29 CFR 1910.1200 (OSHA HazCom 2012)

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

**Product identifier**

Trade name : Pliogrip™ 8500 ADHESIVE
™ Trademark, Ashland or its subsidiaries, registered in various countries

**Relevant identified uses of the substance or mixture and uses advised against**

Recommended use : Adhesives

| | |
|---|---|
| **Details of the supplier of the safety data sheet**<br>Ashland<br>P.O. Box 2219<br>Columbus, OH 43216<br>United States of America (USA)<br>+1-614-790-3333<br><br>EHSProductSafety@ashland.com | **Emergency telephone number**<br>1-800-ASHLAND (1-800-274-5263)<br><br>**Regulatory Information Number**<br>1-614-790-3333<br><br>**Product Information**<br>+1-614-790-3333 |

## SECTION 2. HAZARDS IDENTIFICATION

**GHS Classification**

| | | |
|---|---|---|
| Acute toxicity (Inhalation) | : | Category 4 |
| Skin irritation | : | Category 2 |
| Eye irritation | : | Category 2A |
| Respiratory sensitization | : | Category 1 |
| Skin sensitization | : | Category 1 |
| Specific target organ toxicity - single exposure | : | Category 3 (Respiratory system) |
| Specific target organ toxicity - repeated exposure (Inhalation) | : | Category 2 (Respiratory system, Respiratory Tract) |

**GHS label elements**

Hazard pictograms :



Signal Word : Danger

Hazard Statements : Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
Harmful if inhaled.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.
May cause damage to organs (Respiratory system, Respiratory Tract) through prolonged or repeated exposure if inhaled.

Precautionary Statements : **Prevention:**
Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/ eye protection/ face protection.
In case of inadequate ventilation wear respiratory protection.
**Response:**
IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If skin irritation or rash occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
Take off contaminated clothing and wash before reuse.
**Storage:**
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
**Disposal:**
Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

**Hazardous components**

| Chemical name | CAS-No. | Classification | Concentration (%) |
|---|---|---|---|
| ALUMINUM SILICATES | 254504001-5709 | This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012). | >= 5.00 - < 10.00 |

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

| | | | |
|---|---|---|---|
| DIPHENYLMETHANE DIISOCYANATE HOMOPOLYMER | 25686-28-6 | Acute Tox. 4; H332<br>Skin Irrit. 2; H315<br>Eye Irrit. 2A; H319<br>Resp. Sens. 1A; H334<br>Skin Sens. 1A; H317<br>STOT SE 3; H335<br>STOT RE 2; H373 | >=15.00 - < 20.00 |
| POLYPROPYLENE GLYCOL TRIMETHYLOLPROPANE TRIETHER, 4-4'-DIPHENYLMETHANE DIISOCYANATE POLYMER | 57596-50-6 | Resp. Sens. 1; H334<br>Skin Sens. 1; H317 | >=1.50 - < 5.00 |

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

| | | | |
|---|---|---|---|
| 4,4'-DIPHENYLMETHANE DIISOCYANATE | 101-68-8 | Comb Dust<br>Acute Tox. 4; H332<br>Skin Irrit. 2; H315 | 44.4886 |

| | | | |
|---|---|---|---|
| | | Eye Irrit. 2A; H319<br><br>Resp. Sens. 1; H334<br><br>Skin Sens. 1; H317<br><br>STOT SE 3; H335<br><br>STOT RE 2; H373 | |
| TALC | 14807-96-6 | This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012). | 7.412 |
| PROPYLENE CARBONATE | 108-32-7 | Eye Irrit. 2A; H319 | 1.8745 |

## SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Call a POISON CENTRE or doctor/physician if exposed or you feel unwell.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : Move to fresh air.
Call a physician or poison control centre immediately.
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 : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.

