanical action.

**Sensitization**

For skin sensitization:

Contains component(s) which have demonstrated the potential for contact allergy in mice.

For respiratory sensitization:

No specific, relevant data available for assessment.

**Information for components:**

**Poly(oxypropylene) diamine**

For similar material(s):

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant data found.

**Alkoxyate**

For skin sensitization:

No relevant data found.

For respiratory sensitization:

No relevant data found.

**Ethanol, 2-((2-aminoethyl)amino)- polymer with methyloxirane**

Has demonstrated the potential for contact allergy in mice.

For respiratory sensitization:

No relevant data found.

**Diethyltoluenediamine (DETDA)**

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant data found.

**Dibutylbis(dodecylthio)stannane**

For similar material(s):

Has caused allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant data found.

**Carbon black**

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

Material is corrosive. Material is not classified as a respiratory irritant; however, upper respiratory tract irritation or corrosivity may be expected.

**Information for components:**

**Poly(oxypropylene) diamine**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Alkoxyate**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Ethanol, 2-((2-aminoethyl)amino)- polymer with methyloxirane**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Diethyltoluenediamine (DETDA)**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Dibutylbis(dodecylthio)stannane**

Available data are inadequate to determine single exposure specific target organ toxicity.

**Carbon black**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Aspiration Hazard**

Aspiration into the respiratory system may occur during ingestion or vomiting. Due to corrosivity, tissue damage or lung injury may occur.

**Information for components:**

**Poly(oxypropylene) diamine**

Aspiration into the respiratory system may occur during ingestion or vomiting. Due to corrosivity, tissue damage or lung injury may occur.

**Alkoxyate**

Based on physical properties, not likely to be an aspiration hazard.

**Ethanol, 2-((2-aminoethyl)amino)- polymer with methyloxirane**

Based on physical properties, not likely to be an aspiration hazard.

**Diethyltoluenediamine (DETDA)**

Based on physical properties, not likely to be an aspiration hazard.

**Dibutylbis(dodecylthio)stannane**

Based on physical properties, not likely to be an aspiration hazard.

**Carbon black**

Based on physical properties, not likely to be an aspiration hazard.

**Chronic toxicity (represents longer term exposures with repeated dose resulting in chronic/delayed effects - no immediate effects known unless otherwise noted)**

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

Contains component(s) which have been reported to cause effects on the following organs in animals:

Eye.

Liver

Pancreas

thyroid

**Information for components:**

**Poly(oxypropylene) diamine**

Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

**Alkoxyate**

For similar material(s):

In animals, effects have been reported on the following organs after exposure to aerosols:  
Lung.

**Ethanol, 2-((2-aminoethyl)amino)- polymer with methyloxirane**

Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

**Diethyltoluenediamine (DETDA)**

In rats, repeated dietary ingestion of diethyltoluenediamine (DETDA) has caused pancreatic, eye, liver and thyroid effects.

**Dibutylbis(dodecylthio)stannane**

For this family of materials:

In animals, effects have been reported on the following organs:

Thymus.

Blood.

**Carbon black**

Dust may cause irritation of the upper respiratory tract (nose and throat) and lungs.

Repeated exposures to very fine dusts may cause lung injury.

**Carcinogenicity**

Diethyltoluenediamine (DETDA) has caused cancer in long-term animal studies. Increased numbers of tumors in the liver, thyroid and possibly the mammary glands were observed in rats given DETDA in their diet at exaggerated doses for 2 years. Lung fibrosis and tumors have been observed in rats exposed to high concentrations of very fine carbon black particles for their lifetime. Effects are believed to be due to overloading of the normal respiratory clearance mechanisms caused by the extreme study conditions. Rats may be particularly susceptible to particle clearance overload, resulting in lung injury and tumors. No increases in tumors were observed in male or female mice exposed under the same conditions.

**Information for components:****Poly(oxypropylene) diamine**

No relevant data found.

**Alkoxyate**

No relevant data found.

**Ethanol, 2-((2-aminoethyl)amino)- polymer with methyloxirane**

Available data suggest that the material is unlikely to cause cancer.

**Diethyltoluenediamine (DETDA)**

Diethyltoluenediamine (DETDA) has caused cancer in long-term animal studies. Increased numbers of tumors in the liver, thyroid and possibly the mammary glands were observed in rats given DETDA in their diet at exaggerated doses for 2 years.

**Dibutylbis(dodecylthio)stannane**

There is no evidence that undiluted product is carcinogenic.

**Carbon black**

Lung fibrosis and tumors have been observed in rats exposed to high concentrations of very fine carbon black particles for their lifetime. Effects are believed to be due to overloading of the normal respiratory clearance mechanisms caused by the extreme study conditions. Rats may be particularly susceptible to particle clearance overload, resulting in lung injury and tumors. No increases in tumors were observed in male or female mice exposed under the same conditions.

