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<b>SAFETY DATA SHEET</b>		Revision Date: 05/26/2015
		Print Date: 6/1/2015
		SDS Number: 000000233547
Pliogrip™ DOOR SKIN 30/220 EPOXY ADHESIVE ™ Trademark, Ashland or its subsidiaries, registered in various countries 849244		Version: 1.1

29 CFR 1910.1200 (OSHA HazCom 2012)

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

### Product identifier

Trade name : Pliogrip™ DOOR SKIN 30/220 EPOXY  
ADHESIVE  
™ Trademark, Ashland or its subsidiaries, registered in  
various countries

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

Use of the Substance/Mixture : Adhesives  
Industrial chemical

<b>Details of the supplier of the safety data sheet</b> Ashland P.O. Box 2219 Columbus, OH 43216 United States of America  EHS Customer Requests@ashland.com	<b>Emergency telephone number</b> 1-800-ASHLAND (1-800-274-5263)  <b>Regulatory Information Number</b> 1-800-325-3751  <b>Product Information</b> 614-790-3333
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## SECTION 2. HAZARDS IDENTIFICATION

### GHS Classification

Skin corrosion : Category 1  
Serious eye damage : Category 1  
Skin sensitization : Category 1  
Carcinogenicity : Category 1A  
Reproductive toxicity : Category 1B  
Specific target organ systemic toxicity - repeated exposure : Category 2 (Skin, Nervous system, Liver, Kidney)

### GHS Label element

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Hazard pictograms :



Signal Word :

Danger

Hazard Statements :

Causes severe skin burns and eye damage.  
May cause an allergic skin reaction.  
Causes serious eye damage.  
May cause cancer.  
May damage fertility or the unborn child.  
May cause damage to organs (Skin, Nervous system, Liver, Kidney) through prolonged or repeated exposure.

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/ vapors/ spray.  
Wash skin thoroughly after handling.  
Contaminated work clothing must not be allowed out of the workplace.  
Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**  
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 or doctor/ physician.  
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 or doctor/ physician.  
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/ container to an approved waste disposal plant.

**Other hazards**

None known.

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### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### PART A

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Substance / Mixture : Mixture

#### Hazardous components

Chemical Name	CAS-No.	Classification	Concentration (%)
POLYMER	254504001-6266	Eye Irrit. 2A; H319	>= 30.00 - < 40.00

The identity of one or more component(s) is being withheld under business confidentiality.

SILICA VITREOUS	60676-86-0		24.00
TRIETHYLENETETRAMINE	112-24-3	Acute Tox. 4; H302 Acute Tox. 4; H312 Skin Corr. 1; H314 Eye Dam. 1; H318 Skin Sens. 1; H317	6.40
PHENOL	108-95-2	Acute Tox. 3; H301 Acute Tox. 3; H331 Acute Tox. 3; H311 Skin Corr. 1; H314 Eye Dam. 1; H318 STOT RE 2; H373	5.44
2,4,6- TRIS(DIMETHYLAMINOMETHYL )PHENOL	90-72-2	Skin Corr. 1; H314 Eye Dam. 1; H318	4.49
METHYLPENTAMETHYLENEDIA MINE	15520-10-2	Flam. Liq. 4; H227 Acute Tox. 4; H302	2.40

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		Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Corr. 1A; H314 Eye Dam. 1; H318 STOT SE 3; H335	
IMIDAZOLE	288-32-4	Acute Tox. 4; H302 Skin Corr. 1; H314 Eye Dam. 1; H318 Repr. 1B; H360	2.00
CRISTOBALITE	14464-46-1	Carc. 1A; H350 STOT RE 1; H372	0.21

**PART B**

Substance / Mixture : Mixture

**Hazardous components**

Chemical Name	CAS-No.	Classification	Concentration (%)
POLYMER	800986-5211P	Skin Sens. 1B; H317	>= 70.00 - < 80.00
POLYMER	254504001-6268	Skin Irrit. 2; H315 Eye Irrit. 2A; H319 Skin Sens. 1; H317	>= 1.50 - < 5.00

The identity of one or more component(s) is being withheld under business confidentiality.

SILICA VITREOUS	60676-86-0		5.00
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3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER	2530-83-8	Eye Dam. 1; H318	2.00
GLYCIDYL (C12-C14 ALKYL) ETHER	68609-97-2	Skin Irrit. 2; H315 Skin Sens. 1; H317	2.00
CARBON BLACK	1333-86-4	Carc. 2; H351	0.40

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#### SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.  
Consult a physician.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.
- If inhaled : Move to fresh air.  
IF INHALED: Call a POISON CENTER or doctor/ physician if you feel unwell.  
Keep patient warm and at rest.  
If unconscious place in recovery position and seek medical advice.
- In case of skin contact : Remove contaminated clothing. If irritation develops, get medical attention.  
If on skin, rinse well with water.  
Wash contaminated clothing before re-use.
- In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
Continue rinsing eyes during transport to hospital.  
Remove contact lenses.  
Protect unharmed eye.
- If swallowed : Get medical attention immediately.  
Do NOT induce vomiting.  
Rinse mouth with water.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.

