



ISOCYANATE (MDI)<sup>™</sup> "A" Component Revised Date: 9/13/2018 Version: 6 SDS-314

## SECTION 1: IDENTIFICATION

PRODUCT NAME CAS NUMBER PRODUCT USE MANUFACTURER ADDRESS PHONE FAX EMERGENCY CONTACT TOLL FREE INTERNATIONAL FAX ISOCYANATE (MDI)<sup>™</sup> "A" Component Synergy Series Not available Polyurethane Foam 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

				IOLK				
		G	HS CLAS	SSIFICATION				
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 damag	ge/eye irritation	Category 2B	H320	Causes eye irritation.				
Acute toxicity inha	lation	Category 4	H332	Harmful if inhaled.				
Respiratory sensiti	zation	Category 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.				
exposure; respirate		Category 3	H335	May cause respiratory irritation.				
Specific target org repeated exposure		Category 1	H372	Causes damage to organs (respiratory tract) through prolonged or repeated exposure if inhaled.				
		PRECA	UTIONA	ARY STATEMENTS				
			PREV	'ENTION				
P260	Do not breathe dust/fume	/gas/mist/vapor	s/spray.					
P264	Wash hands thoroughly at	ter handling.						
P270	Do not eat, drink, or smok	e when using th	nis produ	ct.				
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 ven	tilation wear res	piratory	protection.				
			-	PONSE				
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.							
	1			DRAGE				
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			
Polymethylene polyphenylene	9016-87-9	30-70				
4,4'-Diphenylmethane diisocya	nate	101-68-8	30-70			
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 attent	on immediately.			
SKIN:	After contact with skin, wash immediately with plenty of warm, soapy water. Ren 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	rn oil may be more effec	tive than soap and			
INHALATION:	Move exposed person to fresh air. Get medical attention immediately. Tiritation or bronchospasm. If breathing is labored, oxygen should be a					
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 medi	ive anything by mouth to ical attention if symptom:	o an unconscious s appear.			
NOTES TO PHYSICIAN:	Symptomatic and supportive therapy as needed. Following severe exp monitored for 48 hours.	oosure, medical follow	v-up should be			
SECTION 5: FIRE FIGHT						
FLASH POINT:	Not available.					
HAZARDS WHEN ON FIRE OR NEAR FLAME:	Closed container may forcibly rupture under extreme heat or when cor (CO, 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 the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. If in a fire or heated, a pressure increase will occur and the container may rupture.					
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. PVC boots, gloves, safety helmet, and protective clothing should be worn.					
SECTION 6: ACCIDENTA	L RELEASE MEASURES					
ACCIDENTAL RELEASE MEASURES:	For major spills call <b>CHEMTREC</b> : Toll free <b>1-800-424-9300</b> for internat	ional call <b>1-703-527-3</b>	<b>887</b> .			
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 <sub>2</sub> 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

