

MATERIAL SAFETY DATA SHEET

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Spectrum Adhesives Corporate 5611 Universal Drive, Memphis, TN 38118

EMERGENCY PHONE: 800-535-5053

Corporate: 901-795-1943

Customer Service: 800-454-4583

Product Name/Code: PurGrip 712

Issue Date: 12-07-2009

Section 2: HAZARDS IDENTIFICATION

HMIS Rating:

Health - 2 Fire - 1 Reactivity - 1

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

EMERGENCY OVERVIEW

Warning! Respiratory irritant. EYE IRRITANT. RESPIRATORY SENSITIZER. SKIN SENSITIZER.

Appearance/Odor: Brown liquid, Negligible odor.

Potential Health Effects: See Section 11 for more information

Route of Entry: Inhalation, Ingestion, Skin contact, Eye contact.

Eye: Will cause eye irritation.

Skin Contact: Repeated and/or prolonged contact may cause irritation and skin sensitization.

Ingestion: Ingestion may cause irritation of the gastrointestinal tract.

Inhalation: Vapors and/or aerosols may cause irritation. May cause allergic respiratory reaction.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential Environmental Effects: See Section 12 for more information)

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL FAMILY

Polymeric Isocyanate

Component	CAS #	Concentration (% by weight)
4,4'-Diphenylmethane diisocyanate	101-68-8	5 - 10
Polymeric Diphenylmethane diisocyanate	9016-87-9	10 - 30

Section 4: FIRST AID MEASURES

Eye Contact: Irrigate with eyewash solution or clean water until pain is relieved.

Skin Contact: Wash skin with soap and water.

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get medical attention.

Ingestion: Treat symptomatically and supportively. Get medical attention.

Section 5: FIRE FIGHTING MEASURES

Autoignition: Not available.

Flash Point: >200° C >(392° F) (Pensky - Martens Closed Tester)

Suitable Extinguishing Media: CO2, Dry Chemical, Foam.

Special Firefighting Procedures: Fire Fighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes. Cool exposed equipment with water spray.

Fire and Explosion Hazards: Combustion will evolve toxic and irritant vapors.

Hazardous Combustion Products: Decomposes upon heating to release toxic fumes of nitrogen oxides, carbon monoxide, carbon dioxide, and hydrogen cyanide.

Lower Explosion Limit (%): Not applicable.

Upper Explosion Limit (%): Not applicable.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protection recommended in Section 8.

Spill and Leak Procedures: Allow to cool and solidify. Scrape up and collect in suitable containers for disposal. Ventilate area.

For safety and environmental precautions, please review entire Material Safety Data Sheet for necessary information.

Section 7: HANDLING AND STORAGE

Handling

Store at room temperature. Product contains hazardous volatile ingredients which could accumulate in the unvented headspace of drums or bulk storage vessels. Open drums in ventilated area. Avoid breathing vapors.

Sensitivity to Static Electricity: No

Special Sensitivity: Avoid moisture contamination.

Sensitivity to Mechanical Impact: No

Storage

Storage Temperature: Room

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Component	Exposure Limits	OSHA	Mfg. Working Standard
Polymeric Diphenylmethane diisocyanate	0.005 ppm TWA	0.02 ppm Ceiling	0.2 mg/m ³ Ceiling
4,4'-Diphenylmethane diisocyanate	0.005 ppm TWA	0.02 ppm Ceiling	0.2 mg/m ³ Ceiling

Engineering Controls: The following exposure control techniques may be used to effectively minimize employee exposure: local exhaust ventilation, enclosed system design, process isolation and remote control in combination with appropriate use of personal protective equipment and prudent work practices. These techniques may not necessarily address all issues pertaining to your operations. We, therefore, recommend that you consult with experts of your choice to determine whether or not your programs are adequate. If airborne contaminants are generated when the material is heated or handled, sufficient ventilation in volume and air flow patterns should be provided to keep air contaminant concentration levels below acceptable criteria.

Exposure Limit Notes: Exposure limits for Polymeric Diphenylmethane diisocyanate are based on the limits set for the monomeric form (101-68-8).

Ventilation Requirements: Local exhaust to keep vapors below TLV.

Eye Protection Requirements: Safety glasses, goggles or face shield to protect against splashing.

Glove Requirements: Employee must wear appropriate protective gloves to prevent contact with this substance.

Clothing Requirements: Appropriate protective clothing and equipment is recommended to minimize skin contact with this substance.

Change/Removal of Clothing: Remove contaminated clothing and launder before reuse.

Wash Requirements: Wash before eating, drinking, or using toilet facilities.

Respirator Requirements: NIOSH approved respirator if required. Self-contained breathing apparatus in emergency and non-routine situations.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Color: Brown.

Odor: Negligible.

Odor Threshold: Not available.
 Physical State: Liquid.
 Pure Substance or Mixture: Mixture.
 pH as is: Not applicable.
 pH in (1%) Solution: Not applicable.
 Oxidizing Properties: Not applicable.
 Boiling Point: Not applicable.
 Melting/Freezing Point: Not available.
 Flash Point: >200° C >(392° F) (Pensky – Martens Closed Tester)
 Solubility in Water: Insoluble.
 Partition Coefficient (n-octanol/water): Not applicable.
 Specific Gravity (Water=1): 1.1
 Bulk Density: 9.16 lb/gal.
 Evaporation Rate: Not applicable.
 Vapor Pressure (mmHg): Not available.
 Vapor Density (air=1): N/A
 Volatiles: Nil
 Volatile Organic Compounds: Nil
 Autoignition: Not available.