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Do not induce vomiting. Phenol concentrations greater than 1.5% produce irritation and greater than 5% are corrosive; vomiting can cause further damage to the mouth and throat. Do not dilute the swallowed material, since this may enhance its absorption. Seek immediate medical attention. If possible, do not leave the individual unattended. Vomiting and diarrhea may occur spontaneously.

Most important symptoms and effects, both acute and delayed : Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:  
 stomach or intestinal upset (nausea, vomiting, diarrhea)  
 irritation (nose, throat, airways)  
 Cough  
 Drowsiness  
 low body temperature  
 irregular heartbeat  
 cyanosis (causes blue coloring of the skin and nails from lack of oxygen)  
 lung edema (fluid buildup in the lung tissue)  
 Convulsions  
 respiratory failure  
 Difficulty in breathing  
 May cause an allergic skin reaction.  
 Causes serious eye damage.  
 May cause cancer.  
 May damage fertility or the unborn child.  
 May cause damage to organs through prolonged or repeated exposure.  
 Causes severe burns.  
 Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material.  
 Pulmonary edema may be delayed.

Notes to physician : Phenol adsorbs to activated charcoal, and it maybe preferable to ipecac-induced emesis because seizures or coma may onset rapidly and because of the corrosive effects of phenol. A usual activated charcoal dose in adults is 30-100 g and in children is 15-30 g. Activated charcoal should be administered with, or followed by, a cathartic. If endoscopy is planned, charcoal may obscure visualization of affected areas. Gastric lavage may be indicated if it is performed soon after ingestion or in patients who are comatose or at risk of seizures. Monitor for seizures, metabolic acidosis and ventricular dysrhythmias.

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## SECTION 5. FIREFIGHTING MEASURES

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- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Water spray  
Foam  
Carbon dioxide (CO2)  
Dry chemical
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : carbon dioxide and carbon monoxide  
Hydrocarbons  
phenols  
Hydrogen  
Ammonia  
Nitrogen oxides (NOx)  
Hydrogen cyanide (hydrocyanic acid)  
nitrogen oxides (NOx)  
formaldehyde  
acid vapors  
Aldehydes  
carboxylic acids  
Methanol  
silicone polymers  
silicon dioxide  
various hydrocarbons
- Specific extinguishing methods :  
  
Product is compatible with standard fire-fighting agents.
- Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Ensure adequate ventilation.  
Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
- Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.

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Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Keep in suitable, closed containers for disposal.

Other information : Comply with all applicable federal, state, and local regulations.

## SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Do not breathe vapours/dust.  
Do not smoke.  
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.  
Container hazardous when empty.  
Avoid exposure - obtain special instructions before use.  
Avoid contact with skin and eyes.  
Smoking, eating and drinking should be prohibited in the application area.  
For personal protection see section 8.  
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Observe label precautions.  
Electrical installations / working materials must comply with the technological safety standards.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

#### PART A

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
SILICA VITREOUS	60676-86-0	REL	6 mg/m <sup>3</sup>	NIOSH/GUID E
		TWA	0.8 mg/m <sup>3</sup>	Z3
		TWA	0.1 mg/m <sup>3</sup> Respirable dust.	TN OEL
		TWA	0.1 mg/m <sup>3</sup> Respirable dust.	Z1A
		TWA PEL	0.1 mg/m <sup>3</sup>	US CA OEL



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		ST ESL	Respirable dust. 27 µg/m3 Particulate.	TX ESL
		AN ESL	2 µg/m3 Particulate.	TX ESL
TRIETHYLENETETRAMINE	112-24-3	TWA	1 ppm 6 mg/m3	WEEL
PHENOL	108-95-2	TWA	5 ppm	ACGIH
		REL	5 ppm 19 mg/m3	NIOSH/GUID E
		Ceil_Time	15.6 ppm 60 mg/m3	NIOSH/GUID E
		PEL	5 ppm 19 mg/m3	OSHA_TRA NS
		TWA	5 ppm 19 mg/m3	TN OEL
CRISTOBALITE	14464-46-1	TWA	0.025 mg/m3 Respirable fraction.	ACGIH
		TWA	0.15 mg/m3 Total dust.	Z3
		TWA	0.05 mg/m3 Respirable.	Z3
		TWA	0.05 mg/m3 Respirable dust.	Z1A
		REL	5 mg/m3 Fiber, total	NIOSH/GUID E
		REL	5 mg/m3 fibers, total dust	NIOSH/GUID E
		REL	3 fibre/cm3 Dust	NIOSH/GUID E
		REL	3 fibre/cm3 Fiber.	NIOSH/GUID E

### PART B

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
SILICA VITREOUS	60676-86-0	REL	6 mg/m3	NIOSH/GUID E
		TWA	0.8 mg/m3	Z3
		TWA	0.1 mg/m3 Respirable dust.	TN OEL
		TWA	0.1 mg/m3 Respirable dust.	Z1A
		TWA PEL	0.1 mg/m3 Respirable dust.	US CA OEL
		ST ESL	27 µg/m3	TX ESL

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		AN ESL	Particulate. 2 µg/m3 Particulate.	TX ESL
CARBON BLACK	1333-86-4	REL	0.1 mg/m3	NIOSH/GUIDE
		REL	3.5 mg/m3	NIOSH/GUIDE
		PEL	3.5 mg/m3	OSHA_TRANS
		TWA	3 mg/m3 Inhalable fraction.	ACGIH

**Biological occupational exposure limits  
PART A**

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
PHENOL	108-95-2	Phenol with hydrolysis	Creatinine in urine	Sampling time: End of shift.	250 mg/g	
Remarks:	Background, Nonspecific					

**Engineering measures** : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

**Personal protective equipment**

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

Hand protection  
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Wear chemical splash goggles and face shield when there is potential for exposure of the eyes or face to liquid, vapor or mist.  
Maintain eye wash station in immediate work area.

