29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Pliogrip™ 9100 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 Ashland P.O. Box 2219 Columbus, OH 43216 United States of America (USA) +1-614-790-3333 EHSProductSafety@ashland.com	**Emergency telephone number** 1-800-ASHLAND (1-800-274-5263) **Regulatory Information Number** 1-800-325-3751 **Product Information** +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 systemic toxicity - single exposure	:	Category 3 (Respiratory system)
Specific target organ systemic toxicity - repeated	:	Category 2 (Respiratory system)

exposure (Inhalation)

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) 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.

POLYMETHYLENE POLYPHENYL ISOCYANATE	9016-87-9	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 Resp. Sens. 1; H334 Skin Sens. 1; H317 STOT SE 3; H335 STOT RE 2; H373	23.7504
4,4'-DIPHENYLMETHANE DIISOCYANATE	101-68-8	Comb Dust Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 Resp. Sens. 1; H334 Skin Sens. 1; H317	17.8128

SAFETY DATA SHEET

Revision Date: 09/04/2018

Print Date: 8/29/2019

SDS Number: R0340217

Pliogrip™ 9100 ADHESIVE
™ Trademark, Ashland or its subsidiaries, registered in various countries
135198

Version: 1.8

		STOT SE 3; H335 STOT RE 2; H373	
TALC	14807-96-6	This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).	14.224
1-ISOCYANATO-2-((4-ISOCYANATO-PHENYL)METHYL)-BENZ	5873-54-1	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 Resp. Sens. 1; H334 Skin Sens. 1; H317 STOT SE 3; H335 STOT RE 2; H373	1.9792
2,2-DIPHENYL METHANE DIISOCYANATE	2536-05-2	Acute Tox. 3; H331 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 Resp. Sens. 1; H334 Skin Sens. 1; H317 STOT SE 3; H335 STOT RE 2; H373	0.3958

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. 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 Headache chest pain lung edema (fluid buildup in the lung tissue) Difficulty in breathing 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 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. 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 (CO2) Carbon monoxide Hydrocarbons Nitrogen oxides (NOx) Hydrogen cyanide (hydrocyanic acid) Isocyanates
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. 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.
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	:	Avoid formation of aerosol.

Provide sufficient air exchange and/or exhaust in work rooms.
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.
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.
POLYMETHYLENE POLYPHENYL ISOCYANATE	9016-87-9
1-ISOCYANATO-2-((4-ISOCYANATO-PHENYL)METHYL)-BENZ	5873-54-1
2,2-DIPHENYL METHANE DIISOCYANATE	2536-05-2

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 : Wear a positive-pressure supplied-air respirator with full facepiece.

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.

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
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	:	> 93.4 °C Method: Seta closed cup
Evaporation rate	:	1 Ethyl Ether = 1
Flammability (solid, gas)	:	No data available
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapour pressure	:	0.00007 hPaCalculated Vapor Pressure
Relative vapour density	:	No data available
Relative density	:	1.267 (77.00 °F)
Density	:	1.267 g/cm3 (77.00 °F)
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 : temperatures above 350 degrees F (177 degrees C)
Freezing temperatures.
Exposure to moisture

Incompatible materials : Acids
Alcohols
alkenes
aluminum
Amines
Ammonia
Bases
Copper alloys
Iron
strong alkalis
water
Zinc

Hazardous decomposition products
Carbon monoxide
Carbon dioxide (CO2)
Nitrogen oxides (NOx)
Hydrocarbons
Acetone

SECTION 11. TOXICOLOGICAL INFORMATION

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

Acute toxicity
Harmful if inhaled.

Components:
POLYMETHYLENE POLYPHENYL ISOCYANATE:

Acute oral toxicity : LD50 (Rat): > 10,000 mg/kg

Acute inhalation toxicity : 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): > 10,000 mg/kg

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

1-ISOCYANATO-2-((4-ISOCYANATO-PHENYL)METHYL)-BENZ**:**

Acute oral toxicity : LD50 (Rat): > 10,000 mg/kg
Remarks: Information given is based on data obtained from similar substances.

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

Acute dermal toxicity : LD50 (Rabbit): > 9,400 mg/kg

2,2-DIPHENYL METHANE DIISOCYANATE**:**

Acute oral toxicity	:	LD50 (Rat): > 2,000 mg/kg Assessment: Not classified as acutely toxic by ingestion under GHS. Remarks: Information given is based on data obtained from similar substances.
Acute inhalation toxicity	:	LC50 (Rat, male): 527 mg/m3 Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403
Acute dermal toxicity	:	LD50 (Rabbit, male and female): > 9,400 mg/kg Method: OECD Test Guideline 402 Assessment: No adverse effect has been observed in acute dermal toxicity tests. Remarks: Information given is based on data obtained from similar substances.

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

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

Components:
POLYMETHYLENE POLYPHENYL ISOCYANATE**:**
Result: Irritating to skin.

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

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

1-ISOCYANATO-2-((4-ISOCYANATO-PHENYL)METHYL)-BENZ**:**
Result: Irritating to skin.

2,2-DIPHENYL METHANE DIISOCYANATE**:**
Result: Irritating to skin.

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:
POLYMETHYLENE POLYPHENYL ISOCYANATE**:**
Result: Irritating to eyes.

