Material Safety Data Sheet

Original Date: 06/24/1993
Revision Date: 11/03/2003

BASF CORPORATION
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EMERGENCY TELEPHONE: (800) 424-9300 (CHEMTREC)
(800) 832-HELP (BASF Hotline)
BOTH NUMBERS ARE AVAILABLE DAYS, NIGHTS, WEEKENDS, & HOLIDAYS.

SECTION 1 - PRODUCT INFORMATION

AUTOFROTH®9300A ISOCYANATE

Product ID: NPU 552779
Common Chemical Name:
POLYMETHYLENE POLYPHENYLISOCYANATE
Synonyms:
PMDI
Molecular Formula:
MIXTURE
Chemical Family: Aromatic Isocyanates
Molecular Wt.: NOT ESTABLISHED

SECTION 2 - INGREDIENTS

Chemical Name:			CAS	Amount
4,4' DIPHENYLMETHANE DIISOCYANATE			101-68-8	45.0 %
ACGIH TLV	TWA	0.005 PPM		
OSHA PEL	CEIL	0.02 PPM		
POLYMERIC MDI			9016-87-9	> 50.0 %
PEL/TLV NOT ESTABLISHED				
MDI MIXED ISOMERS			26447-40-5	< 3.0 %
PEL/TLV NOT ESTABLISHED				

For TSCA Inventory Purposes, this product is 100% CAS #9016-87-9

SECTION 3 - HAZARDS IDENTIFICATION

Emergency Overview
Color: Brown
Form/Appearance: Liquid
Odor: Aromatic
WARNING STATEMENT:
DANGER: COMPRESSED GAS
CONTAINS DIPHENYLMETHANE DIISOCYANATE (CAS NO. 101-68-8).
INHALATION OF MDI MISTS OR VAPORS MAY CAUSE RESPIRATORY IRRITATION, BREATHLESSNESS, CHEST DISCOMFORT AND REDUCED PULMONARY FUNCTION. OVEREXPOSURE WELL ABOVE THE PEL MAY RESULT IN BRONCHITIS, BRONCHIAL SPASMS AND PULMONARY EDEMA. LONG-TERM EXPOSURE TO ISOCYANATES HAS BEEN REPORTED TO CAUSE LUNG DAMAGE, INCLUDING REDUCED LUNG FUNCTION

SECTION 3 - HAZARDS IDENTIFICATION (cont)

WHICH MAY BE PERMANENT. ACUTE OR CHRONIC OVEREXPOSURE TO ISOCYANATES MAY CAUSE SENSITIZATION IN SOME INDIVIDUALS, RESULTING IN ALLERGIC RESPIRATORY REACTIONS INCLUDING WHEEZING, SHORTNESS OF BREATH AND DIFFICULTY BREATHING.

Potential Health Effects

Primary Routes of Exposure:

Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquified gases.

Acute Overexposure Effects:

Eye contact with isocyanates may result in conjunctival irritation and mild corneal opacity. Skin contact may result in dermatitis, either irritative or allergic.

Inhalation of MDI vapors may cause irritation of the mucous membranes of the nose, throat or trachea, breathlessness, chest discomfort, difficult breathing and reduced pulmonary function. Airborne overexposure well above the PEL may result additionally in eye irritation, headache, chemical bronchitis, asthma-like findings or pulmonary edema. Isocyanates have also been reported to cause hypersensitivity pneumonitis, which is characterized by flu-like symptoms, the onset of which may be delayed. Gastrointestinal symptoms include nausea, vomiting and abdominal pain.

Chronic Overexposure Effects:

Results from a lifetime inhalation study in rats indicate that MDI aerosol was carcinogenic at 6 mg/m3, the highest dose tested. This is well above the recommended TLV of 5 ppb (0.05 mg/m3). Only irritation was noted at the lower concentration of 0.2 and 1 mg/m3. No birth defects or teratogenic effects were reported in a teratology study with rats exposed to 1, 4, and 12 mg/m3 polymeric MDI for 6 hr/day on days 6-15 of gestation. Embryotoxicity and fetotoxicity was reported at the top dose in the presence of maternal toxicity.