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- Skin and body protection : Wear as appropriate:  
 impervious clothing  
 Chemical resistant apron  
 Safety shoes  
 Choose body protection according to the amount and concentration of the dangerous substance at the work place.  
 Discard gloves that show tears, pinholes, or signs of wear.  
 Wear resistant gloves (consult your safety equipment supplier).
- Hygiene measures : Wash hands before breaks and at the end of workday.  
 When using do not eat or drink.  
 Ensure that eyewash stations and safety showers are close to the workstation location.  
 When using do not smoke.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### PART A

- Physical state : liquid
- Colour : tan
- Odour : No data available
- Odour Threshold : No data available
- pH : No data available
- Melting point/freezing point : No data available
- Boiling point/boiling range : No data available
- Flash point : > 212 °F / > 100 °C
- Evaporation rate : No data available
- Flammability (solid, gas) : No data available
- Upper explosion limit : No data available
- Lower explosion limit : No data available
- Vapour pressure : No data available
- Relative vapour density : No data available
- Relative density : No data available
- Density : 1.0 g/cm<sup>3</sup> (23 °C)

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Solubility(ies)  
Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-  
octanol/water : No data available

Thermal decomposition : No data available

Viscosity  
Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Oxidizing properties : No data available

#### **PART B**

Physical state : liquid

Colour : black

Odour : No data available

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : No data available

Flash point : > 212 °F / > 100 °C

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : No data available

Density : 1.1 g/cm<sup>3</sup> (23 °C)

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Solubility(ies)  
 Water solubility : No data available  
 Solubility in other solvents : No data available  
 Partition coefficient: n-octanol/water : No data available  
 Thermal decomposition : No data available  
 Viscosity  
 Viscosity, dynamic : No data available  
 Viscosity, kinematic : No data available  
 Oxidizing properties : No data available

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## SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.  
 Chemical stability : Stable under recommended storage conditions.  
 Possibility of hazardous reactions : Product will not undergo hazardous polymerization.  
 Conditions to avoid : excessive heat  
 Exposure to air.  
 Exposure to moisture  
 Incompatible materials : None known.  
 1,3-butadiene  
 Acids  
 acrylates  
 Alcohols  
 Aldehydes  
 aluminum  
 Amines  
 Bases  
 brass  
 bronze  
 Copper  
 Copper alloys  
 fluorides  
 halogenated hydrocarbons  
 halogens  
 Iron  
 Ketones  
 Lead

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magnesium  
 Nickel  
 nitrates  
 organic absorbents such as sawdust, peat moss, ground corn  
 cobs, etc.  
 Oxidizing agents  
 peroxides  
 Reducing agents  
 strong alkalis  
 water  
 Zinc  
 Peroxides

Hazardous decomposition  
products

acid vapors  
 Aldehydes  
 carbon dioxide and carbon monoxide  
 formaldehyde-like  
 Hydrocarbons  
 Methanol  
 nitrogen compounds  
 Nitrogen oxides (NOx)  
 phenols  
 silicone polymers  
 volatile amines  
 Ammonia  
 silicon dioxide  
 various hydrocarbons

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## SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation  
 Skin contact  
 Eye Contact  
 Ingestion

### Acute toxicity

Not classified based on available information.

#### Components:

##### BISPHENOL A-EPICHLOROHYDRIN POLYMER:

Acute oral toxicity : LD 50 (Rat): > 2,000 mg/kg  
 Method: OECD Test Guideline 420  
 Assessment: No adverse effect has been observed in acute  
 oral toxicity tests.

Acute dermal toxicity : LD 50 (Rat): > 2,000 mg/kg  
 Method: OECD Test Guideline 402  
 Assessment: Not classified as acutely toxic by dermal  
 absorption under GHS.

##### TRIETHYLENETETRAMINE:

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Acute oral toxicity : LD 50 (Rat): 1,670 mg/kg

Acute dermal toxicity : LD 50 (Rabbit): 1,465 mg/kg

**PHENOL:**

Acute oral toxicity : LD 50 (Rat): 317 mg/kg

LD 50 (Mouse): 270 mg/kg

Assessment: The component/mixture is classified as acute oral toxicity, category 3.

Acute inhalation toxicity : Assessment: The component/mixture is classified as acute inhalation toxicity, category 3.