If swallowed : Obtain medical attention.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.

| | | |
|---|---|---|
| | | If symptoms persist, call a physician. |
| Most important symptoms and effects, both acute and delayed | : | Pulmonary edema may be delayed.<br>Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:<br>stomach or intestinal upset (nausea, vomiting, diarrhea)<br>irritation (nose, throat, airways)<br>Cough<br>Headache<br>chest pain<br>lung edema (fluid buildup in the lung tissue)<br>Difficulty in breathing<br>Causes skin irritation.<br>May cause an allergic skin reaction.<br>Causes serious eye irritation.<br>Harmful if inhaled.<br>May cause allergy or asthma symptoms or breathing difficulties if inhaled.<br>May cause respiratory irritation.<br>May cause damage to organs through prolonged or repeated exposure if inhaled. |
| Notes to physician | : | No hazards which require special first aid measures. |

## SECTION 5. FIREFIGHTING MEASURES

| | | |
|---|---|---|
| Suitable extinguishing media | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.<br>Water spray<br>Foam<br>Carbon dioxide (CO2)<br>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 (CO2)<br>Carbon monoxide<br>Nitrogen oxides (NOx)<br>Hydrogen cyanide (hydrocyanic acid)<br>Isocyanates<br>Hydrocarbons |
| Specific extinguishing methods | : | Product is compatible with standard fire-fighting agents. |

| | | |
|---|---|---|
| Further information | : | Standard procedure for chemical fires. |
| Special protective equipment for firefighters | : | In the event of fire, wear self-contained breathing apparatus. |

## SECTION 6. ACCIDENTAL RELEASE MEASURES

| | | |
|---|---|---|
| Personal precautions, protective equipment and emergency procedures | : | Use personal protective equipment.<br>Ensure adequate ventilation.<br>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.<br>Prevent further leakage or spillage if safe to do so.<br>If the product contaminates rivers and lakes or drains inform respective authorities. |
| Methods and materials for containment and cleaning up | : | Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).<br>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 | : | Avoid formation of aerosol.<br>Provide sufficient air exchange and/or exhaust in work rooms.<br>Do not breathe vapours/dust.<br>Do not smoke.<br>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.<br>Container hazardous when empty.<br>Avoid exposure - obtain special instructions before use.<br>Avoid contact with skin and eyes.<br>Smoking, eating and drinking should be prohibited in the application area.<br>For personal protection see section 8.<br>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.<br>Observe label precautions. |

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Components with workplace control parameters**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|---|---|---|---|---|
| ALUMINUM SILICATES | 254504001-5709 | TWA | 1 mg/m3 Respirable fraction (Aluminium) | ACGIH |
| The identity and concentration of one or more component(s) is being withheld under business confidentiality. | | | | |
| 4,4'-DIPHENYLMETHANE DIISOCYANATE | 101-68-8 | TWA | 0.005 ppm | ACGIH |
| TALC | 14807-96-6 | TWA | 20 Million particles per cubic foot Dust | OSHA Z-3 |
| | | TWA | 2 mg/m3 respirable dust fraction | OSHA P0 |
| | | TWA | 2 mg/m3 Respirable | NIOSH REL |
| | | PEL | 2 mg/m3 Respirable dust | CAL PEL |
| | | TWA | 0.1 fibres per cubic centimeter | ACGIH |
| | | TWA | 2 mg/m3 Respirable fraction | ACGIH |

**Hazardous components without workplace control parameters**

| Components | CAS-No. |
|---|---|
| DIPHENYLMETHANE DIISOCYANATE HOMOPOLYMER | 25686-28-6 |
| POLYPROPYLENE GLYCOL TRIMETHYLOLPROPANE TRIETHER, 4-4'-DIPHENYLMETHANE DIISOCYANATE POLYMER | 57596-50-6 |
| PROPYLENE CARBONATE | 108-32-7 |

**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 within the capabilities of the respirator/filter combination.
Where concentrations are above recommended limits or are unknown, or a cartridge type respirator is not adequate, wear a positive-pressure supplied-air respirator.

