

SEAMLESS SOLUTIONS FOR OVER 40 YEARS

SAFETY DATA SHEET
FULL METAL JACKET™ PLUS "A" Component
Revised Date: 10/2/2018 Version: 10 SDS-112

SECTION 1: IDENTIFICATION

PRODUCT NAME **CAS NUMBER PRODUCT USE MANUFACTURER ADDRESS PHONE** FAX **EMERGENCY CONTACT TOLL FREE**

INTERNATIONAL

FAX

FULL METAL JACKET™ PLUS "A" Component

Not available Polyurea Coating Specialty Products, Inc. (SPI)

2410 104TH ST. CT. S. STE D LAKEWOOD, WA 98499

253 588 7101 800 627 0773

253 588 7196

FOR SPILLS, LEAKS, FIRE, OR EXPOSURE CALL CHEMTREC

800 424 9300 +1 703 527 3887 913 321 1490

SECTION 2: HAZARDS IDENTIFICATION

GHS LABEL ELEMENTS

GHS PICTOGRAM





DANGER

| DANGER | | | | | | |
|---|-------------|-------------------|--|--|--|--|
| GHS CLASSIFICATION | | | | | | |
| CATEGORY | | HAZARD STATEMENTS | | | | |
| Skin corrosion/irritation | Category 2 | H315 | Causes skin irritation. | | | |
| Skin sensitization | Category 1 | H317 | May cause an allergic skin reaction. | | | |
| Serious eye damage/eye irritation | Category 2B | H320 | Causes eye irritation. | | | |
| Acute toxicity inhalation | Category 4 | H332 | Harmful if inhaled. | | | |
| Respiratory sensitization | Category 1 | H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. | | | |
| Specific target organ toxicity (STOT), single exposure; respiratory tract | Category 3 | H335 | May cause respiratory irritation. | | | |
| Specific target organ toxicity (STOT), repeated exposure | Category 1 | H372 | Causes damage to organs (respiratory tract) through prolonged or repeated exposure if inhaled. | | | |

| PRECAUTIONARY STATEMENTS | | | | | |
|--------------------------|--|--|--|--|--|
| | PREVENTION | | | | |
| P260 | Do not breathe dust/fume/gas/mist/vapors/spray. | | | | |
| P264 | Wash hands thoroughly after handling. | | | | |
| P270 | Do not eat, drink, or smoke when using this product. | | | | |
| P271 | Use only outdoors or in a well-ventilated area. | | | | |
| P272 | Contaminated work clothing should not be allowed out of the workplace. | | | | |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. | | | | |
| P285 | In case of inadequate ventilation wear respiratory protection. | | | | |
| | RESPONSE | | | | |
| P302+P352 | IF ON SKIN: Wash with plenty of soap and water. | | | | |
| P321 | Specific treatment (as detailed in this SDS). | | | | |
| P332+P313 | IF SKIN irritation occurs: Get medical advice/attention. | | | | |
| P362 | Take off contaminated clothing and wash before reuse. | | | | |
| P363 | Wash contaminated clothing before reuse. | | | | |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. | | | | |
| P337+P313 | IF eye irritation persists: Get medical advice/attention. | | | | |
| P304+P340 | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. | | | | |
| P312 | Call a POISON CENTER or doctor/physician if you feel unwell. | | | | |
| P304+P312 | IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell. | | | | |
| P342+P311 | IF experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. | | | | |
| P314 | Get medical advice/attention if you feel unwell. | | | | |
| | STORAGE | | | | |
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. | | | | |
| P405 | Store locked up. | | | | |
| | DISPOSAL | | | | |
| P501 | Dispose of contents/container in accordance with applicable regional, national and local laws and regulations. | | | | |