Acute dermal toxicity : LD 50 (Rabbit): 850 mg/kg

LD50 (Rat, females): 660 mg/kg

Method: OECD Test Guideline 402

**2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL:**

Acute oral toxicity : LD 50 (Rat): 2,169 mg/kg

Method: OECD Test Guideline 401

**POLYMER:**

Acute oral toxicity : LD 50 (Rat): 2,020 mg/kg

**METHYLPENTAMETHYLENEDIAMINE:**

Acute oral toxicity : LD50 (Rat, male): 1,690 mg/kg

Method: OECD Test Guideline 401

GLP: no

Acute inhalation toxicity : LC50 (Rat, male and female): 4.9 mg/l

Exposure time: 1 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 403

GLP: yes

Acute dermal toxicity : LD50 (Rat, male and female): 1,870 mg/kg

Method: OECD Test Guideline 402

GLP: no

Remarks: Information given is based on data obtained from similar substances.

**3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER:**

Acute oral toxicity : LD 50 (Rat): 8,025 mg/kg

Method: OECD Test Guideline 401

Acute inhalation toxicity : LC 50 (Rat): > 5.3 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 403

Acute dermal toxicity : LD 50 (Rabbit): 4,250 mg/kg

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**GLYCIDYL (C12-C14 ALKYL) ETHER:**

Acute oral toxicity : LD50 (Rat, male): 26.8 g/kg

**IMIDAZOLE:**

Acute oral toxicity : LD 50 (Rat): ca. 970 mg/kg

**CARBON BLACK:**

Acute oral toxicity : LD 50 (Rat): > 10,000 mg/kg

Acute dermal toxicity : LD 50 (Rabbit): > 3 g/kg

**Skin corrosion/irritation**

Causes severe burns.

**Product:**

Remarks: May cause skin irritation in susceptible persons., Causes severe skin burns and eye damage.

**Components:**

**BISPHENOL A-EPICHLOROHYDRIN POLYMER:**

Result: Slightly irritating to skin

**SILICA VITREOUS:**

Result: Possibly irritating to skin

**TRIETHYLENETETRAMINE:**

Result: Corrosive after 4 hours or less of exposure

**PHENOL:**

Result: Corrosive to skin

**2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL:**

Result: Corrosive to skin

**POLYMER:**

Result: Irritating to skin

**METHYLPENTAMETHYLENEDIAMINE:**

Species: Rabbit

Method: OECD Test Guideline 404

Result: Corrosive after 3 minutes or less of exposure

**3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER:**

Result: Slightly irritating to skin

**GLYCIDYL (C12-C14 ALKYL) ETHER:**

Species: Rabbit

Method: Patch Test 24 Hrs.

Result: Irritating to skin

**IMIDAZOLE:**

Species: Rabbit

Result: Corrosive to skin



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**CARBON BLACK:**

Result: Not irritating to skin

**CRISTOBALITE:**

Result: Possibly irritating to skin

**Serious eye damage/eye irritation**

Causes serious eye damage.

**Product:**

Remarks: May cause irreversible eye damage.

**Components:**

**BISPHENOL A-EPICHLOROHYDRIN POLYMER:**

Result: Slightly irritating to eyes

**SILICA VITREOUS:**

Result: Possibly irritating to eyes

**TRIETHYLENETETRAMINE:**

Result: Corrosive to eyes

**PHENOL:**

Result: Corrosive to eyes

**2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL:**

Result: Corrosive to eyes

**POLYMER:**

Result: Irritating to eyes

**METHYLPENTAMETHYLENEDIAMINE:**

Species: Rabbit

Result: Corrosive to eyes

**3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER:**

Result: Irreversible effects on the eye

**GLYCIDYL (C12-C14 ALKYL) ETHER:**

Species: Rabbit

Result: Mildly irritating to eyes

Method: OECD Test Guideline 405

**IMIDAZOLE:**

Species: Rabbit

Result: Corrosive to eyes

**CARBON BLACK:**

Result: Slightly irritating to eyes

**CRISTOBALITE:**

Result: Possibly irritating to eyes

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### Respiratory or skin sensitisation

Skin sensitisation: May cause an allergic skin reaction.

Respiratory sensitisation: Not classified based on available information.

#### Components:

##### BISPHENOL A-EPICHLOROHYDRIN POLYMER:

Test Type: Local lymph node assay

Method: OECD Test Guideline 429

Result: The product is a skin sensitiser, sub-category 1B.

##### TRIETHYLENETETRAMINE:

Assessment: May cause sensitization by skin contact.

##### POLYMER:

Assessment: May cause sensitization by skin contact.

##### METHYLPENTAMETHYLENEDIAMINE:

Species: Guinea pig

Assessment: Did not cause sensitisation on laboratory animals.

##### 3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER:

Species: Guinea pig

Assessment: Did not cause sensitisation on laboratory animals.

##### GLYCIDYL (C12-C14 ALKYL) ETHER:

Test Type: Buehler Test

Species: Guinea pig

Assessment: May cause sensitization by skin contact.

### Germ cell mutagenicity

Not classified based on available information.

