SAFETY DATA SHEET

K5™ "A" Component Revised Date: 10/16/2018 Version: 9 SDS-068

SECTION 1: IDENTIFICATION

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

Skin corrosion/irritation

K5[™] "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

HAZARD STATEMENTS

SECTION 2: HAZARDS IDENTIFICATION

CATEGORY

GHS LABEL ELEMENTS

GHS PICTOGRAM



 DANGER

 GHS CLASSIFICATION

 HA

 Category 2
 H315
 Causes skin irritation.

 Category 1
 H317
 May cause an allergic

Skin conosion/initiation	Cutegory 2	11010		
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				

	FREVENTION		
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.		

READ THE ENTIRE SDS FOR MORE THOROUGH EVALUATION OF THE HAZARDS



SECTION 3: COMPOSIT	ION/INFORMATION ON INGREDIENTS			
CHEMICAL NAME		CAS NUMBER	% WEIGHT	
Polyurethane		*Proprietary	50-80	
2,4'-Diphenylmethane diisocya		5873-54-1	1-10	
4,4'-Diphenylmethane diisocya		101-68-8	1-10	
lsocyanates, reaction product o	of polyol with MDI	*Proprietary	1-5	
Propylene carbonate		108-32-7	1-10	
2,2'-Diphenylmethane diisocyanate 2536-05-2 *The specific chemical identity and exact percentage (concentration) is withheld as a trade secret per applicable regulations ar		1-5		
SECTION 4: FIRST AID		pplicable regulations a	and statutes.	
EYE:	In case of contact, immediately flush eyes with plenty of water for at least 15 mir	utes. Get medical attenti	on immediately	
SKIN:	After contact with skin, wash immediately with plenty of warm, soapy water. Rer Continue to rinse for at least 10 minutes. A poly-glycol based skin cleanser or co water. Get medical attention if symptoms occur. Wash clothing before reuse. Cle	orn oil may be more effec	tive than soap and	
INHALATION:	Move exposed person to fresh air. Get medical attention immediately. irritation or bronchospasm. If breathing is labored, oxygen should be a	Treatment is symptom dministered by qualifie	atic for primary ed personnel.	
INGESTION:	Do not induce vomiting unless directed to do so by medical personnel. Never g person. Provided the patient is conscious, wash out mouth with water. Get med	ive anything by mouth to ical attention if symptoms	an unconscious appear.	
NOTES TO PHYSICIAN:	Symptomatic and supportive therapy as needed. Following severe exmonitored for 48 hours.	posure, medical follow	-up should be	
SECTION 5: FIRE FIGHT	ING MEASURES			
FLASH POINT:	384°F (196°C).			
HAZARDS WHEN ON FIRE OR NEAR FLAME:	Closed container may forcibly rupture under extreme heat or when cor $(CO_2 \text{ formed})$.	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 tra increase will occur and the container may rupture.			
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,	oaratus (SCBA) and protective	
SECTION 6: ACCIDENTA	AL RELEASE MEASURES			
ACCIDENTAL RELEASE MEASURES:	For major spills call CHEMTREC : Toll free 1-800-424-9300 for internat	ional call 1-703-527-3	887.	
PERSONAL PRECAUTIONS:	Wear appropriate personal protective equipment recommended in SE PERSONAL PROTECTION of this SDS. Immediately contact emergence upwind avoiding inhalation of vapors. Clean-up should only be perform dealing with major spillages should wear full protective clothing include	y personnel. Evacuate med by trained persor	e the area. Keep nel. People	
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 surrounding area does not contain further hazards that could worsen the s harm (i.e. eliminate any ignition sources). Move any non-contaminated, no if it can be done safely. Dike, dam, or further restrict and stop active leaks to individuals, the environment, and/or structures. Contain and collect spill CONSIDERATIONS for disposal information and SECTION 8: EXPOSURE C recommended Personal Protective Equipment (PPE). Obey all local, state,	pill, cause migration, or n-leaking containers fro without posing further c age. See SECTION 13: CONTROL/ PERSONAL	cause further m the spill zone lamage or harm DISPOSAL PROTECTION for	

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.		
	and stored after purging the container with argon or nitrogen gas.		