| SECTION 3: COMPOSIT CHEMICAL NAME | ION/INFORMATION ON INGREDIENTS | CAS NUMBER | % WEIGHT | | | |
|---|--|--|----------------------------------|--|--|--|
| Isocyantes, reaction product of | polyol with MDI | *Proprietary | 10-30 | | | |
| 2,4'-Diphenylmethane diisocya | • | 5873-54-1 | 20-40 | | | |
| 4,4'-Diphenylmethane diisocya | | 101-68-8 | 20-40 | | | |
| Propylene carbonate | | 108-32-7 | 1-10 | | | |
| Polymethylene polyphenylene | isocyanate | 9016-87-9 | 1-5 | | | |
| 2,2'-Diphenylmethane diisocya | | 2536-05-2 | 1-5 | | | |
| *The specific chemical identity | and exact percentage (concentration) is withheld as a trade secret per a | pplicable regulations | and statutes. | | | |
| SECTION 4: FIRST AID | MEASURES | | | | | |
| EYE: | In case of contact, immediately flush eyes with plenty of water for at least 15 min | utes. Get medical attenti | on immediately. | | | |
| SKIN: | Continue to rinse for at least 10 minutes. A poly-glycol based skin cleanser or co | After contact with skin, wash immediately with plenty of warm, soapy water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. A poly-glycol based skin cleanser or corn oil may be more effective than soap and water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse. | | | | |
| INHALATION: | Move exposed person to fresh air. Get medical attention immediately. Treatment is symptomatic for primary irritation or bronchospasm. If breathing is labored, oxygen should be administered by qualified personnel. | | | | | |
| INGESTION: | Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Provided the patient is conscious, wash out mouth with water. Get medical attention if symptoms appear. | | | | | |
| NOTES TO PHYSICIAN: | Symptomatic and supportive therapy as needed. Following severe exposure, medical follow-up should be monitored for 48 hours. | | | | | |
| SECTION 5: FIRE FIGHT | ING MEASURES | | | | | |
| FLASH POINT: | 320°F (160°C). | | | | | |
| HAZARDS WHEN ON FIRE OR NEAR FLAME: | Closed container may forcibly rupture under extreme heat or when cor $(CO_2$ formed). | ntents are contaminate | ed with water | | | |
| SUITABLE EXTINGUISHING MEDIA: | Dry chemical, carbon dioxide, or dry powder. | | | | | |
| UNSUITABLE EXTINGUISHING MEDIA: | Direct water spray. | | | | | |
| SPECIAL EXPOSURE HAZARDS: | Promptly isolate the scene by removing all persons from the vicinity of action shall be taken involving any personal risk or without suitable traincrease will occur and the container may rupture. | the incident if there is ning. If in a fire or hea | a fire. No ated, a pressure | | | |
| SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS: | Fire-fighters should wear appropriate protective equipment and self-co with a full face-piece operated in positive pressure mode. PVC boots, clothing should be worn. | ontained breathing app gloves, safety helmet, | paratus (SCBA) and protective | | | |

| MEASURES: | of major spins can effective. To the feet 1-300-424-3300 for international can 1-703-327-3007. |
|----------------------------|--|
| PERSONAL PRECAUTIONS: | Wear appropriate personal protective equipment recommended in SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION of this SDS. Immediately contact emergency personnel. Evacuate the area. Keep upwind avoiding inhalation of vapors. Clean-up should only be performed by trained personnel. People dealing with major spillages should wear full protective clothing including respiratory protection. |
| ENVIRONMENTAL PRECAUTIONS: | This material may contaminate the environment without proper control and response to spills. Ensure spilled material does not come in contact with soil, waterway, drains, sewers, or other runoff that would further disperse the material. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil, or air). Sources of ignition should be kept clear. |
| METHODS FOR CONTAINMENT: | Use diking or capping to control migration. Contain and absorb large spillages with a non-flammable absorbent carrier (such as vermiculite, earth, or sand). DO NOT USE combustible materials such as sawdust. Shovel into open-top drums or plastic bags for further decontamination, if necessary. Remove and properly dispose of residues. Dispose of via a licensed waste disposal contractor (See SECTION 13: DISPOSAL CONSIDERATIONS) Notify applicable government authorities if release is reportable. |
| METHODS FOR CLEANING UP: | Only proceed with clean up by taking the appropriate personal protection measures required and ensure surrounding area does not contain further hazards that could worsen the spill, cause migration, or cause further harm (i.e. eliminate any ignition sources). Move any non-contaminated, non-leaking containers from the spill zone if it can be done safely. Dike, dam, or further restrict and stop active leaks without posing further damage or harm to individuals, the environment, and/or structures. Contain and collect spillage. See SECTION 13: DISPOSAL CONSIDERATIONS for disposal information and SECTION 8: EXPOSURE CONTROL/ PERSONAL PROTECTION for recommended Personal Protective Equipment (PPE). Obey all local, state, and federal regulations during clean up. |