**Carcinogenicity****Component****Carbon black****List**

IARC

ACGIH

**Classification**

Group 2B: Possibly carcinogenic to humans

A3: Confirmed animal carcinogen with unknown relevance to humans.

**Teratogenicity**

Contains component(s) which caused birth defects in laboratory animals.

**Information for components:****Poly(oxypropylene) diamine**

No relevant data found.

**Alkoxyate**

No relevant data found.

**Ethanol, 2-((2-aminoethyl)amino)- polymer with methyloxirane**

For similar material(s): Did not cause birth defects or any other fetal effects in laboratory animals.

**Diethyltoluenediamine (DETDA)**

No relevant data found.

**Dibutylbis(dodecylthio)stannane**

For this family of materials: Has caused birth defects in laboratory animals.

**Carbon black**

No relevant data found.

**Reproductive toxicity**

Contains component(s) which have interfered with fertility in animal studies.

**Information for components:****Poly(oxypropylene) diamine**

No relevant data found.

**Alkoxyate**

No relevant data found.

**Ethanol, 2-((2-aminoethyl)amino)- polymer with methyloxirane**

In animal studies, a similar material has been shown not to interfere with reproduction.

**Diethyltoluenediamine (DETDA)**

No relevant data found.

**Dibutylbis(dodecylthio)stannane**

For this family of materials: In animal studies, has been shown to interfere with reproduction.

**Carbon black**

No relevant data found.

**Mutagenicity**

Contains component(s) which were negative in some in vitro genetic toxicity studies and positive in others. Genetic toxicity studies in animals were negative for component(s) tested.

**Information for components:****Poly(oxypropylene) diamine**

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

**Alkoxylate**

No relevant data found.

**Ethanol, 2-((2-aminoethyl)amino)- polymer with methyloxirane**

Based on information for a similar material: In vitro genetic toxicity studies were negative.

**Diethyltoluenediamine (DETDA)**

In vitro genetic toxicity studies were negative in some cases and positive in other cases.  
Animal genetic toxicity studies were negative.

**Dibutylbis(dodecylthio)stannane**

In vitro genetic toxicity studies were negative. For this family of materials: Animal genetic toxicity studies were negative in some cases and positive in other cases.

**Carbon black**

Animal genetic toxicity studies were negative in some cases and positive in other cases.  
Positive findings were observed only at doses which produced significant inflammation.

---

**12. ECOLOGICAL INFORMATION**

---

*Ecotoxicological information appears in this section when such data is available.*

**Toxicity****Poly(oxypropylene) diamine****Acute toxicity to fish**

Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).

LC50, Fish, 96 Hour, > 1,000 mg/l

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), 48 Hour, 15 mg/l

**Acute toxicity to algae/aquatic plants**

EC50, Algae, 72 Hour, Growth rate inhibition, 135 mg/l

**Alkoxylate**

**Acute toxicity to fish**

Based on information for a similar material:

Material is practically non-toxic to aquatic organisms on an acute basis  
(LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

**Ethanol, 2-((2-aminoethyl)amino)- polymer with methyloxirane**

**Acute toxicity to fish**

Material is practically non-toxic to aquatic organisms on an acute basis  
(LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

LC50, Pimephales promelas (fathead minnow), static test, 96 Hour, 25,600 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

LC50, Daphnia magna (Water flea), static test, 48 Hour, 103 mg/l, OECD Test Guideline 202 or Equivalent

**Acute toxicity to algae/aquatic plants**

NOEC, Desmodesmus subspicatus (green algae), static test, 72 Hour, Growth rate inhibition, > 100 mg/l

**Toxicity to bacteria**

NOEC, Bacteria, static test, 3 Hour, > 10,000 mg/l

**Chronic toxicity to aquatic invertebrates**

NOEC, Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, >= 10 mg/l

**Diethyltoluenediamine (DETDA)**

**Acute toxicity to fish**

Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).

LC50, Leuciscus idus (Golden orfe), static test, 48 Hour, 194 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), static test, 48 Hour, 0.5 mg/l, OECD Test Guideline 202 or Equivalent

**Acute toxicity to algae/aquatic plants**

ErC50, Desmodesmus subspicatus (green algae), static test, 72 Hour, Growth rate, 100 mg/l, OECD Test Guideline 201

**Dibutylbis(dodecylthio)stannane**

**Acute toxicity to aquatic invertebrates**

Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).

EC50, water flea Daphnia magna, Immobilization, 48 Hour, 0.11 mg/l, OECD Test Guideline 202 or Equivalent

**Carbon black**

**Acute toxicity to fish**



Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).  
LC50, Leuciscus idus (Golden orfe), static test, 96 Hour, > 1,000 mg/l

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), 24 Hour, > 5,600 mg/l

**Acute toxicity to algae/aquatic plants**

NOEC, Desmodesmus subspicatus (green algae), 72 Hour, 10,000 mg/l

**Persistence and degradability****Poly(oxypropylene) diamine**

**Biodegradability:** Material is not readily biodegradable according to OECD/EEC guidelines.

**Alkoxyate**

**Biodegradability:** Based on information for a similar material: Biodegradation under aerobic laboratory conditions is below detectable limits (BOD20 or BOD28/ThOD < 2.5%).