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS:

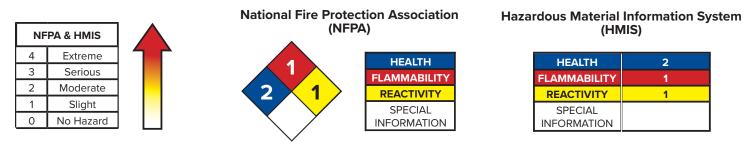
COMPONENT NAME	CAS NUMBER	EXPOSURE LIMITS	
Polyurethane	*Proprietary	Not available	
2,4'-Diphenylmethane diisocyanate	5873-54-1	Not available	
4,4'-Diphenylmethane diisocyanate	101-68-8	ACGIH TLV TWA: 0.005 ppm 8 hour(s) OSHA PEL CEIL: 0.02 ppm CEIL: 0.2 mg/m ³ NIOSH REL CEIL: 0.2 mg/m ³ 10 minute(s) CEIL: 0.02 ppm 10 minute(s) TWA: 0.05 mg/m ³ 10 hour(s) TWA: 0.005 ppm 10 hour(s)	
Isocyanates, reaction product of polyol with MDI	*Proprietary	Not available	
Propylene carbonate	108-32-7	Not available	
2,2'-Diphenylmethane diisocyanate	2536-05-2	Not available	
ENGINEERING CONTROLS:	Use only with adequate ventilat enclosures, local exhaust ventil contaminants below any recom	tion. If user operations generate dust, fumes, gas, vapor, or mist, use process ation, and other engineering controls to keep worker exposure to airborne mended 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	PMENT (PPE):		
EYE PROTECTION:	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher 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.		