## EXPOSURE LIMITS:

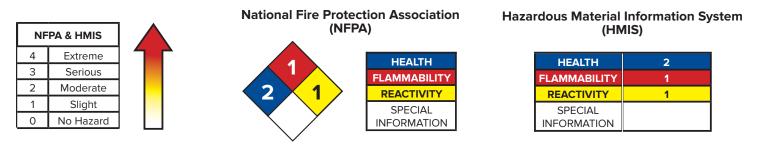
COMPONENT NAME	CAS NUMBER	EXPOSURE LIMITS				
Polymethylene polyphenylene isocyanate	9016-87-9	ALBERTA CANADA TWA TWA: 0.005 ppm TWA: 0.07 mg/m <sup>3</sup>				
4,4'-Diphenylmethane diisocyanate	101-68-8	ACGIH TLV TWA: 0.005 ppm 8 hour(s) OSHA PEL CEIL: 0.02 ppm CEIL: 0.2 mg/m <sup>3</sup> NIOSH REL CEIL: 0.2 mg/m <sup>3</sup> 10 minute(s) CEIL: 0.02 ppm 10 minute(s) TWA: 0.05 mg/m <sup>3</sup> 10 hour(s) TWA: 0.005 ppm 10 hour(s)				
ENGINEERING CONTROLS:	Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor, or mist, use process enclosures, local exhaust ventilation, and other engineering controls to keep worker exposure to airborne contaminants below any recommended 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	QUIPMENT (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	RTIES				
PHYSICAL STATE:	Liquid	lid FLASH POINT:		446°F (230°C)		
COLOR:	Dark brown	AUTO-IGN	ITION TEMPERATURE:	Not available		
ODOR:	Musty odor	DECOMPO	SITION TEMPERATURE:	> 400°F (204°C)		
ODOR THRESHOLD:	Not available	EXPLOSIV	E LIMITS:	Not explosive		
pH:	Not applicable	FLAMMAB	ILITY:	Not available		
WATER SOLUBILITY:	Not available	BOILING P	OINT:	Not available		
PARTITION COEFFICIENT:	Not available	BOILING R	ANGE:	> 400°F (204°C)		
SPECIFIC GRAVITY:	1.25±0.005 g/cc @ 77	°F (25°C) MELTING/F	REEZING POINT:	Not available		
VISCOSITY:	200±50 mPa.s @ 77°F	= (25°C) VAPOR PR	ESSURE:	10-4 mmHg @ 104°F (40°C)		
EVAPORATION RATE:	Not available	VAPOR DE	NSITY:	Not available		
VOC:	0 g/L	RELATIVE	DENSITY:	10.4±0.05 lbs/gal		
SECTION 10: STABILITY &						
STABILITY:	especially highly reac	tive toward a large numb	Isocyanates are very reac er of compounds with activ May make brittle many pla	e hydrogens, particularly at high		
INCOMPATIBILITY:	Water reacts slowly, forming carbon dioxide and an inert material comprised of polyureas which could rupture closed containers. 4, 4'- methylene dianiline is formed as in intermediate product in this reaction. At temperatures above 122°F (50°C), the reaction becomes progressively more vigorous. Amines, alcohols, acids, and bases may react violently with generation of heat. Metal compounds (e.g. organotin catalysts) may polymerize with generation of heat and pressure.					
HAZARDOUS REACTION:	Polymeric MDI may undergo uncontrolled exothermic polymerization upon contact with incompatible materials or if heated above 347°F-399°F (175-204°C). The resulting pressure build-up could rupture closed containers. May cause some corrosion to copper alloys and aluminum.					
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 conditions of heat, moisture, and direct sunlight.					
HAZARDOUS DECOMPOSITION:	May produce toxic fumes of carbon dioxide, carbon monoxide, and/or nitrogen oxides when near heat source/flame.					
SECTION 11: TOXICOLOG	SECTION 11: TOXICOLOGY INFORMATION					
ACUTE HEALTH EFFECTS:						
EYE CONTACT:	Causes serious eye irritation. Contact with liquid, mist and aerosols may cause irritation with redness, swelling, pain, and watering of the eyes.					
SKIN CONTACT:	Causes skin irritation and may cause allergic skin reaction. Polymeric MDI can cause mild irritation. Skin sensitization, resulting in dermatitis, may occur in some individuals. Application of single doses of 2.5, 3.9, 6.0 and 9.4 mg/kg Polymeric MDI to abraded skin of rabbits, under a cover for 24 hours, caused only minor, local, reversible skin changes.					
INHALATION:	May cause allergy or asthma symptoms or breathing difficulties if inhaled. Polymeric MDI has an extremely low vapor pressure and it is difficult to achieve vapor concentrations necessary for inhalation toxicity testing. Symptoms of severe irritation and deaths occurred at 13.6 mg/m <sup>3</sup> . Less severe irritation and no deaths occurred at 4.9 mg/m3. There were no visible effects at 2.2 mg/m <sup>3</sup> .					
INGESTION:	Swallowing may result in irritation and corrosion of the mouth, throat, and digestive tract.					
ACUTE TOXICITY:						
COMPONENT NAME	CAS NUMBER	LD <sub>50</sub> Oral (mg/kg)	LD <sub>50</sub> Dermal (mg/kg)	LC <sub>50</sub> Inhalation (mg/L/4hrs)		
Polymethylene polyphenylene	9016-87-9	>10,000 (rat)	>6,200 (rabbit)	0.49 (rat)		
isocyanate				· · ·		