**Ethanol, 2-((2-aminoethyl)amino)- polymer with methyloxirane**

**Biodegradability:** Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability. Material has inherent, primary biodegradability according to OECD test (s) guidelines (reaches > 20% biodegradation in OECD test(s)).

10-day Window: Not applicable

**Biodegradation:** 48.5 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 302B or Equivalent

10-day Window: Fail

**Biodegradation:** 2 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301F or Equivalent

**Diethyltoluenediamine (DETDA)**

**Biodegradability:** Material is not readily biodegradable according to OECD/EEC guidelines.

10-day Window: Fail

**Biodegradation:** < 1 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301D or Equivalent

**Theoretical Oxygen Demand:** 3.23 mg/mg

**Dibutylbis(dodecylthio)stannane**

**Biodegradability:** For similar material(s): Material is not readily biodegradable according to OECD/EEC guidelines.

**Theoretical Oxygen Demand:** 3.22 mg/mg

**Carbon black**

**Biodegradability:** Biodegradation is not applicable.

**Bioaccumulative potential****Poly(oxypropylene) diamine**

**Bioaccumulation:** No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000).

**Alkoxyate**

**Bioaccumulation:** No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000).

**Ethanol, 2-((2-aminoethyl)amino)- polymer with methyloxirane**

**Bioaccumulation:** Based on information for a similar material: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** -1.25 - 1.20 estimated

**Diethyltoluenediamine (DETDA)**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** 1.17 Measured

**Bioconcentration factor (BCF):** 3 Estimated.

**Dibutylbis(dodecylthio)stannane**

**Bioaccumulation:** Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5). No data available for assessment due to technical difficulties with testing.

**Bioconcentration factor (BCF):** 100 Estimated.

**Carbon black**

**Bioaccumulation:** No relevant data found.

**Mobility in soil**

**Poly(oxypropylene) diamine**

No relevant data found.

**Alkoxyate**

No relevant data found.

**Ethanol, 2-((2-aminoethyl)amino)- polymer with methyloxirane**

For similar material(s):

**Partition coefficient (Koc):** 10 - 47 Estimated.

**Diethyltoluenediamine (DETDA)**

Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

**Partition coefficient (Koc):** 551.2 Estimated.

**Dibutylbis(dodecylthio)stannane**

Expected to be relatively immobile in soil (Koc > 5000).

**Carbon black**

No relevant data found.

---

## **13. DISPOSAL CONSIDERATIONS**

---

**Disposal methods:** DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local

laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device. For additional information, refer to: Handling & Storage Information, MSDS Section 7 Stability & Reactivity Information, MSDS Section 10 Regulatory Information, MSDS Section 15

---

## 14. TRANSPORT INFORMATION

---

### DOT

<b>Proper shipping name</b>	Amines, liquid, corrosive, n.o.s.(Poly(oxypropylene) diamine, N,N,N',N',N''''-Pentamethylene triamine)
<b>UN number</b>	UN 2735
<b>Class</b>	8
<b>Packing group</b>	III

### Classification for SEA transport (IMO-IMDG):

<b>Proper shipping name</b>	AMINES, LIQUID, CORROSIVE, N.O.S.(Poly(oxypropylene) diamine, N,N,N',N',N''''-Pentamethylene triamine)
<b>UN number</b>	UN 2735
<b>Class</b>	8
<b>Packing group</b>	III
<b>Marine pollutant</b>	Diethyltoluenediamine
<b>Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code</b>	Consult IMO regulations before transporting ocean bulk

### Classification for AIR transport (IATA/ICAO):

<b>Proper shipping name</b>	Amines, liquid, corrosive, n.o.s.(Poly(oxypropylene) diamine, N,N,N',N',N''''-Pentamethylene triamine)
<b>UN number</b>	UN 2735
<b>Class</b>	8
<b>Packing group</b>	III

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

---

## 15. REGULATORY INFORMATION

---

**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312**

Acute toxicity (any route of exposure)  
Respiratory or skin sensitisation  
Reproductive toxicity  
Specific target organ toxicity (single or repeated exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation

**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**Pennsylvania Worker and Community Right-To-Know Act:**

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

**California Prop. 65**

WARNING: This product can expose you to chemicals including Carbon black, which is/are known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**United States TSCA Inventory (TSCA)**

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

---

## 16. OTHER INFORMATION

---

**Revision**

Identification Number: 99189244 / A001 / Issue Date: 09/18/2021 / Version: 1.0  
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

**Legend**

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
STEL	Short-term exposure limit
TWA	8-hour, time-weighted average

**Full text of other abbreviations**

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely

Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

**Information Source and References**

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

Spray Equipment and Coatings, Inc. urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

US