| SECTION 7: HANDLING & STORAGE | | | | | |
|-------------------------------|---|--|--|--|--|
| GENERAL: | Ideal storage temperature is 60-90°F (15-32°C). Handling and storage shall be in accordance with local, state/provincial, or federal regulations. | | | | |
| HANDLING: | Before opening this package, read and follow warning labels on all components. Avoid contact with the product or reaction mixture. Put on appropriate personal protective equipment. Use only with adequate ventilation to ensure that the occupational exposure limit is not exceeded, use respirator when ventilation is inadequate. Avoid breathing aerosols, mists, and vapors. (See SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION for details). Do not ingest. Eating, drinking, and smoking shall be prohibited in areas where this material is handled, stored, and processed. Workers shall wash hands and face before eating, drinking, and smoking. Persons with a history of skin sensitization problems, asthma, allergies, or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not get in eyes, on skin, or clothing. Keep in the original container or an approved alternative made from a compatible material. Keep tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse containers. | | | | |
| STORAGE: | Keep container tightly closed and properly sealed when stored. Keep contents away from moisture. Due to reaction with water producing CO ₂ gas, a hazardous build-up of pressure could result if contaminated containers are resealed. DO NOT reseal contaminated containers. Uncontaminated containers, free of moisture, may be resealed and stored after purging the container with argon or nitrogen gas. | | | | |

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| SECTION 8: EXPOSURE | CONTROLS/PERSONAL | PROTECTION | | | | |
|---|--|---|--|--|--|--|
| EXPOSURE LIMITS: | | | | | | |
| COMPONENT NAME | CAS NUMBER | EXPOSURE LIMITS | | | | |
| Isocyantes, reaction product of polyol with MDI | *Proprietary | Not available | | | | |
| 2,4'-Diphenylmethane diisocyanate | 5873-54-1 | Not available | | | | |
| 4,4'-Diphenylmethane diisocyanate | 101-68-8 | ACGIH TLV TWA: 0.005 ppm 8 hour(s) OSHA PEL CEIL: 0.02 ppm CEIL: 0.2 mg/m³ NIOSH REL CEIL: 0.2 pgm/m³ 10 minute(s) CEIL: 0.02 ppm 10 minute(s) TWA: 0.05 mg/m³ 10 hour(s) TWA: 0.005 ppm 10 hour(s) | | | | |
| Propylene carbonate | 108-32-7 | Not available | | | | |
| Polymethylene polyphenylene isocyanate | 9016-87-9 | ALBERTA CANADA TWA TWA: 0.005 ppm TWA: 0.07 mg/m³ | | | | |
| 2,2'-Diphenylmethane diisocyanate | 2536-05-2 | Not available | | | | |
| ENGINEERING CONTROLS: | | tion. If user operations generate dust, fumes, gas, vapor, or mist, use process lation, and other engineering controls to keep worker exposure to airborne imended or statutory limits. | | | | |
| HYGIENE MEASURES: | Wash hands, forearms, and face thoroughly with plenty of soap and water after handling chemical products, before eating, smoking, and using the restroom and at the end of the working period. Appropriate engineering, administrative, and other best practice decontamination control measures must be used to isolate contaminates on clothing and to prevent unintended migration of contaminants. Handle clothing and other potentially contaminated material appropriately and in compliance with local, state, and federal regulations in the process of removing, washing/cleaning, and reuse of these potentially contaminated materials. Ensure compliant use and location of eyewash station and safety showers. | | | | | |
| PERSONAL PROTECTIVE EQU | IPMENT (PPE): | | | | | |
| EYE PROTECTION: | to avoid exposure to liquid splasl | an approved standard should be used when a risk assessment indicates this is necessary hes, mists, or dusts. If contact is possible, the following protection should be worn, unless er degree of protection: chemical splash goggles and/or face shield. | | | | |
| SKIN PROTECTION: | Personal protective equipment for the body should be selected based on the task being performed, the risks involved, and should be approved by an industrial hygiene specialist before handling this product. | | | | | |
| HANDS PROTECTION: | Chemical resistant gloves complying with applicable health and safety standards shall be worn when handling this product. Protective gloves are those made from butyl rubber, nitrile rubber, or polyvinyl alcohol. Appropriate hazard assessments in conjunction with an evaluation of the protection factors of chemical resistant gloves shall be performed to ensure the protective properties remain intact. It is noted that the time it takes to breakdown of protection factors for different glove manufacturers varies. In the case of mixtures, the protection factors of chemical resistant gloves may be impacted and deteriorate at unpredictable rates without understanding the impact of the substance and the specific protection factors of the chemical resistant gloves. | | | | | |
| RESPIRATORY PROTECTION: | Ensure adequate ventilation. If the respirator is the sole means of protection, use a full-face supplied respirator. Use respirators and components tested and approved under appropriate government standards such as OSHA 29CFR 1910.134, NIOSH (US), or CEN (EU). | | | | | |
| ENVIRONMENTAL EXPOSURE CONTROLS: | Dispose of raw and spent materials and wastes in compliance with all local, state, and federal regulations to prevent potential environmental contamination. Industrial air monitoring may be required to determine any potential environmental hazards to the atmosphere. This monitoring may result in the use of engineering and administrative controls such as filtering and scrubbing systems to mitigate or eliminate potential contaminants. | | | | | |