SECTION 9: PHYSICAL &	CHEMICAL PROPE	RHES				
PHYSICAL STATE:	Liquid	FLASH PO	INT:	384°F (196°C)		
COLOR:	Clear yellow	AUTO-IGN	ITION TEMPERATURE:	Not available		
ODOR:	Slightly musty	DECOMPO	SITION TEMPERATURE:	Not available		
ODOR THRESHOLD:	Not available	EXPLOSIV	E LIMITS:	Not explosive		
pH:	Not applicable	FLAMMAE	ILITY:	Not available		
WATER SOLUBILITY:	Not available	BOILING F	OINT:	Not available		
PARTITION COEFFICIENT:	Not available	BOILING F	ANGE:	Not available		
SPECIFIC GRAVITY:	1.15±0.005 g/cc @ 77°	F (25°C) MELTING/	REEZING POINT:	Not available		
VISCOSITY:	1,400±100 mPa.s @ 77	7°F (25°C) VAPOR PF	ESSURE:	Not available		
EVAPORATION RATE:	Not available	VAPOR DE	NSITY:	Not available		
VOC:	0 g/L	RELATIVE	DENSITY:	9.6±0.05 lbs/gal		
SECTION 10: STABILITY &						
STABILITY:	Stable when handled	and stored at temperatu	es 60-90°F (15-32°C).			
INCOMPATIBILITY:	Incompatible with wat	er, alcohols, amines, bas	es, and acids.			
HAZARDOUS REACTION:	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 CO ₂ 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 materials 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.					
CONDITIONS TO AVOID:	May produce toxic fumes of carbon dioxide, carbon monoxide, and/or nitrogen oxides when near heat					
HAZARDOUS DECOMPOSITION:	May produce toxic fun source/flame.			ogen oxides when near heat		
	May produce toxic fun source/flame.			ogen oxides when near heat		
HAZARDOUS DECOMPOSITION: SECTION 11: TOXICOLOG	May produce toxic fun source/flame. Y INFORMATION Causes eye irritation w	nes of carbon dioxide, ca	rbon monoxide, and/or nitr	velling. May cause temporary		
HAZARDOUS DECOMPOSITION: SECTION 11: TOXICOLOG ACUTE HEALTH EFFECTS:	May produce toxic fun source/flame. Y INFORMATION Causes eye irritation wi corneal injury. Vapor or Causes skin irritation w experience allergic skir	ith symptoms of reddeni aerosol may cause irrita ith symptoms of reddeni	rbon monoxide, and/or nitr ng, tearing, stinging, and sv tion with symptoms of burn ng, itching, and swelling. Pe	velling. May cause temporary ing and tearing. ersons previously sensitized can		
HAZARDOUS DECOMPOSITION: SECTION 11: TOXICOLOG ACUTE HEALTH EFFECTS: EYE CONTACT:	May produce toxic fun source/flame. Y INFORMATION Causes eye irritation w corneal injury. Vapor or Causes skin irritation w experience allergic skir difficult to remove. Con Disocyanate vapors or mi membranes in the respira shortness of breath and re hyperreactivity can respor asthma-like symptoms. Ex edema (fluid in lungs). Che reported. These symptom test atmosphere generate placed on the market, and	ith symptoms of reddenin aerosol may cause irrita ith symptoms of reddenin aerosol may cause irrita ith symptoms of reddenin reaction with symptoms tact with MDI can cause st at concentrations above tory tract (nose, throat, lungs educed lung function (breath nd to concentrations below posure well above the TLV emical or hypersensitivity pr is can be delayed up to sev id in the animal study is not how it can reasonably be e assessing hazard. Based o	rbon monoxide, and/or nitr ng, tearing, stinging, and sw tion with symptoms of burn ng, itching, and swelling. Pe s of reddening, itching, swe discoloration. he TLV or PEL can irritate (burn causing runny nose, sore thruing obstruction). Persons with the TLV or PEL with similar sym or PEL may lead to bronchitis, eumonitis, with flu-like sympto eral hours after exposure. These representative of workplace er xpected to be used. Therefore	velling. May cause temporary ing and tearing. ersons previously sensitized can lling, and rash. Cured material is		
HAZARDOUS DECOMPOSITION: SECTION 11: TOXICOLOG ACUTE HEALTH EFFECTS: EYE CONTACT: SKIN CONTACT:	May produce toxic fun source/flame. Y INFORMATION Causes eye irritation wi corneal injury. Vapor or Causes skin irritation wi experience allergic skin difficult to remove. Con Diisocyanate vapors or mi membranes in the respiral shortness of breath and re- hyperreactivity can respor- asthma-like symptoms. Ex- edema (fluid in lungs). Che reported. These symptoms test atmosphere generate placed on the market, and applied for the purpose of classification for acute inh	ith symptoms of reddening aerosol may cause irritation in reaction with symptoms tact with MDI can cause st at concentrations above tory tract (nose, throat, lungs educed lung function (breath ad to concentrations below posure well above the TLV emical or hypersensitivity pr is can be delayed up to sev id in the animal study is not how it can reasonably be de assessing hazard. Based of alation toxicity is justified.	rbon monoxide, and/or nitr ng, tearing, stinging, and sw tion with symptoms of burn ng, itching, and swelling. Pe s of reddening, itching, swe discoloration. The TLV or PEL can irritate (burn s) causing runny nose, sore thra ing obstruction). Persons with the TLV or PEL can irritate (burn s) causing runny nose, sore thra ing obstruction). Persons with the TLV or PEL with similar sym or PEL may lead to bronchitis, eumonitis, with flu-like sympto eral hours after exposure. These representative of workplace en expected to be used. Therefore n expert judgment and the we	velling. May cause temporary ing and tearing. ersons previously sensitized can lling, and rash. Cured material is ning sensation) the mucous bat, coughing, chest discomfort, a preexisting, nonspecific bronchial ptoms as well as asthma attack or pronchial spasm and pulmonary ms (e.g., fever, chills), has also been e effects are usually reversible. The pvironments, how the substance is a the test result cannot be directly		