Section 10: REACTIVITY

Stability: Stable.
 Hazardous Decomposition Products: Decomposes upon heating to release toxic fumes of nitrogen oxides, carbon monoxide, carbon dioxide, and hydrogen cyanide.

Section 11: TOXICOLOGY INFORMATION

Route of Entry: Inhalation, Ingestion, Skin contact, Eye contact.

CARCINOGEN	IARC (group)	NTP	OSHA Substance Specific Regulation
COMPONENT			
There is no evidence that this product poses a carcinogenic risk under normal conditions of handling and use.			

ACUTE (SHORT TERM) EFFECTS OF EXPOSURE

CHRONIC (LONG TERM) EFFECTS OF EXPOSURE

Effects of Chronic Exposure: The toxicological properties of this product have not been fully evaluated. Use of good industrial hygiene practices is required. Avoid direct contact with skin or eyes. Do not ingest or inhale.
 Target Organs: Respiratory system: Skin, Eyes, Lungs, Gastrointestinal
 Respiratory Sensitization: Sensitizer. May cause allergic reaction.
 Skin Sensitization: Sensitizer. May cause allergic reaction.

COMPONENT	ORAL TOXICITY	NOTES ON ORAL TOXICITY
Polymeric Diphenylmethane diisocyanate	Oral LD50: Rat>15000 mg/kg	Irritant and may cause nausea and vomiting.
4,4'-Diphenylmethane diisocyanate	Oral LD50: Mouse 10.7 g/kg Oral LD50: Rat 31.6 g/kg	Irritant and may cause nausea and vomiting. Corrosive to mouth, throat and stomach.
COMPONENT	DERMAL TOXICITY	NOTES ON DERMAL TOXICITY
Polymeric Diphenylmethane	Dermal LD50: Rabbit >5000 mg/kg	Repeated and/or prolonged contact may

diisocyanate		cause skin sensitization. Irritating to the skin.
4,4'-Diphenylmethane diisocyanate	Dermal LD50: Rabbit >7900 mg/kg	Severely irritating: may cause permanent skin damage. Repeated and/or prolonged contact may cause skin sensitization.
COMPONENT	INHALATION TOXICITY	NOTES ON INHALATION TOXICITY
Polymeric Diphenylmethane diisocyanate	Inhalation LC50 (4hr): Rat 490 mg/m ³	Exposure to high concentrations may produce lung damage. Extremely toxic. Respiratory sensitizer. Respiratory irritant. Symptoms may develop after several hours. Symptoms may include irritation to the eyes, nose, throat and lungs, possibly combined with dryness of the throat, tightness of chest and difficulty in breathing.
4,4'-Diphenylmethane diisocyanate	Inhalation LC50(2hr): Rat 370-490 mg/m ³	Exposure to high concentrations may produce lung damage. Possible respiratory sensitizer. Extremely toxic.
COMPONENT		NOTES ON EYE IRRITATION
Polymeric Diphenylmethane diisocyanate		Will cause eye irritation.
4,4'-Diphenylmethane diisocyanate		Severe/very severe irritant.

Section 12: ECOLOGICAL INFORMATION

Potential to Bioaccumulate: Unknown.
 Aquatic Toxicity: None Established.

Section 13: DISPOSAL CONSIDERATIONS

Waste Disposal Methods: Dispose of in accordance with federal, state and local regulations.
 Empty Container Warnings: Empty containers may contain product residue, follow MSDS and label warnings even after they have been emptied.

Section 14: TRANSPORTATION INFORMATION

This section provided for general information only. The shipping description below may not represent requirements for all modes of transportation, packaging, shipping methods or locations outside of the United States.

For more complete transportation regulatory information please refer to the shipping documents accompanying the shipment of this product.

DOT CLASSIFICATION Not applicable.

The information provided herein may not include the impact of additional regulatory requirements (e.g. for materials meeting the definition of a hazardous waste under RCRA, hazardous substances under CERCLA, and/of marine pollutants under CWA or other similar federal, state or local laws) or any associated exceptions or exemptions under regulations applicable to the transport of this material.

Section 15: REGULATORY INFORMATION

USA

TSCA: This product is manufactured in compliance with all provisions of the Toxic Substances Control Act, 15 U.S.C. 2601 et. seq.

SARA- Section 313 (Superfund Amendments and Reauthorization Act of 1986 – 40CFR 372).

	CAS NUMBER	CONCENTRATION (% by weight)
Polymeric diphenylmethane diisocyanate	9016-87-9	26.00000
Methylenebis(phenylisocyanate)(MDI)	101-68-8	9.00000

WHMIS: Canadian Workplace Hazardous Material Information System
Not available.

California Proposition 65

Warning: This product contains the following chemicals that are known to the State of California to cause cancer, birth defects or other reproductive harm.

Unless a concentration is specified in Section 2 of the MSDS, the below chemical/s are present in trace amounts.

COMPONENT	CAS NUMBER
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None reportable.

Section 16: OTHER INFORMATION

Spectrum Adhesives, inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. SPECTRUM ADHESIVES, INC. MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, MID SOUTH ADHESIVES, INC. WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.