| CONTROL OF THE OWNER OF | CHEMICAL PROPE | KIIES | | | | | |
|---|--|---|--|--|--|--|--|
| PHYSICAL STATE: | Liquid | FLASH F | POINT: | 320°F (160°C) | | | |
| COLOR: | Clear yellow | AUTO-10 | NITION TEMPERATURE: | Not available | | | |
| ODOR: | Slightly musty | DECOM | POSITION TEMPERATURE: | Not available | | | |
| ODOR THRESHOLD: | Not available | EXPLOS | IVE LIMITS: | Not explosive | | | |
| pH: | Not applicable | FLAMM | ABILITY: | Not available | | | |
| WATER SOLUBILITY: | Not available | BOILING | POINT: | Not available | | | |
| PARTITION COEFFICIENT: | Not available | BOILING | RANGE: | Not available | | | |
| SPECIFIC GRAVITY: | 1.12±0.005 g/cc @ 77° | F (25°C) MELTIN | G/FREEZING POINT: | Not available | | | |
| VISCOSITY: | 450±50 mPa.s @ 77°F | (25°C) VAPOR | PRESSURE: | Not available | | | |
| EVAPORATION RATE: | Not available | VAPOR | DENSITY: | Not available | | | |
| VOC: | 0 g/L | RELATIV | E DENSITY: | 9.4±0.05 lbs/gal | | | |
| SECTION 10: STABILITY & | REACTIVITY | | | | | | |
| STABILITY: | Stable when handled | and stored at tempera | tures 60-90°F (15-32°C). | | | | |
| INCOMPATIBILITY: | Incompatible with wat | er, alcohols, amines, b | ases, and acids. | | | | |
| HAZARDOUS REACTION: | hazardous reactions will materials containing active be violent at higher temporesence of solvents. The | Exothermic reaction will occur when combined with sister component. Under normal conditions of storage and use, hazardous reactions will not occur. Reaction with water (moisture) produces CO2 gas. An exothermic reaction with materials containing active hydrogen groups can occur. The reaction becomes progressively more vigorous and can be violent at higher temperatures if the miscibility of the reaction partners is good or is supported by stirring or by the presence of solvents. This material is insoluble with and heavier than water. It sinks to the bottom, but reacts slowly at the interface. A solid water insoluble layer of polyurea is formed at the interface by liberating carbon dioxide. | | | | | |
| HAZARDOUS POLYMERIZATION: | | Polymerization may occur at elevated temperatures in the presence of alkalis, tertiary amines and metal compounds. Under normal conditions of storage and use, hazardous polymerization should not occur. | | | | | |
| CONDITIONS TO AVOID: | Avoid moisture contamination and high temperatures. | | | | | | |
| HAZARDOUS DECOMPOSITION: | May produce toxic fumes of carbon dioxide, carbon monoxide, and/or nitrogen oxides when near heat source/flame. | | | | | | |
| SECTION 11: TOXICOLOGY INFORMATION | | | | | | | |
| ACUTE HEALTH EFFECTS: | | | | | | | |
| EYE CONTACT: | Causes eye irritation with symptoms of reddening, tearing, stinging, and swelling. May cause temporary corneal injury. Vapor or aerosol may cause irritation with symptoms of burning and tearing. | | | | | | |
| SKIN CONTACT: | Causes skin irritation with symptoms of reddening, itching, and swelling. Persons previously sensitized can experience allergic skin reaction with symptoms of reddening, itching, swelling, and rash. Cured material is difficult to remove. Contact with MDI can cause discoloration. | | | | | | |
| | | itact with MDI can caus | | lling, and rash. Čured material is | | | |
| INHALATION: | membranes in the respiral shortness of breath and responsively can responsive the symptoms. Exedema (fluid in lungs). Che reported. These symptom test atmosphere generate placed on the market, and | ist at concentrations above tory tract (nose, throat, lureduced lung function (bread to concentrations below the Tlemical or hypersensitivity as can be delayed up to sed in the animal study is not how it can reasonably be assessing hazard. Based | re the TLV or PEL can irritate (burnags) causing runny nose, sore throathing obstruction). Persons with withe TLV or PEL with similar syn V or PEL may lead to bronchitis, pneumonitis, with flu-like sympto everal hours after exposure. Thesot representative of workplace en | Illing, and rash. Cured material is ming sensation) the mucous pat, coughing, chest discomfort, a preexisting, nonspecific bronchial aptoms as well as asthma attack or bronchial spasm and pulmonary ms (e.g., fever, chills), has also been se effects are usually reversible. The nvironments, how the substance is a the test result cannot be directly | | | |