HAZARDOUS DECOMPOSITION: SECTION 11: TOXICOLOG ACUTE HEALTH EFFECTS: EYE CONTACT: SKIN CONTACT: INHALATION:	May produce toxic fun source/flame. Y INFORMATION Causes eye irritation wi corneal injury. Vapor or Causes skin irritation wi experience allergic skin difficult to remove. Con Diisocyanate vapors or mi membranes in the respiral shortness of breath and re- hyperreactivity can respor- asthma-like symptoms. Ex- edema (fluid in lungs). Che reported. These symptoms test atmosphere generate placed on the market, and applied for the purpose of classification for acute inh	ith symptoms of reddening aerosol may cause irritation in reaction with symptoms tact with MDI can cause st at concentrations above tory tract (nose, throat, lungs educed lung function (breath ad to concentrations below posure well above the TLV emical or hypersensitivity pr is can be delayed up to sev id in the animal study is not how it can reasonably be de assessing hazard. Based of alation toxicity is justified.	rbon monoxide, and/or nitr ng, tearing, stinging, and sw tion with symptoms of burn ng, itching, and swelling. Pe s of reddening, itching, swe discoloration. The TLV or PEL can irritate (burn s) causing runny nose, sore thra ing obstruction). Persons with the TLV or PEL can irritate (burn s) causing runny nose, sore thra ing obstruction). Persons with the TLV or PEL with similar sym or PEL may lead to bronchitis, eumonitis, with flu-like sympto eral hours after exposure. These representative of workplace en expected to be used. Therefore n expert judgment and the we	velling. May cause temporary ing and tearing. ersons previously sensitized can lling, and rash. Cured material is bat, coughing, chest discomfort, a preexisting, nonspecific bronchial optoms as well as asthma attack or bronchial spasm and pulmonary ms (e.g., fever, chills), has also been be effects are usually reversible. The invironments, how the substance is a the test result cannot be directly ight of the evidence, a modified		
HAZARDOUS DECOMPOSITION: SECTION 11: TOXICOLOG ACUTE HEALTH EFFECTS: EYE CONTACT: SKIN CONTACT: INHALATION: INGESTION:	May produce toxic fun source/flame. Y INFORMATION Causes eye irritation wi corneal injury. Vapor or Causes skin irritation wi experience allergic skin difficult to remove. Con Diisocyanate vapors or mi membranes in the respiral shortness of breath and re- hyperreactivity can respor- asthma-like symptoms. Ex- edema (fluid in lungs). Che reported. These symptoms test atmosphere generate placed on the market, and applied for the purpose of classification for acute inh	ith symptoms of reddening aerosol may cause irritation in reaction with symptoms tact with MDI can cause st at concentrations above tory tract (nose, throat, lungs educed lung function (breath ad to concentrations below posure well above the TLV emical or hypersensitivity pr is can be delayed up to sev id in the animal study is not how it can reasonably be de assessing hazard. Based of alation toxicity is justified.	rbon monoxide, and/or nitr ng, tearing, stinging, and sw tion with symptoms of burn ng, itching, and swelling. Pe s of reddening, itching, swe discoloration. The TLV or PEL can irritate (burn s) causing runny nose, sore thra ing obstruction). Persons with the TLV or PEL can irritate (burn s) causing runny nose, sore thra ing obstruction). Persons with the TLV or PEL with similar sym or PEL may lead to bronchitis, eumonitis, with flu-like sympto eral hours after exposure. These representative of workplace en expected to be used. Therefore n expert judgment and the we	velling. May cause temporary ing and tearing. ersons previously sensitized can lling, and rash. Cured material is bat, coughing, chest discomfort, a preexisting, nonspecific bronchial optoms as well as asthma attack or bronchial spasm and pulmonary ms (e.g., fever, chills), has also been be effects are usually reversible. The twironments, how the substance is a the test result cannot be directly ight of the evidence, a modified		
HAZARDOUS DECOMPOSITION: SECTION 11: TOXICOLOG ACUTE HEALTH EFFECTS: EYE CONTACT: SKIN CONTACT: INHALATION: INGESTION: ACUTE TOXICITY:	May produce toxic fun source/flame. Y INFORMATION Causes eye irritation w corneal injury. Vapor or Causes skin irritation w experience allergic skir difficult to remove. Con Diisocyanate vapors or mi membranes in the respira shortness of breath and re hyperreactivity can respor asthma-like symptoms. Ex edema (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 th	ith symptoms of reddeni aerosol may cause irrita ith symptoms of reddeni aerosol may cause irrita ith symptoms of reddeni n reaction with symptoms tact with MDI can cause st at concentrations above tory tract (nose, throat, lungs educed lung function (breath nd to concentrations below posure well above the TLV emical or hypersensitivity pr is can be delayed up to sev id in the animal study is not how it can reasonably be e assessing hazard. Based o alation toxicity is justified. e digestive tract. Symptor	rbon monoxide, and/or nitr ng, tearing, stinging, and sw tion with symptoms of burn ng, itching, and swelling. Pe s of reddening, itching, swe discoloration. he TLV or PEL can irritate (burn causing runny nose, sore thr ing obstruction). Persons with the TLV or PEL with similar symp or PEL may lead to bronchitis, eumonitis, with flu-like sympto eral hours after exposure. These representative of workplace er xpected to be used. Therefore n expert judgment and the we	velling. May cause temporary ing and tearing. ersons previously sensitized can lling, and rash. Cured material is bing sensation) the mucous bat, coughing, chest discomfort, a preexisting, nonspecific bronchial uptoms as well as asthma attack or pronchial spasm and pulmonary ms (e.g., fever, chills), has also been se effects are usually reversible. The hyironments, how the substance is the test result cannot be directly ight of the evidence, a modified		