#### Components:

##### BISPHENOL A-EPICHLOROHYDRIN POLYMER:

Genotoxicity in vitro : Test Type: in vitro assay  
Test species: Rodent cell line  
Metabolic activation: without metabolic activation  
Result: positive

: Test Type: in vitro assay  
Test species: Rodent cell line  
Metabolic activation: with metabolic activation  
Result: negative

: Test Type: Ames test  
Metabolic activation: with and without metabolic activation  
Result: negative

Genotoxicity in vivo : Test Type: in vivo assay  
Test species: Mouse (male)  
Application Route: Ingestion  
Result: negative

##### TRIETHYLENETETRAMINE:

Genotoxicity in vitro : Result: Positive results were obtained in some in vitro tests.

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Genotoxicity in vivo : Test Type: Micronucleus test  
Test species: Mouse  
Result: negative

**PHENOL:**

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro  
Test species: Chinese hamster ovary cells  
Metabolic activation: with metabolic activation  
Method: OECD Test Guideline 473  
Result: positive

: Test Type: Micronucleus test  
Test species: Chinese hamster ovary cells  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 487  
Result: positive

Genotoxicity in vivo : Test Type: Micronucleus test  
Test species: Mouse (male and female)  
Application Route: Intraperitoneal injection  
Method: OECD Test Guideline 474  
Result: positive

**METHYLPENTAMETHYLENEDIAMINE:**

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro  
Test species: Human lymphocytes  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 473 (In vitro Mammalian Chromosome Aberration Test)  
Result: negative  
GLP: yes

: Test species: mouse lymphoma cells  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 476  
Result: negative  
GLP: yes

Genotoxicity in vivo : Test Type: In vivo micronucleus test  
Test species: Mouse (male and female)  
Application Route: inhalation (dust/mist/fume)  
Method: OECD Test Guideline 474  
Result: negative  
GLP: yes  
Remarks: Information given is based on data obtained from similar substances.

**3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER:**

Genotoxicity in vitro : Test Type: Ames test  
Test species: Salmonella typhimurium  
Metabolic activation: with and without metabolic activation  
Method: Mutagenicity (Salmonella typhimurium - reverse

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mutation assay)  
Result: positive

: Test species: mouse lymphoma cells  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 476  
Result: positive

: Test species: Chinese hamster ovary cells  
Method: OECD Test Guideline 479  
Result: positive

Genotoxicity in vivo : Test Type: In vivo micronucleus test  
Test species: Mouse (male and female)  
Cell type: Bone marrow  
Application Route: Intraperitoneal  
Method: OECD Test Guideline 474  
Result: positive

**GLYCIDYL (C12-C14 ALKYL) ETHER:**

Genotoxicity in vitro : Test Type: Ames test  
Test species: Salmonella typhimurium  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: Positive results were obtained in some in vitro tests.  
GLP: yes

Genotoxicity in vivo : Test Type: Micronucleus test  
Test species: Mouse  
Cell type: Bone marrow  
Method: OECD Test Guideline 474  
Result: negative  
GLP: yes

**IMIDAZOLE:**

Genotoxicity in vitro : Test Type: unscheduled DNA synthesis assay  
Test species: rat hepatocytes  
Method: OECD Test Guideline 482  
Result: negative

: Test Type: Ames test  
Test species: Salmonella typhimurium  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative  
GLP: yes

: Test Type: In vitro mammalian cell gene mutation test  
Test species: Chinese hamster lung cells  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 476  
Result: negative  
GLP: yes

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Genotoxicity in vivo : Test Type: Micronucleus test  
 Test species: Mouse  
 Method: OECD Test Guideline 474  
 Result: negative  
 GLP: yes

**Carcinogenicity**

May cause cancer.

**Components:**

CARBON BLACK:

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in inhalation studies with animals.

CRISTOBALITE:

Carcinogenicity - Assessment : Human carcinogen.

**Reproductive toxicity**

May damage fertility or the unborn child.

**Components:**

TRIETHYLENETETRAMINE:

Effects on foetal development : Species: Rat  
 Application Route: Oral  
 Developmental Toxicity: No observed adverse effect level F1:  
 750 mg/kg body weight

IMIDAZOLE:

Reproductive toxicity - Assessment : Clear evidence of adverse effects on development, based on animal experiments.

**STOT - single exposure**

Not classified based on available information.

**Components:**

METHYLPENTAMETHYLENEDIAMINE:

Exposure routes: Inhalation  
 Target Organs: Respiratory Tract  
 Assessment: May cause respiratory irritation.

**STOT - repeated exposure**

May cause damage to organs (Skin, Nervous system, Liver, Kidney) through prolonged or repeated exposure.

**Components:**

PHENOL:

Target Organs: Skin  
 Assessment: May cause damage to organs through prolonged or repeated exposure.

Target Organs: Nervous system

Assessment: May cause damage to organs through prolonged or repeated exposure.

Target Organs: Liver

Assessment: May cause damage to organs through prolonged or repeated exposure.

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Target Organs: Kidney  
Assessment: May cause damage to organs through prolonged or repeated exposure.

**CRISTOBALITE:**  
Exposure routes: inhalation (dust/mist/fume)  
Target Organs: Respiratory system, Kidney  
Assessment: Causes damage to organs through prolonged or repeated exposure.