| INHALATION: INGESTION: | membranes in the respiral shortness of breath and responding to the shortness of breath and responding the shortness of breath and responding the shortness of | ist at concentrations above tory tract (nose, throat, lureduced lung function (bread to concentrations below the Tlemical or hypersensitivity as can be delayed up to seed in the animal study is not how it can reasonably be assessing hazard. Basealation toxicity is justified. | se discoloration. The the TLV or PEL can irritate (burnags) causing runny nose, sore through the total postruction). Persons with withe TLV or PEL with similar synthem of the total postruction. We will be supposed to be used. The sort representative of workplace ele expected to be used. Therefore on expert judgment and the we | Illing, and rash. Cured material is ming sensation) the mucous pat, coughing, chest discomfort, a preexisting, nonspecific bronchial aptoms as well as asthma attack or bronchial spasm and pulmonary ms (e.g., fever, chills), has also been se effects are usually reversible. The nvironments, how the substance is a the test result cannot be directly | | | |
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| INGESTION: ACUTE TOXICITY: COMPONENT NAME | membranes in the respiral shortness of breath and respondent shortness of breath and respondent shortness of breath and respondent should be shortness. Executing the shortness of the shortness | ist at concentrations above tory tract (nose, throat, lureduced lung function (bread to concentrations below the Tilemical or hypersensitivity as can be delayed up to sed in the animal study is nat how it can reasonably be assessing hazard. Based alation toxicity is justified. The digestive tract. Symptons of the second of the digestive tract. Symptons of the digestive tract. Symptons of the digestive tract. | te the TLV or PEL can irritate (burnags) causing runny nose, sore throathing obstruction). Persons with with TLV or PEL with similar synthem of the property o | Illing, and rash. Cured material is ning sensation) the mucous pat, coughing, chest discomfort, a preexisting, nonspecific bronchial sptoms as well as asthma attack or bronchial spasm and pulmonary ms (e.g., fever, chills), has also been se effects are usually reversible. The nvironments, how the substance is a the test result cannot be directly ight of the evidence, a modified hin, nausea, vomiting, and diarrhea. LC ₅₀ Inhalation (mg/L/4hrs) | | | |
| INGESTION: ACUTE TOXICITY: COMPONENT NAME 2,4'-Diphenylmethane diisocyanate | membranes in the respiral shortness of breath and respondent shortness of breath and respondent shortness of breath and respondent shortness. Exedema (fluid in lungs). Che reported. These symptom test atmosphere generate placed on the market, and applied for the purpose of classification for acute inh. May cause irritation of the CAS NUMBER 5873-54-1 | ist at concentrations above tory tract (nose, throat, lureduced lung function (bread to concentrations belowage) above the Tlemical or hypersensitivity is can be delayed up to sed in the animal study is not how it can reasonably be assessing hazard. Based alation toxicity is justified. LD ₅₀ Oral (mg/kg) >2,000 (rat) | the TLV or PEL can irritate (burnags) causing runny nose, sore thrathing obstruction). Persons with with the TLV or PEL with similar synth or PEL may lead to bronchitis, pneumonitis, with flu-like symptoteveral hours after exposure. These of representative of workplace ele expected to be used. Therefore of on expert judgment and the weather the symptote of the sympton of the sym | Illing, and rash. Cured material is ning sensation) the mucous pat, coughing, chest discomfort, a preexisting, nonspecific bronchial aptoms as well as asthma attack or bronchial spasm and pulmonary ms (e.g., fever, chills), has also been se effects are usually reversible. The avironments, how the substance is a the test result cannot be directly ight of the evidence, a modified ain, nausea, vomiting, and diarrhea. LC ₅₀ Inhalation (mg/L/4hrs) 0.49 (rat) | | | |
| INGESTION: ACUTE TOXICITY: COMPONENT NAME 2,4'-Diphenylmethane diisocyanate 4,4'-Diphenylmethane diisocyanate | membranes in the respiral shortness of breath and respondent to the properties of the properties atthmatically and the properties at | ist at concentrations above tory tract (nose, throat, lureduced lung function (bread to concentrations below the Tlemical or hypersensitivity is can be delayed up to seed in the animal study is not a how it can reasonably be assessing hazard. Based alation toxicity is justified. LD ₅₀ Oral (mg/kg) >2,000 (rat) | the the TLV or PEL can irritate (burnags) causing runny nose, sore throathing obstruction). Persons with with TLV or PEL with similar synthem of the tribute | Illing, and rash. Cured material is ning sensation) the mucous pat, coughing, chest discomfort, a preexisting, nonspecific bronchial aptoms as well as asthma attack or bronchial spasm and pulmonary ms (e.g., fever, chills), has also been se effects are usually reversible. The vironments, how the substance is a the test result cannot be directly ight of the evidence, a modified ain, nausea, vomiting, and diarrhea. LC ₅₀ Inhalation (mg/L/4hrs) 0.49 (rat) | | | |