Hand protection
- Material : butyl-rubber
- Break through time : 480 min
- Glove thickness : > 0.5 mm

Remarks : The exact break through time can be obtained from the protective glove producer and this has to be observed. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.

Skin and body protection : Wear as appropriate:
Impervious clothing
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.
When using do not smoke.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|---|---|---|
| Physical state | : | liquid |
| Odour | : | No data available |
| Odour Threshold | : | No data available |
| pH | : | Not applicable |
| Melting point/freezing point | : | No data available |
| Boiling point/boiling range | : | No data available |
| Flash point | : | > 93.4 °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 | : | Approximate 1.28 (25 °C) |
| Density | : | Approximate 1.28 g/cm3 (25 °C) |
| 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 | : | >= 25,000 mPa.s |
| Viscosity, kinematic | : | No data available |
| Oxidizing properties | : | No data available |

## 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 | : | Freezing temperatures.<br>Exposure to moisture |
| Incompatible materials | : | Acids<br>Alcohols<br>aluminum<br>Amines<br>Ammonia<br>Bases |

| | |
|---|---|
| | Copper alloys<br>fluorides<br>Iron<br>Oxidizing agents<br>strong alkalis<br>strong reducing agents<br>water<br>Zinc<br>Humid air |
| Hazardous decomposition products | Carbon monoxide<br>Carbon dioxide (CO2)<br>Nitrogen oxides (NOx)<br>carbon dioxide and carbon monoxide<br>Hydrocarbons<br>Acetone |

## SECTION 11. TOXICOLOGICAL INFORMATION

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

**Acute toxicity**
Harmful if inhaled.

**Components:**
DIPHENYLMETHANE DIISOCYANATE HOMOPOLYMER**:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 425
GLP: yes

Acute inhalation toxicity : Assessment: The component/mixture is classified as acute inhalation toxicity, category 4.

Acute dermal toxicity : (Rabbit): > 9,400 mg/kg
Remarks: Information given is based on data obtained from similar substances.

**Components:**
4,4'-DIPHENYLMETHANE DIISOCYANATE**:**

Acute oral toxicity : LD50 (Rat): 9,200 mg/kg

Acute inhalation toxicity : LC50 (Rat): 0.369 mg/l
Exposure time: 4 h

LC50 (Rat): > 2.24 mg/l
Exposure time: 1 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The component/mixture is classified as acute inhalation toxicity, category 4.

Acute dermal toxicity : LD50 (Rabbit): > 7,900 mg/kg

TALC:
Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 423

PROPYLENE CARBONATE:
Acute oral toxicity : LD50 (Rat): 29.1 g/kg

Acute dermal toxicity : LD50 (Rabbit): > 24 g/kg

**Skin corrosion/irritation**
Causes skin irritation.
**Product:**
Remarks: May cause skin irritation and/or dermatitis.

**Components:**
ALUMINUM SILICATES:
Result: Slight, transient irritation

**Components:**
DIPHENYLMETHANE DIISOCYANATE HOMOPOLYMER:
Result: Irritating to skin.
Remarks: Information given is based on data obtained from similar substances.

POLYPROPYLENE GLYCOL TRIMETHYLOLPROPANE TRIETHER, 4-4'-DIPHENYLMETHANE DIISOCYANATE POLYMER:
Result: No skin irritation

**Components:**
4,4'-DIPHENYLMETHANE DIISOCYANATE:
Result: Irritating to skin.

TALC:
Species: reconstructed human epidermis (RhE)
Result: No skin irritation

PROPYLENE CARBONATE:

Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

**Serious eye damage/eye irritation**
Causes serious eye irritation.
**Product:**
Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin., Causes serious eye irritation.