**Repeated dose toxicity**

**Components:**

TRIETHYLENETETRAMINE:

Species: Mouse  
NOAEL: 92 mg/kg  
Application Route: Oral  
Exposure time: 90-day

**Aspiration toxicity**

Not classified based on available information.

**Further information**

**Product:**

Remarks: No data available

**Components:**

SILICA VITREOUS:

Remarks: Lung

PHENOL:

Remarks: Central nervous system

Remarks: Blood

CRISTOBALITE:

Remarks: Lung

**Carcinogenicity:**

**IARC**

Group 1: Carcinogenic to humans

CRISTOBALITE 14464-46-1

Group 2B: Possibly carcinogenic to humans

CARBON BLACK 1333-86-4

**OSHA**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**NTP**

Known to be human carcinogen

CRISTOBALITE 14464-46-1

Reasonably anticipated to be a human carcinogen

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CRISTOBALITE

14464-46-1

## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### BISPHENOL A-EPICHLOROHYDRIN POLYMER:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 2.7 mg/l  
Exposure time: 96 h  
Test Type: semi-static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Water flea (Daphnia magna)): 2.8 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 4.2 mg/l  
Exposure time: 72 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Water flea (Daphnia magna)): 0.3 mg/l  
Exposure time: 21 d  
Test Type: semi-static test  
Method: OECD Test Guideline 211

#### TRIETHYLENETETRAMINE:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): Exposure time: 96 h  
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Water flea (Daphnia magna)): 31.1 mg/l  
Exposure time: 48 h  
Test Type: static test

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 20 mg/l  
End point: Growth inhibition  
Exposure time: 72 h  
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Water flea (Daphnia magna)): 1.9 mg/l  
Exposure time: 21 d  
End point: Reproduction Test

#### PHENOL:

Toxicity to fish : LC 50 (Oncorhynchus mykiss (rainbow trout)): 7.5 - 14 mg/l  
Exposure time: 96 h  
Test Type: static test

LC 50 (Fathead minnow (Pimephales promelas)): 67.5 mg/l  
Exposure time: 96 h

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Test Type: flow-through test

LC 50 (Danio rerio (zebra fish)): 27.8 mg/l  
Exposure time: 96 h  
Method: Static  
Remarks: Mortality

Toxicity to daphnia and other aquatic invertebrates : EC50 (Water flea (Ceriodaphnia dubia)): 3.1 mg/l  
Exposure time: 48 h  
Test Type: static test

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 61.1 mg/l  
Exposure time: 96 h  
Test Type: static test

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 0.077 mg/l  
Exposure time: 60 d  
Test Type: semi-static test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Water flea (Daphnia magna)): 0.16 mg/l  
Exposure time: 16 d  
Test Type: semi-static test

**2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL:**

Toxicity to fish : LC 50 (Oncorhynchus mykiss (rainbow trout)): > 180 - < 240 mg/l  
Exposure time: 96 h  
Test Type: static test

Toxicity to algae : EC 50 (Desmodesmus subspicatus (green algae)): 84 mg/l  
End point: Growth inhibition  
Exposure time: 72 h

**METHYLPENTAMETHYLENEDIAMINE:**

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 130 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 203  
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 50 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: EPA-660/3-75-009  
Remarks: Information given is based on data obtained from similar substances.

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l  
Exposure time: 72 h  
Test Type: static test



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Method: OECD Test Guideline 201

Remarks: Information given is based on data obtained from similar substances.

NOEC (Pseudokirchneriella subcapitata (green algae)): 10 mg/l

Exposure time: 72 h

Test Type: static test

Method: OECD Test Guideline 201

Remarks: Information given is based on data obtained from similar substances.

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 4.16 mg/l  
Exposure time: 21 d  
End point: Reproduction Test  
Test Type: semi-static test  
Method: OECD Test Guideline 211  
GLP: yes  
Remarks: Information given is based on data obtained from similar substances.

Toxicity to bacteria : EC20 (Pseudomonas putida): 30 mg/l  
End point: Growth rate  
Exposure time: 18 h  
Test Type: Static

**3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER:**

Toxicity to fish : LC50 (Cyprinus carpio (Carp)): 55 mg/l  
Exposure time: 96 h  
Test Type: semi-static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): 324 mg/l  
Exposure time: 48 h  
Test Type: static test

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (microalgae)): 350 mg/l  
Exposure time: 96 h  
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia (water flea)): 100 mg/l  
Exposure time: 21 d

**GLYCIDYL (C12-C14 ALKYL) ETHER:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 5,000 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 203  
GLP: yes