As a result of previous repeated overexposures or a single large dose, certain individuals will develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the PEL/TLV. These symptoms, which include chest tightness, wheezing, cough, shortness of breath, or asthmatic attack, could be immediate or delayed up to several hours after exposure. 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. Chronic overexposure to isocyanates has also been reported to cause lung damage, including a decrease in lung function, which may be permanent. Sensitization may be either temporary or permanent. Prolonged contact can cause reddening, swelling, rash, scaling, or blistering. In those who have developed a skin sensitization, these symptoms can develop as a result of contact with very small amounts of liquid material, or even as a result of vapor-only exposure.

SECTION 3 - HAZARDS IDENTIFICATION (cont)

First Aid Procedures - Aggravated Medical Conditions:
Individuals who are sensitized to isocyanates and those with pre-exisiting lung diseases or conditions, including non-specific bronchial hyperreactivity or asthma, must avoid all exposure to isocyanates.

SECTION 4 - FIRST AID MEASURES

First Aid Procedures - Skin:
Wash affected areas with soap and water. Remove and launder contaminated clothing before reuse. Get immediate medical attention.

First Aid Procedures - Eyes:
Immediately rinse eyes with running water for 15 minutes. Get immediate medical attention.

First Aid Procedures - Ingestion:
If swallowed, dilute with water. DO NOT INDUCE VOMITING. Never give fluids or induce vomiting if the victim is unconscious or having convulsions. Get immediate medical attention.

First Aid Procedures - Inhalation:
Move to fresh air. Aid in breathing, if necessary, and get immediate medical attention.

First Aid Procedures - Notes to Physicians:
There is no specific antidote to counteract the effects of MDI. Care should be supportive and treatment should be based on the judgement of the physician in response to the reaction of the patient.

First Aid Procedures - Aggravated Medical Conditions:
Individuals who are sensitized to isocyanates and those with pre-exisiting lung diseases or conditions, including non-specific bronchial hyperreactivity or asthma, must avoid all exposure to isocyanates.

First Aid Procedures - Special Precautions:
None

Other First Aid Procedures:
Medical supervision of all employees who handle or come into contact with MDI is recommended. Preemployment and periodic medical examinations with respiratory function tests (FEV, FVC as a minimum are suggested). Persons with asthmatic conditions chronic bronchitis, other chronic respiratory diseases, recurrent eczema or pulmonary sensitization should be excluded from working with MDI. Once a person is diagnosed as having pulmonary sensitization (allergic asthma) to MDI, further exposure is not permissible.

SECTION 5 - FIRE FIGHTING MEASURES

	Typical	Low/High	Deg.	Method
Flash Point:	220		C	OPEN CUP
Autoignition:	NOT AVAILABLE			

Extinguishing Media:
Use water, dry extinguishing media, carbon dioxide (CO2) or foam.

Fire Fighting Procedures:
Personnel engaged in fighting isocyanate fires must be protected

SECTION 5 - FIRE FIGHTING MEASURES (cont)

against nitrogen dioxide fumes as well as isocyanate vapors. Firefighters must wear self-contained breathing apparatus and turnout gear.

Unusual Hazards:

Reacts exothermically with water to form carbon dioxide gas, which may create excessive pressure in closed containers. Reacts exothermically with polyol and alcohols. Reacts exothermically and possibly violently with acids, amines and alkaline solutions.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

General:

General:

Evacuate and ventilate spill area, dike spill to prevent entry into water system, wear full protective equipment including respiratory equipment during clean up.

MAJOR SPILL:

Call BASF Corporation @ 1-800-832-4357. If transportation spill involved, call CHEMTREC @ 1-800-424-9300. If temporary control of isocyanate vapor is required a blanket of protein foam or other suitable foam (available at most fire departments), may be placed over the spill. Transfer as much liquid as possible via pump or vacuum device into closed but not sealed containers for disposal.