HAZARDOUS DECOMPOSITION: SECTION 11: TOXICOLOG ACUTE HEALTH EFFECTS: EYE CONTACT: SKIN CONTACT: INHALATION: INGESTION: ACUTE TOXICITY: COMPONENT NAME Polyurethane	May produce toxic fun source/flame. Y INFORMATION Causes eye irritation wi corneal injury. Vapor or Causes skin irritation wi experience allergic skin difficult to remove. Con Diisocyanate vapors or mi membranes in the respira shortness of breath and re hyperreactivity can respor asthma-like symptoms. Ex edema (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 th CAS NUMBER	ith symptoms of reddenination aerosol may cause irritation with symptoms of reddenination reaction with symptoms tact with MDI can cause stat concentrations above tory tract (nose, throat, lungs educed lung function (breathed to concentrations below posure well above the TLV emical or hypersensitivity prises and be delayed up to sevid in the animal study is not a sessing hazard. Based of alation toxicity is justified.	rbon monoxide, and/or nitr ng, tearing, stinging, and sw tion with symptoms of burn ng, itching, and swelling. Pe s of reddening, itching, swe discoloration. the TLV or PEL can irritate (burn s) causing runny nose, sore thra ing obstruction). Persons with the TLV or PEL with similar sym or PEL may lead to bronchitis, eumonitis, with flu-like sympto eral hours after exposure. These representative of workplace en expected to be used. Therefore in expert judgment and the we as may include abdominal pa	velling. May cause temporary ing and tearing. ersons previously sensitized can lling, and rash. Cured material is and sensation the mucous pat, coughing, chest discomfort, a preexisting, nonspecific bronchial uptoms as well as asthma attack or pronchial spasm and pulmonary ms (e.g., fever, chills), has also been se effects are usually reversible. The hydroments, how the substance is a the test result cannot be directly ght of the evidence, a modified in, nausea, vomiting, and diarrhea LC ₅₀ Inhalation (mg/L/4hrs)		
HAZARDOUS DECOMPOSITION: SECTION 11: TOXICOLOG ACUTE HEALTH EFFECTS: EYE CONTACT: SKIN CONTACT: INHALATION: INHALATION: INGESTION: ACUTE TOXICITY: COMPONENT NAME Polyurethane 2,4'-Diphenylmethane diisocyanate	May produce toxic fun source/flame. Y INFORMATION Causes eye irritation w corneal injury. Vapor or Causes skin irritation w experience allergic skir difficult to remove. Con Diisocyanate vapors or mi membranes in the respira shortness of breath and re hyperreactivity can respor asthma-like symptoms. Ex- edema (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 th CAS NUMBER *Proprietary	ith symptoms of reddeni aerosol may cause irrita ith symptoms of reddeni aerosol may cause irrita ith symptoms of reddeni n reaction with symptoms tact with MDI can cause st at concentrations above tory tract (nose, throat, lungs educed lung function (breat d to concentrations below posure well above the TLV emical or hypersensitivity pr is can be delayed up to sev ed in the animal study is not I how it can reasonably be e assessing hazard. Based o alation toxicity is justified. e digestive tract. Sympton LD ₅₀ Oral (mg/kg) >5,000 (rat)	rbon monoxide, and/or nitr ng, tearing, stinging, and sv tion with symptoms of burn ng, itching, and swelling. Pet s of reddening, itching, swe discoloration. the TLV or PEL can irritate (burn b) causing runny nose, sore thre ing obstruction). Persons with the TLV or PEL with similar sym or PEL may lead to bronchitis, eumonitis, with flu-like sympto areal hours after exposure. These representative of workplace en expected to be used. Therefore n expert judgment and the we hs may include abdominal par LD ₅₀ Dermal (mg/kg) >5,000 (rabbit)	velling. May cause temporary ing and tearing. ersons previously sensitized can lling, and rash. Cured material is bing sensation) the mucous bat, coughing, chest discomfort, a preexisting, nonspecific bronchial ptoms as well as asthma attack or pronchial spasm and pulmonary ms (e.g., fever, chills), has also been be effects are usually reversible. The hvironments, how the substance is the test result cannot be directly ight of the evidence, a modified in, nausea, vomiting, and diarrhea LC ₅₀ Inhalation (mg/L/4hrs) Not available		