Toxicity to daphnia and other : EL50 (Water flea (Daphnia magna)): 7.2 mg/l

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- aquatic invertebrates                      Exposure time: 48 h  
                                                             Test Type: static test  
                                                             Test substance: WAF  
                                                             Method: OECD Test Guideline 202  
                                                             GLP: yes
- Toxicity to algae                                : IC50 (Pseudokirchneriella subcapitata (microalgae)): 843 mg/l  
                                                             Exposure time: 72 h  
                                                             Method: OECD Test Guideline 201  
                                                             GLP: yes
- NOEC (Pseudokirchneriella subcapitata (microalgae)): 500 mg/l  
                                                             Exposure time: 72 h  
                                                             Method: OECD Test Guideline 201  
                                                             GLP: yes
- IMIDAZOLE:
- Toxicity to fish                                 : LC50 (Leuciscus idus (Golden orfe)): 283.6 mg/l  
                                                             Exposure time: 48 h  
                                                             Test Type: static test
- Toxicity to daphnia and other                : EC50 (Daphnia magna (Water flea)): 341.5 mg/l  
  aquatic invertebrates                              Exposure time: 48 h  
                                                             Test Type: static test  
                                                             Method: Directive 67/548/EEC, Annex V, C.2.
- Toxicity to algae                                : EC50 (Desmodesmus subspicatus (Scenedesmus subspicatus)): 133 mg/l  
                                                             End point: Growth inhibition  
                                                             Exposure time: 72 h  
                                                             Test Type: static test  
                                                             Method: DIN 38412  
                                                             GLP: no

**Persistence and degradability**

**BISPHENOL A-EPICHLOROHYDRIN POLYMER:**

- Biodegradability                                : Result: Not readily biodegradable.  
                                                             Biodegradation: 5 %  
                                                             Exposure time: 28 d  
                                                             Method: OECD Test Guideline 301F
- Biodegradation: 82 %  
                                                             Exposure time: 28 d  
                                                             Method: Abiotic degradation

- Physico-chemical                                : Remarks: The product can be degraded by abiotic (e.g.  
  removability                                              chemical or photolytic) processes.

**TRIETHYLENETETRAMINE:**

- Biodegradability                                : Inoculum: activated sludge  
                                                             Result: Not readily biodegradable.

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Biodegradation: 0 %  
Exposure time: 20 d  
Method: OECD Test Guideline 301D  
Remarks: Not readily biodegradable.

**PHENOL:**

Biodegradability : Result: Readily biodegradable  
Biodegradation: 62 %  
Exposure time: 100 h  
Method: OECD Test Guideline 301C

**2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 4 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301D

**METHYLPENTAMETHYLENEDIAMINE:**

Biodegradability : Result: Readily biodegradable  
Biodegradation: 100 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301D  
GLP: yes

**3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER:**

Biodegradability : aerobic  
Result: Not readily biodegradable.  
Biodegradation: 37 %  
Exposure time: 28 d  
GLP: yes

**GLYCIDYL (C12-C14 ALKYL) ETHER:**

Biodegradability : Result: Readily biodegradable  
Biodegradation: 87 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301F

**IMIDAZOLE:**

Biodegradability : Inoculum: activated sludge  
Result: Readily biodegradable  
Exposure time: 18 d  
Method: OECD Test Guideline 301A  
GLP: yes

**Bioaccumulative potential**

**TRIETHYLENETETRAMINE:**

Bioaccumulation : Bioconcentration factor (BCF): < 100

Partition coefficient: n-octanol/water : log Pow: Calculated -2.4

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**PHENOL:**

Partition coefficient: n-octanol/water : log Pow: 1.46

**METHYLPENTAMETHYLENEDIAMINE:**

Partition coefficient: n-octanol/water : log Pow: <= 1 (25 °C)  
pH: 9  
GLP: yes

**3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER:**

Partition coefficient: n-octanol/water : log Pow: Estimated 0.5 (20 °C)

**IMIDAZOLE:**

Partition coefficient: n-octanol/water : log Pow: -0.02 (25 °C)  
Method: OECD Test Guideline 107

**Mobility in soil**

No data available

**Other adverse effects**

No data available

**Product:**

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic to aquatic life with long lasting effects.

**SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods**

General advice : The product should not be allowed to enter drains, water courses or the soil.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Send to a licensed waste management company.  
  
Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.  
Do not re-use empty containers.

**SECTION 14. TRANSPORT INFORMATION**

**International transport regulations**

**REGULATION**

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ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.
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**U.S. DOT - ROAD**

UN 2735	Amines, liquid, corrosive, n.o.s. (TRIETHYLENETETRAMINE)	8		III	LIMITED QUANTITY
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**U.S. DOT - RAIL**

UN 2735	Amines, liquid, corrosive, n.o.s. (TRIETHYLENETETRAMINE)	8		III	LIMITED QUANTITY
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**U.S. DOT - INLAND WATERWAYS**

UN 2735	Amines, liquid, corrosive, n.o.s. (TRIETHYLENETETRAMINE)	8		III	LIMITED QUANTITY
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**TRANSPORT CANADA - ROAD**

UN 2735	AMINES, LIQUID, CORROSIVE, N.O.S. (TRIETHYLENETETRAMINE)	8		III	LIMITED QUANTITY
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**TRANSPORT CANADA - RAIL**

UN 2735	AMINES, LIQUID, CORROSIVE, N.O.S. (TRIETHYLENETETRAMINE)	8		III	LIMITED QUANTITY
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**TRANSPORT CANADA - INLAND WATERWAYS**

UN 2735	AMINES, LIQUID, CORROSIVE, N.O.S. (TRIETHYLENETETRAMINE)	8		III	LIMITED QUANTITY
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**INTERNATIONAL MARITIME DANGEROUS GOODS**