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

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

1-ISOCYANATO-2-((4-ISOCYANATO-PHENYL)METHYL)-BENZ**:**
Result: Irritating to eyes.

2,2-DIPHENYL METHANE DIISOCYANATE**:**
Result: Irritating to eyes.

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:
POLYMETHYLENE POLYPHENYL ISOCYANATE**:**
Assessment: May cause sensitisation by skin contact.

Assessment: May cause sensitisation by inhalation.

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
Result: Did not cause sensitisation on laboratory animals.

1-ISOCYANATO-2-((4-ISOCYANATO-PHENYL)METHYL)-BENZ**:**
Assessment: May cause sensitisation by inhalation.

Assessment: May cause sensitisation by skin contact.

2,2-DIPHENYL METHANE DIISOCYANATE**:**
Assessment: May cause sensitisation by inhalation.

Assessment: May cause sensitisation by skin contact.

Germ cell mutagenicity
Not classified based on available information.
Components:
TALC**:**

Genotoxicity in vitro	:	Test Type: In vitro gene mutation study in bacteria Test species: Salmonella typhimurium Metabolic activation: with and without metabolic activation Result: negative
	:	Test Type: In vitro gene mutation study in bacteria 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

1-ISOCYANATO-2-((4-ISOCYANATO-PHENYL)METHYL)-BENZ**:**

Genotoxicity in vitro	:	Test Type: Ames test Test species: Salmonella typhimurium Metabolic activation: with and without metabolic activation Result: negative
Genotoxicity in vivo	:	Test Type: chromosome aberration assay Test species: Rat Cell type: Bone marrow Method: OECD Test Guideline 474 Remarks: Information given is based on data obtained from similar substances.

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:
POLYMETHYLENE POLYPHENYL ISOCYANATE**:**
Exposure routes: Inhalation
Target Organs: Respiratory system
Assessment: May cause respiratory irritation.

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

1-ISOCYANATO-2-((4-ISOCYANATO-PHENYL)METHYL)-BENZ**:**
Exposure routes: Inhalation
Target Organs: Respiratory system
Assessment: May cause respiratory irritation.

2,2-DIPHENYL METHANE DIISOCYANATE**:**
Exposure routes: Inhalation
Target Organs: Respiratory Tract
Assessment: May cause respiratory irritation.

STOT - repeated exposure
May cause damage to organs (Respiratory system) through prolonged or repeated exposure if inhaled.
Components:
POLYMETHYLENE POLYPHENYL ISOCYANATE**:**
Exposure routes: Inhalation
Target Organs: Respiratory system
Assessment: May cause damage to organs through prolonged or repeated exposure.

4,4'-DIPHENYLMETHANE DIISOCYANATE**:**
Exposure routes: Inhalation

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

1-ISOCYANATO-2-((4-ISOCYANATO-PHENYL)METHYL)-BENZ**:**
Exposure routes: Inhalation
Target Organs: Respiratory system
Assessment: May cause damage to organs through prolonged or repeated exposure.

2,2-DIPHENYL METHANE 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.

POLYMETHYLENE POLYPHENYL ISOCYANATE**:**

Toxicity to fish	:	LC50 (Oryzias latipes (Orange-red killifish)): > 3,000 mg/l Exposure time: 96 h Test Type: semi-static test

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
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

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.

1-ISOCYANATO-2-((4-ISOCYANATO-PHENYL)METHYL)-BENZ**:**

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 algae	:	EC50 (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. NOELR (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.

2,2-DIPHENYL METHANE 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 algae	:	EC50 (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.
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.

Persistence and degradability

POLYMETHYLENE POLYPHENYL ISOCYANATE**:**

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

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

Biodegradability : Result: Not biodegradable
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 302C
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.

1-ISOCYANATO-2-((4-ISOCYANATO-PHENYL)METHYL)-BENZ**:**

Biodegradability : Result: Not readily biodegradable.

2,2-DIPHENYL METHANE DIISOCYANATE**:**

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

No data available

Bioaccumulative potential

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	28070

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:

POLYMETHYLENE POLYPHENYL ISOCYANATE	9016-87-9	23.75 %
4,4'-DIPHENYLMETHANE DIISOCYANATE	101-68-8	17.81 %

California Prop. 65

WARNING: This product can expose you to chemicals including Talc (Mg3H2(SiO3)4), Quartz (SiO2), 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 : Not 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)

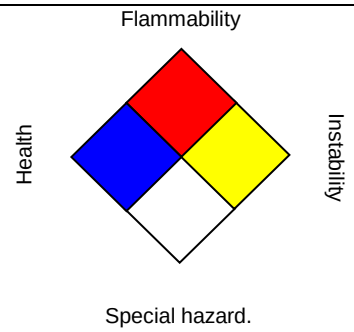
SECTION 16. OTHER INFORMATION

Further information

Revision Date: 09/04/2018

NFPA:	HMIS III:

SAFETY DATA SHEET		Revision Date: 09/04/2018
		Print Date: 8/29/2019
		SDS Number: R0340217
Pliogrip™ 9100 ADHESIVE ™ Trademark, Ashland or its subsidiaries, registered in various countries 135198		Version: 1.8



HEALTH	
FLAMMABILITY	
PHYSICAL HAZARD	

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.
H331	Toxic if inhaled.
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