**Components:**
ALUMINUM SILICATES**:**
Result: Slight, transient irritation

**Components:**
DIPHENYLMETHANE DIISOCYANATE HOMOPOLYMER**:**
Result: Irritating to eyes.

POLYPROPYLENE GLYCOL TRIMETHYLOLPROPANE TRIETHER, 4-4'-DIPHENYLMETHANE DIISOCYANATE POLYMER**:**
Result: No eye irritation

**Components:**
4,4'-DIPHENYLMETHANE DIISOCYANATE**:**
Result: Irritating to eyes.

TALC**:**
Species: Rabbit
Result: Slight, transient irritation
Method: OECD Test Guideline 405

PROPYLENE CARBONATE**:**
Species: Rabbit
Result: Irritating to eyes.
Method: OECD Test Guideline 405

**Respiratory or skin sensitisation**
Skin sensitisation: May cause an allergic skin reaction.
Respiratory sensitisation: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
**Components:**
DIPHENYLMETHANE DIISOCYANATE HOMOPOLYMER**:**
Test Type: Maximisation Test
Species: Guinea pig
Assessment: May cause sensitisation by skin contact.
Result: The product is a skin sensitiser, sub-category 1A.

Assessment: May cause sensitisation by inhalation.
Result: The product is a respiratory sensitiser, sub-category 1A.

POLYPROPYLENE GLYCOL TRIMETHYLOLPROPANE TRIETHER, 4-4'-DIPHENYLMETHANE DIISOCYANATE POLYMER**:**
Assessment: May cause sensitisation by skin contact.

Assessment: May cause sensitisation by inhalation.

**Components:**
4,4'-DIPHENYLMETHANE DIISOCYANATE**:**
Assessment: May cause sensitisation by inhalation.

Assessment: May cause sensitisation by skin contact.

TALC**:**
Test Type: Maximisation Test
Species: Guinea pig
Assessment: Did not cause sensitisation on laboratory animals.
Method: OECD Test Guideline 406

Germ cell mutagenicity
Not classified based on available information.
**Components:**
DIPHENYLMETHANE DIISOCYANATE HOMOPOLYMER**:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: Ames test<br>Result: negative<br>Remarks: Information given is based on data obtained from similar substances. |
| Genotoxicity in vivo | : | Test Type: In vivo micronucleus test<br>Test species: Rat<br>Method: OECD Test Guideline 474<br>Remarks: Information given is based on data obtained from similar substances. |

**Components:**
TALC**:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: In vitro gene mutation study in bacteria<br>Test species: Salmonella typhimurium<br>Metabolic activation: with and without metabolic activation<br>Result: negative |
| | : | Test Type: In vitro gene mutation study in bacteria<br>Test species: Saccharomyces cerevisiae |

Metabolic activation: with and without metabolic activation
Result: negative

Genotoxicity in vivo : Test Type: dominant lethal test
Test species: Rat (male)
Cell type: Bone marrow
Result: negative

PROPYLENE CARBONATE**:**
Genotoxicity in vitro : Test Type: Ames test
Test species: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

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

**Carcinogenicity**
Not classified based on available information.
**Product:**
Carcinogenicity - Assessment : Methylene bisphenylisocyanate (MDI) aerosol has been reported to be irritating to lungs at a concentration of 1 mg/m3 with no effect observed at 0.2 mg/m3. Although MDI has been reported to cause an increase in non-carcinogenic lung tumors and a single carcinogenic lung tumor at very high concentrations (6 mg/m3), it is not classified as a carcinogen by IARC, NTP or OSHA.

**Reproductive toxicity**
Not classified based on available information.
**STOT - single exposure**
May cause respiratory irritation.
**Components:**
DIPHENYLMETHANE DIISOCYANATE HOMOPOLYMER**:**
Exposure routes: Inhalation
Target Organs: Respiratory Tract
Assessment: May cause respiratory irritation.

**Components:**
4,4'-DIPHENYLMETHANE DIISOCYANATE**:**
Exposure routes: Inhalation
Target Organs: Respiratory system
Assessment: May cause respiratory irritation.