UN 2735	AMINES, LIQUID, CORROSIVE, N.O.S. (TRIETHYLENETETRAMINE)	8		III	MARINE POLLUTANT:( EPOXY RESIN)LIMITED QUANTITY
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**INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO**

UN 2735	Amines, liquid, corrosive, n.o.s. (TRIETHYLENETETRAMINE)	8		III	
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**INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER**

**SAFETY DATA SHEET**

Revision Date: 05/26/2015

Print Date: 6/1/2015

SDS Number: 000000233547

Version: 1.1

Pliogrip™ DOOR SKIN 30/220 EPOXY ADHESIVE  
 ™ Trademark, Ashland or its subsidiaries, registered  
 in various countries  
 849244

UN	2735	Amines, liquid, corrosive, n.o.s. (TRIETHYLENETETRAMINE)	8	III
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**MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES**

UN	2735	AMINAS LIQUIDAS, CORROSIVAS, N.E.P. (TRIETHYLENETETRAMINE)	8	III
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**\*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant	yes
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Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

**SECTION 15. REGULATORY INFORMATION****PART A****EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
PHENOL	108-95-2	1000	18382.352941

**SARA 311/312 Hazards** : Acute Health Hazard  
 Chronic Health Hazard

**SARA 313 Component(s)**

108-95-2	108-95-2	5.44 %
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**California Prop 65** WARNING! This product contains a chemical known to the State of California to cause cancer.  
 CRISTOBALITE 14464-46-1

**PART B**

**SARA 311/312 Hazards** : Acute Health Hazard  
 Chronic Health Hazard

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**SARA 313 Component(s)** : 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.

**California Prop 65**

WARNING! This product contains a chemical known to the State of California to cause cancer.

CARBON BLACK	1333-86-4
CRISTOBALITE	14464-46-1
EPICHLOROHYDRIN	106-89-8

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

METHANOL	67-56-1
EPICHLOROHYDRIN	106-89-8

**The components of this product are reported in the following inventories:**

TSCA : On TSCA Inventory

DSL : This product contains one or several components that are not on the Canadian DSL and have annual quantity limits.

AUSTR : Not in compliance with the inventory

ENCS : Exempt

KECL : On the inventory, or in compliance with the inventory

PICCS : Not in compliance with the inventory

IECSC : Not in compliance with the inventory

**Inventories**

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECL (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

**Registration: Trade Secret**

Chemical Name	Identification number
POLYMER	254504001-6266

**SECTION 16. OTHER INFORMATION**

**Further information**

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**PART A**

## SAFETY DATA SHEET

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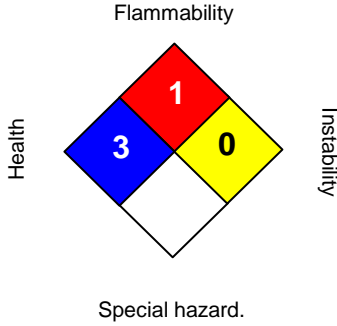
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**NFPA:**



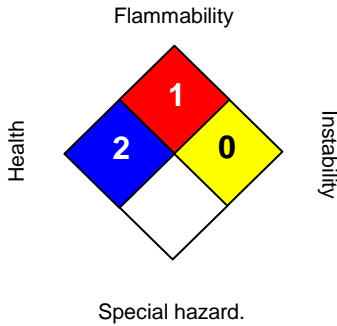
**HMIS III:**

<b>HEALTH</b>	<b>3*</b>
<b>FLAMMABILITY</b>	<b>1</b>
<b>PHYSICAL HAZARD</b>	<b>0</b>

0 = not significant, 1 =Slight,  
 2 = Moderate, 3 = High  
 4 = Extreme, \* = Chronic

**NFPA Flammable and Combustible Liquids Classification**  
 Combustible Liquid Class IIIB

**PART B**  
**NFPA:**



**HMIS III:**

<b>HEALTH</b>	<b>2*</b>
<b>FLAMMABILITY</b>	<b>1</b>
<b>PHYSICAL HAZARD</b>	<b>0</b>

0 = not significant, 1 =Slight,  
 2 = Moderate, 3 = High  
 4 = Extreme, \* = Chronic

**NFPA Flammable and Combustible Liquids Classification**  
 Combustible Liquid Class IIIB

**Full text of H-Statements referred to under sections 2 and 3.**  
**PART A**



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H227	Combustible liquid.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H350	May cause cancer.
H351	Suspected of causing cancer if inhaled.
H360	May damage fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.

#### **PART B**

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H351	Suspected of causing cancer if inhaled.

Sources of key data used to compile the Safety Data Sheet  
Ashland internal data including own and sponsored test reports  
The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists  
BEI : Biological Exposure Index  
CAS : Chemical Abstracts Service (Division of the American Chemical Society).  
CMR : Carcinogenic, Mutagenic or Toxic for Reproduction  
FG : Food grade  
GHS : Globally Harmonized System of Classification and Labeling of Chemicals.  
H-statement : Hazard Statement  
IATA : International Air Transport Association.  
IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

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ICAO-TI (ICAO) : Technical Instructions by the “International Civil Aviation Organization”

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

**WHMIS : Workplace Hazardous Materials Information System**