HAZARDOUS DECOMPOSITION: SECTION 11: TOXICOLOG ACUTE HEALTH EFFECTS: EYE CONTACT: SKIN CONTACT: INHALATION: INGESTION: ACUTE TOXICITY: COMPONENT NAME	May produce toxic fun source/flame. Y INFORMATION Causes eye irritation wi corneal injury. Vapor or Causes skin irritation wi experience allergic skin difficult to remove. Con Diisocyanate vapors or mi membranes in the respira shortness of breath and re hyperreactivity can resport asthma-like symptoms. Ex- edema (fluid in lungs). Che reported. These symptoms test atmosphere generate placed on the market, and applied for the purpose of classification for acute inhe May cause irritation of the *Proprietary 5873-54-1	ith symptoms of reddenii aerosol may cause irrita ith symptoms of reddenii n reaction with symptoms tact with MDI can cause st at concentrations above tory tract (nose, throat, lungs educed lung function (breat nd to concentrations below posure well above the TLV emical or hypersensitivity pr is can be delayed up to sev ed in the animal study is not how it can reasonably be ef assessing hazard. Based of alation toxicity is justified. e digestive tract. Sympton LD ₅₀ Oral (mg/kg) >5,000 (rat) >2,000 (rat)	rbon monoxide, and/or nitr ng, tearing, stinging, and sw tion with symptoms of burn ng, itching, and swelling. Pe s of reddening, itching, swe discoloration. the TLV or PEL can irritate (burn causing runny nose, sore thra- ing obstruction). Persons with the TLV or PEL can irritate (burn s) causing runny nose, sore thra- ing obstruction). Persons with the TLV or PEL with similar sym- or PEL may lead to bronchitis, eumonitis, with flu-like sympto- eral hours after exposure. These representative of workplace en- expected to be used. Therefore an expert judgment and the we as may include abdominal par- LD ₅₀ Dermal (mg/kg) >5,000 (rabbit) >9,400 (rabbit)	velling. May cause temporary ing and tearing. ersons previously sensitized can lling, and rash. Cured material is bing sensation) the mucous bat, coughing, chest discomfort, a preexisting, nonspecific bronchial uptoms as well as asthma attack or pronchial 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 in, nausea, vomiting, and diarrhea LC ₅₀ Inhalation (mg/L/4hrs) Not available 0.49 (rat)		
HAZARDOUS DECOMPOSITION: SECTION 11: TOXICOLOG ACUTE HEALTH EFFECTS: EYE CONTACT: SKIN CONTACT: INHALATION: INHALATION: INGESTION: ACUTE TOXICITY: COMPONENT NAME Polyurethane 2,4'-Diphenylmethane diisocyanate 4,4'-Diphenylmethane diisocyanate Isocyanates, reaction product of	May produce toxic fun source/flame. Y INFORMATION Causes eye irritation wi corneal injury. Vapor or Causes skin irritation wi experience allergic skir difficult to remove. Con Diisocyanate vapors or mi membranes in the respira shortness of breath and re hyperreactivity can respor asthma-like symptoms. Ex- edema (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 th CAS NUMBER *Proprietary 5873-54-1 101-68-8	ith symptoms of reddenii aerosol may cause irrita ith symptoms of reddenii aerosol may cause irrita ith symptoms of reddenii reaction with symptoms tact with MDI can cause st at concentrations above tory tract (nose, throat, lungs educed lung function (breath nd to concentrations below posure well above the TLV emical or hypersensitivity prise can be delayed up to seve d in the animal study is not how it can reasonably be de assessing hazard. Based of alation toxicity is justified. e digestive tract. Sympton LD ₅₀ Oral (mg/kg) >5,000 (rat) >2,000 (rat) >2,000 (rat)	rbon monoxide, and/or nitr ng, tearing, stinging, and sw tion with symptoms of burn ng, itching, and swelling. Pe s of reddening, itching, swe discoloration. the TLV or PEL can irritate (burn s) causing runny nose, sore thra ing obstruction). Persons with the TLV or PEL can irritate (burn s) causing runny nose, sore thra ing obstruction). Persons with the TLV or PEL with similar sym or PEL may lead to bronchitis, eumonitis, with flu-like sympto areal hours after exposure. These representative of workplace ere expected to be used. Therefore n expert judgment and the we as may include abdominal parts LD ₅₀ Dermal (mg/kg) >5,000 (rabbit) >9,400 (rabbit)	velling. May cause temporary ing and tearing. ersons previously sensitized can lling, and rash. Cured material is bing sensation) the mucous bat, coughing, chest discomfort, a preexisting, nonspecific bronchial uptoms as well as asthma attack or pronchial spasm and pulmonary ms (e.g., fever, chills), has also been se effects are usually reversible. The nvironments, how the substance is the test result cannot be directly ight of the evidence, a modified in, nausea, vomiting, and diarrhea LC ₅₀ Inhalation (mg/L/4hrs) Not available 0.49 (rat) 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 w	vhich causes da	amage to	o the upper	respiratory tract.
CARCINOGENICITY:	to the most recent infe	ormation with NT s Group 3. Expos	P. The ma ure to lev	aterial is clas /els of MDI, s	al Toxic Program (NTP) Report of Carcinogens. Please refer sified on the International Agency for Research on Cancer ignificantly above the threshold limit value (0.005 ppm), was udy using rats.
MUTAGENICITY:	No known significa	nt effects or cri	tical haz	ards.	
TERATOGENICITY:	No known significa	nt effects or cri	tical haz	ards.	
FERTILITY EFFECTS:	No known significa	nt effects or cri	tical haz	ards.	
DEVELOPMENTAL EFFECTS:	No known significa	nt effects or cri	tical haz	ards.	
MEDICAL CONDITIONS AGGRAVATED BY OVER-EXPOSURE:	Existing respiratory	/pulmonary and	d skin co	onditions ma	ay be aggravated by overexposure.
SECTION 12: ECOLOGICAI	. INFORMATION	N			
ENVIRONMENTAL EFFECTS: SECTION 13: DISPOSAL CO	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.				
WASTE DISPOSAL: SECTION 14: TRANSPORT	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.				
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.				
and laws. Users, transporters, and	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		1	•		