**STOT - repeated exposure**
May cause damage to organs (Respiratory system, Respiratory Tract) through prolonged or repeated exposure if inhaled.
**Components:**
DIPHENYLMETHANE DIISOCYANATE HOMOPOLYMER**:**
Exposure routes: Inhalation
Target Organs: Respiratory Tract
Assessment: May cause damage to organs through prolonged or repeated exposure.

**Components:**
4,4'-DIPHENYLMETHANE DIISOCYANATE**:**
Exposure routes: Inhalation
Target Organs: Respiratory system
Assessment: May cause damage to organs through prolonged or repeated exposure.

**Aspiration toxicity**
Not classified based on available information.
**Further information**
**Product:**
Remarks: No data available

**Carcinogenicity:**

| | |
|---|---|
| **IARC** | No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. |
| **OSHA** | No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens. |
| **NTP** | No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. |

## SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity**
**Product:**
Ecotoxicology Assessment

| | | |
|---|---|---|
| Short-term (acute) aquatic hazard | : | Not classified based on available information. |
| Long-term (chronic) aquatic hazard | : | Not classified based on available information. |

DIPHENYLMETHANE DIISOCYANATE HOMOPOLYMER**:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Oryzias latipes (Japanese medaka)): > 3,000 mg/l |

Exposure time: 96 h
Test Type: semi-static test
Remarks: Information given is based on data obtained from similar substances.

Toxicity to daphnia and other aquatic invertebrates : (Daphnia magna (Water flea)): > 1,000 mg/l
Exposure time: 24 h
Test Type: static test
Method: OECD Test Guideline 202
Remarks: Information given is based on data obtained from similar substances.

Toxicity to algae : NOEC (Desmodesmus subspicatus (green algae)): 1,640 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
Remarks: Information given is based on data obtained from similar substances.

4,4'-DIPHENYLMETHANE DIISOCYANATE**:**

Toxicity to fish : LC50 (Oryzias latipes (Orange-red killifish)): > 3,000 mg/l
Exposure time: 96 h
Test Type: semi-static test
Remarks: Information given is based on data obtained from similar substances.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 24 h
Test Type: static test
Method: OECD Test Guideline 202
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)): > 10 mg/l
Exposure time: 21 d
End point: Reproduction Test
Test Type: semi-static test
Method: OECD Test Guideline 211
Remarks: Information given is based on data obtained from similar substances.

PROPYLENE CARBONATE**:**

Toxicity to fish : LC50 (Cyprinus carpio (Carp)): > 1,000 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: Directive 67/548/EEC, Annex V, C.1.

| | | |
|---|---|---|
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): > 1,000 mg/l<br>Exposure time: 48 h<br>Test Type: static test<br>Method: OECD Test Guideline 202 |
| Toxicity to algae | : | EC50 (Desmodesmus subspicatus (green algae)): > 900 mg/l<br>End point: Growth inhibition<br>Exposure time: 72 h<br>Test Type: static test<br>Method: OECD Test Guideline 201<br><br>NOEC (Desmodesmus subspicatus (green algae)): 900 mg/l<br>End point: Growth inhibition<br>Exposure time: 72 h<br>Test Type: static test<br>Method: OECD Test Guideline 201 |

**Persistence and degradability**

DIPHENYLMETHANE DIISOCYANATE HOMOPOLYMER**:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Not readily biodegradable.<br>Biodegradation: 0 %<br>Exposure time: 28 d<br>Method: OECD Test Guideline 302C |

4,4'-DIPHENYLMETHANE DIISOCYANATE**:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Not biodegradable<br>Biodegradation: 0 %<br>Exposure time: 28 d<br>Method: OECD Test Guideline 302C<br>Remarks: Information given is based on data obtained from similar substances. |

TALC**:**

| | | |
|---|---|---|
| Biodegradability | : | Result: The methods for determining biodegradability are not applicable to inorganic substances. |

PROPYLENE CARBONATE**:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Readily biodegradable.<br>Biodegradation: 87.1 %<br>Exposure time: 29 d<br>Method: OECD Test Guideline 301B |