POTENTIAL CHRONIC EFFECTS:							
CHRONIC EFFECTS:	Contains material that can cause target organ damage. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.						
TARGET ORGANS:	Long-term, low-level exposure my cause severe, permanent respiratory impairment.						
	This material does not contain any component that is considered a human carcinogen by the International Agency for Research on Cancer (IARC), American Conference of Governmental Industrial Hygienists (ACGIH), OSHA or the National Toxicology Program (NTP). IARC has concluded that polymeric MDI and MDI are not classifiable as to their carcinogenicity to humans (Group 3). Although lifetime inhalation of PMDI aerosols by rats resulted in a small number of benign adenomas, they are considered to be of unlikely relevance to occupational exposures. Such aerosols are not encountered outside of the experimental laboratory.						
MUTAGENICITY:	No known significa	nt effects or crit	ical haz	ards.			
TERATOGENICITY:	No known significa	nt effects or crit	ical haz	ards.			
FERTILITY EFFECTS:	No known significa	nt effects or crit	ical haz	ards.			
DEVELOPMENTAL EFFECTS:	No known significa	nt effects or crit	ical haz	ards.			
MEDICAL CONDITIONS AGGRAVATED BY OVER-EXPOSURE:	Existing respiratory	/pulmonary and	l skin co	onditions ma	ay be aggravated by overexposure.		
SECTION 12: ECOLOGICAL	INFORMATION	J					
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 CO	ONSIDERATION	l					
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.						
<b>SECTION 14: TRANSPORT</b>	N 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.						
	all other applicable	entities must re	eview, fo	llow, and a	ndled in accordance with all precautions, regulations, pply any and all necessary precautions and al environments.		
REGULATORY INFORMATION	UN NUMBER	CLASSES	PG*	LABEL	ADDITIONAL INFORMATION		
DOT Classification	NA3082	9	111		<b>Reportable quantity 5,000 lbs. (2,268 kg)</b> Single containers less than 5,000 lbs. are not regulated.		
*PG: Packaging group							

SECTION 15: REGULATORY II	NFORMATION					
U.S. Federal Regulations						
TSCA 8b Inventory:	All components are listed on the TSCA inventory or are exempt.					
TSCA 5a (2):	No components listed	l.				
TSCA 5e:	No components listed	l.				
TSCA 12b:	No components listed	d.				
Clean Air Act Section 112(b)	СОМРО	NENT	CAS NUMBER		CONCENTRATION	
Hazardous Air Pollutants (HAPs):	4,4'-Diphenylmethane	e diisocyanate	101-68-8		30-70%	
Clean Air Act - Ozone Depleting Substances (ODS):	This product does no	t contain nor is it m	anufactured with c	ozone depleting su	bstances.	
SARA 313 Form R - Reporting	СОМРО	NENT	CAS N	UMBER	CONCENTRATION	
Requirements:	Polymethylene polypl isocyanate	henylene	9016	5-87-9	30-70%	
	4,4'-Diphenylmethane	e diisocyanate	101-	68-8	30-70%	
SARA 311/312 hazard identification:	Not classified.					
CERCLA Hazardous substances:	•					
Component	Concentration	Section 302	Section 313	Section 304	Reportable Quantity	
Polymethylene polyphenylene isocyanate	30-70%	Not listed	Listed	Not listed	Not available	
4,4'-Diphenylmethane diisocyanate	30-70%	Not listed	Listed	Not listed	5,000 lbs	
STATE REGULATIONS:						
PENNSYLVANIA/NEW JERSEY/	COMPONENT		CAS NUMBER		CONCENTRATION	
MASSACHUSETTS - RTK:	Polymethylene polyphenylene isocyanate		9016-87-9		30-70%	
	4,4'-Diphenylmethane diisocyanate		101-68-8		30-70%	
California Prop 65:	This product contains no listed substances known to the State of California to cause cancer, birth defects, or other reproductive harm, at levels which would require a warning under the statute.					
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 a the information required by the Cont			Controlled Produ	icts Regulations a	nd the SDS contains al	
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 li	sted or exempted.				
Korea inventory:	All components are listed or exempted.					
New Zealand inventory of Chemicals (NZIoC):	All components are listed or exempted.					
Phillipines inventory (PICCS):	All components are li	stad or avampted				

## **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.