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 listed.					
TSCA 5e:	No components lis	ted.				
TSCA 12b:	No components lis	ted.	-			
Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs):	COMPONENT CAS NUMBER CONCENTRAT					
	4,4'-Diphenylmetha	ane diisocyanate	101	-68-8	1-10%	
Clean Air Act - Ozone Depleting Substances (ODS):	This product does	not contain nor is it m	anufactured with o	zone depleting subs	tances.	
SARA 313 Form R - Reporting	СОМР	ONENT	CAS N	IUMBER	CONCENTRATION	
Requirements:	4,4'-Diphenylmetha	ane diisocyanate	101	-68-8	1-10%	
SARA 311/312 hazard identification:	Immediate (acute) I Delayed (chronic) h					
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	
STATE REGULATIONS:						
PENNSYLVANIA/NEW JERSEY/	COMPONENT		CAS NUMBER		CONCENTRATION	
MASSACHUSETTS - RTK:	2,4'-Diphenylmethane diisocyanate		5873-54-1		20-40%	
	4,4'-Diphenylmetha	ane diisocyanate	101-68-8		20-40%	
California Prop 65:	This product contai	ins less than 0.1% of a	chemical known to	the State of Californ	nia to cause cancer.	
CANADA						
WHMIS (Canada):	WHMIS Class D-1A: Material causing immediate and serious toxic effects (very toxic). WHMIS Class D-2A: Material causing other toxic effects (very toxic).					
CEPA DSL:	All components are listed or exempted.					
This product has been classified in the information required by the Cor			e Controlled Prod	ucts Regulations an	d the SDS contains all	
INTERNATIONAL LISTS:						
Australia inventory (AICS):	All components are listed or exempted.					
China inventory (IECSC):	All components are listed or exempted.					
Japan inventory:	All components are listed or exempted.					
Korea inventory:	All components are	All components are listed or exempted.				
New Zealand inventory of Chemicals (NZIoC):	All components are	All components are listed or exempted.				
Phillipines inventory (PICCS):	All components are	e listed or exempted.				

SECTION 16: OTHER INFORMATION



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.