| POTENTIAL CHRONIC EFFECTS | : |
|---|---|
| CHRONIC EFFECTS: | As a result of previous repeated overexposures or a single large dose, certain individuals may develop sensitization to isocyanates (asthma or asthma-like symptoms) that may cause them to react to a later exposure to isocyanates at levels well below the TLV or PEL. These symptoms, which can include chest tightness, wheezing, cough, shortness of breath or asthmatic attack, could be immediate or delayed up to several hours after exposure. Extreme asthmatic reactions can be life threatening. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air, or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Sensitization can be permanent. Chronic overexposure to isocyanates has also been reported to cause lung damage (including fibrosis, decrease in lung function) that may be permanent. Prolonged contact with skin can cause reddening, swelling, rash, and, in some cases, skin sensitization. Animal tests and other research indicate that skin contact with MDI can play a role in causing isocyanate sensitization and respiratory reaction. This data reinforces the need to prevent direct skin contact with isocyanates. Prolonged vapor contact with the eyes may cause conjunctivitis. |
| TARGET ORGANS: | Contains material which causes damage to the upper respiratory tract. |
| CARCINOGENICITY: | As of this publication, this material is not listed on the National Toxic Program (NTP) Report of Carcinogens. Please refer to the most recent information with NTP. The material is classified on the International Agency for Research on Cancer (IARC) Monographs as Group 3. Exposure to levels of MDI, significantly above the threshold limit value (0.005 ppm), was shown to be related to the occurrence of lung tumors in a study using rats. |
| MUTAGENICITY: | No known significant effects or critical hazards. |
| TERATOGENICITY: | No known significant effects or critical hazards. |
| FERTILITY EFFECTS: | No known significant effects or critical hazards. |
| DEVELOPMENTAL EFFECTS: | No known significant effects or critical hazards. |
| MEDICAL CONDITIONS AGGRAVATED BY OVER-EXPOSURE: | Existing respiratory/pulmonary and skin conditions may be aggravated by overexposure. |