No data available

**Bioaccumulative potential**

PROPYLENE CARBONATE**:**

| | | |
|---|---|---|
| Partition coefficient: n- | : | log Pow: -0.41 |

octanol/water
No data available
**Mobility in soil**
No data available
**Other adverse effects**
No data available
**Product:**
Additional ecological information : No data available

## SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal methods**

General advice : Do not dispose of waste into sewer.
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**

| ID NUMBER | PROPER SHIPPING NAME | *HAZARD CLASS | SUBSIDIARY HAZARDS | PACKING GROUP | MARINE POLLUTANT / LTD. QTY. |
|---|---|---|---|---|---|

**U.S. DOT - ROAD**

| |
|---|
| Not dangerous goods |

**CFR_RAIL_C**

| |
|---|
| Not dangerous goods |

**U.S. DOT - INLAND WATERWAYS**

| |
|---|
| Not dangerous goods |

**TDG_ROAD_C**

| |
|---|
| Not dangerous goods |
| |

**TDG_RAIL_C**

| |
|---|
| Not dangerous goods |
| |

**TDG_INWT_C**

| |
|---|
| Not dangerous goods |
| |

**INTERNATIONAL MARITIME DANGEROUS GOODS**

| |
|---|
| Not dangerous goods |
| |

**INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO**

| |
|---|
| Not dangerous goods |
| |

**INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER**

| |
|---|
| Not dangerous goods |
| |

**MX_DG**

| |
|---|
| Not dangerous goods |
| |

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

| | | |
|---|---|---|
| Marine pollutant | | no |

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

**EPCRA - Emergency Planning and Community Right-to-Know Act**
**CERCLA Reportable Quantity**

| Components | CAS-No. | Component RQ (lbs) | Calculated product RQ (lbs) |
|---|---|---|---|
| 4,4'-DIPHENYLMETHANE DIISOCYANATE | 101-68-8 | 5000 | 11239 |

**SARA 304 Extremely Hazardous Substances Reportable Quantity**
This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : Acute toxicity (any route of exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitisation
Specific target organ toxicity (single or repeated exposure)

**SARA 302** : This material does not contain any components with a section 302 EHS TPQ.

**SARA 313** The following components are subject to reporting levels established by SARA Title III, Section 313:
4,4'-DIPHENYLMETHANE 101-68-8 44.48 %
DIISOCYANATE

**California Prop. 65**
WARNING: This product can expose you to chemicals including Talc (powder), Quartz, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

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

DSL : All components of this product are on the Canadian DSL

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

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

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

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

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

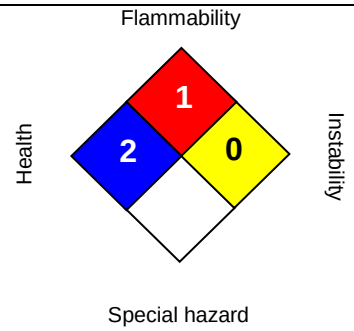
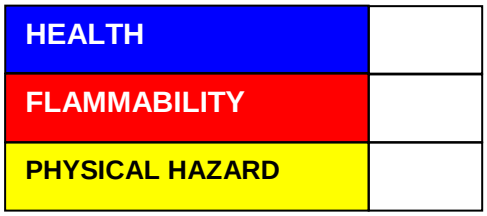
TCSI : On the inventory, or in compliance with the inventory

TSCA : On TSCA Inventory

**Inventories**
AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

## SECTION 16. OTHER INFORMATION

**Further information**
Revision Date: 08/13/2019

| NFPA: | HMIS III: |
|---|---|
|  |  |





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**

| | |
|---|---|
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H335 | May cause respiratory irritation. |
| H373 | May cause damage to organs through prolonged or repeated exposure 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).

**Full text of other abbreviations**

AICS - Australian Inventory of Chemical Substances; 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; 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