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL EFFECTS:

Based on a review of the individual components, this product has low ecotoxicity on aquatic organisms. When in contact with water an inert non-biodegradable solid will be produced. There is no evidence of bio-accumulation occurring.

SECTION 13: DISPOSAL CONSIDERATION

WASTE DISPOSAL:

By-product wastes or process waste generation should be eliminated and/or minimized when possible. Do not dispose of any contaminants into sanitary sewer systems, storm drains, Publicly Owned Treatment Works (POTW), or any other municipal waste water treatment facility without written approval and agreements for processing wastes with such enterprises. Dispose of raw or unused materials, wastes, and/or by-products in accordance with all applicable local, state, and federal laws. Employ the expertise and knowledge of qualified personnel or contractors in disposal of any and all variants of this product. Ensure material containers are cleaned to the applicable standards before recycling, disposing, or reusing containers. Take special precautions to avoid any cross contamination and potential unknown effects from mixing with other substances. Refer to SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION of this document for personal protection requirements. Disposal to the environment or in violation of environmental protection laws and statutes must be prevented.

SECTION 14: TRANSPORT INFORMATION

| PROPER SHIPPING NAME: | |
|-----------------------|--|
| DOT: | Other regulated substance, liquid, n.o.s. (contains: 4,4'-Diphenylmethane diisocyanate) *Single containers less than 5,000 lbs. are not regulated. |
| TDG: | Not regulated. |
| IMDG: | Not regulated. |
| IATA: | Not regulated. |

This product could potentially contaminate aquatic and terrestrial environments if not handled in accordance with all precautions, regulations, and laws. Users, transporters, and all other applicable entities must review, follow, and apply any and all necessary precautions and procedures to eliminate and/or minimize potential hazards or risks to aquatic or terrestrial environments.

| REGULATORY INFORMATION | UN NUMBER | CLASSES | PG* | LABEL | ADDITIONAL INFORMATION |
|------------------------|--------------|---------|-----|-------|---|
| DOT Classification | NA3082 | 9 | III | | Reportable quantity 5,000 lbs. (2,268 kg) Single containers less than 5,000 lbs. are not regulated. |
| *PG: Packaging group | | | | | |

| SECTION 15: REGULATORY | INFORMATION | | | | | | |
|--|--|---|---|-----------------------------------|------------------------|--|--|
| U.S. Federal Regulations | | | | | | | |
| TSCA 8b Inventory: | All components are listed on the TSCA inventory or are exempt. | | | | | | |
| TSCA 5a (2): | No components lis | ted. | | | | | |
| TSCA 5e: | No components lis | ted. | | | | | |
| TSCA 12b: | No components lis | ted. | | , | | | |
| Clean Air Act Section 112(b) | СОМР | COMPONENT CAS NUMBER CONCENTRATION | | | | | |
| Hazardous Air Pollutants (HAPs): | 4,4'-Diphenylmetha | ane diisocyanate | 101 | -68-8 | 20-40% | | |
| Clean Air Act - Ozone Depleting Substances (ODS): | This product does | not contain nor is it m | nanufactured with o | zone depleting subs | stances. | | |
| SARA 313 Form R - Reporting | СОМР | ONENT | CAS | IUMBER | CONCENTRATION | | |
| Requirements: | 4,4'-Diphenylmetha | ane diisocyanate | 101 | -68-8 | 20-40% | | |
| | Polymethylene polyisocyanate | yphenylene | 901 | 6-87-9 | 1-5% | | |
| SARA 311/312 hazard identification: | Immediate (acute) I Delayed (chronic) h | nealth hazard. nealth hazard. | | | | | |
| CERCLA Hazardous substances: | | | | | | | |
| Component | Concentration | Section 302 | Section 313 | Section 304 | Reportable Quantity | | |
| 4,4'-Diphenylmethane diisocyanate | 20-40% | Not listed | Listed | Not listed | 5,000 lbs | | |
| Polymethylene polyphenylene isocyanate | 1-5% Not listed | | Listed | Not listed | Not available | | |
| STATE REGULATIONS: | | | | | | | |
| PENNSYLVANIA/NEW JERSEY/ | COMPONENT | | CAS | IUMBER | CONCENTRATION | | |
| MASSACHUSETTS - RTK: | 2,4'-Diphenylmethane diisocyanate | | 5873-54-1 | | 20-40% | | |
| | 4,4'-Diphenylmethane diisocyanate | | 101-68-8 | | 20-40% | | |
| | Polymethylene polyisocyanate | yphenylene | 9016-87-9 | | 1-5% | | |
| California Prop 65: | | ins no listed substand productive harm, at l | | | | | |
| CANADA | | | | | | | |
| WHMIS (Canada): | WHMIS Class D-1A WHMIS Class D-2A | Material causing im Material causing ot | mediate and seriou her toxic effects (ve | s toxic effects (very ery toxic). | toxic). | | |
| CEPA DSL: | All components are | e listed or exempted. | | | | | |
| This product has been classified in the information required by the Co | | | ne Controlled Prod | ucts Regulations an | d the SDS contains all | | |
| INTERNATIONAL LISTS: | | | | | | | |
| Australia inventory (AICS): | All components are | e listed or exempted. | | | | | |
| China inventory (IECSC): | All components are | e listed or exempted. | | | | | |
| Japan inventory: | All components are | e listed or exempted. | | | | | |
| Korea inventory: | All components are | e listed or exempted. | | | | | |
| New Zealand inventory of Chemicals (NZIoC): | All components are | All components are listed or exempted. | | | | | |
| Phillipines inventory (PICCS): | All components are listed or exempted. | | | | | | |

SECTION 16: OTHER INFORMATION

NFPA & HMIS 4 Extreme 3 Serious 2 Moderate 1 Slight 0 No Hazard



National Fire Protection Association (NFPA)



| HEALTH | |
|-------------|---|
| FLAMMABILIT | Υ |
| REACTIVITY | |
| SPECIAL | |
| INFORMATION | 1 |
| | |

Hazardous Material Information System (HMIS)

| HEALTH | 2 |
|--------------------|-----|
| FLAMMABILIT | Y 1 |
| REACTIVITY | 1 |
| SPECIAL | |
| INFORMATION | I |

Note: The customer is responsible for determining the PPE code for this material. At the time of publishing, the NFPA/HMIS and the New GHS scale had opposite scales of severity. Check the most recent publications for current information.

| For Your Protection: | The information and recommendations in this publication is to the best of our knowledge, reliable. The toxicity and risk characteristics of products made by SPI will necessarily differ from the toxicity and risk characteristics that occur when such products are used with other materials during a manufacturing process. The resulting risk characteristics should be determined and made known to ultimate end-users and processors. The user is responsible to comply with all applicable federal, provincial or municipal laws and regulations. SPI MAKES NO WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. |
|--------------------------|---|
| Preparation Information: | This SDS supersedes ALL previous SDS versions. |