MINOR SPILL:

Absorb the isocyanate with an acceptable absorbent, see 40 CFR sections 260, 264, and 265 for further information. Shovel into open containers. Do not make pressure tight. Move to a well ventilated area (outside) and neutralize with a mixture of 90% water, 3-8% ammonia and 2-7% detergent. Add at 10 to 1 ratio. Let stand for 48 hours letting evolved CO2 escape. Proceed with final clean up of spill area.

CLEAN UP:

Decontaminate spill area using neutralizing solution and let stand for at least 10 minutes.

SECTION 7 - STORAGE AND HANDLING

General:

Keep containers closed and store in well-ventilated area at 60-80 deg. F. Outage of container should be filled with dry inert gas at atmospheric pressure to avoid reaction with moisture. Contamination by moisture or basic compounds can cause dangerous pressure buildup in closed containers.

Do not apply heat to any cylinder or tank by direct contact (band heaters, etc.). Use indirect heating methods only to avoid damage to the chemicals and to avoid sudden discharge via the pressure relief valve. Do not store tanks in direct sunlight, but rather in a cool, well ventilated area.

Other Storage and Handling Data:

INCOMPATIBLE MATERIALS FOR PACKAGING: Stored and transported in a cylinder under pressure. Must not be repacked by the customer.

Do not pressurize any tank with any gas other than dry nitrogen to prevent any reaction with the chemicals.

SECTION 8 - PERSONAL PROTECTION

Clothing:
Rubber gloves, coveralls, hard hat, boots and rubber apron to avoid skin contact. Contaminated equipment or clothing should be cleaned after each use or disposed of.

Eyes:
Wear fitted chemical goggles or face shield and safety glasses.

Respiration:
For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), select and use an appropriate positive pressure air supplying respirator (airline or self-contained breathing apparatus). When atmospheric levels may exceed the occupational exposure limit (PEL or TLV) approved air-purifying respirators equipped with an organic vapor sorbent and particulate filter can be used as long as appropriate precautions and change out schedules are in place.

Ventilation:
Use local exhaust as necessary to maintain P.E.L.

Explosion Proofing:
None required.

Other Personal Protection Data:
Compatible materials for response to this material are neoprene, chlorinated polyethylene, polyvinyl chloride, butyl rubber, viton polyvinyl alcohol and saranex.
Eyewash fountains and safety showers must be easily accessible.
Maintain work area below P.E.L.

SECTION 9 - PHYSICAL PROPERTIES

Color:	Brown					
Form/Appearance:	Liquid					
Odor:	Aromatic					
Odor Intensity:	Slight					
	Typical	Low/High	U.O.M.			
Specific Gravity:	1.22			@	25	DEG C
Viscosity:	200		CENTIPOISE	@	25	DEG.
pH:	NOT AVAILABLE					
	Typical	Low/High	Deg.	@	Pressure	
Boiling Pt:	200		C	5	MM HG	
Freezing Pt:	NOT AVAILABLE					
Decomp. Tmp:	NOT AVAILABLE					

Solubility in Water Description: Water reactive
Vapor Pressure: .00001 mm Hg @ 25 Deg. C.

SECTION 10 - STABILITY AND REACTIVITY

Stability Data:
Stable.

SECTION 10 - STABILITY AND REACTIVITY (cont)

Incompatability:
Water, alcohols and strong bases.
Conditions/Hazards to Avoid:
Reaction with moisture may form CO2.
Hazardous Decomposition/Polymerization:
Hazardous decomposition products: CO, NOx, HCN and MDI vapors.
Polymerization: May occur.
Corrosive Properties:
Not corrosive.
Oxidizer Properties:
Not an oxidizer
Other Reactivity Data:
Hazardous polymerization may occur. Avoid contamination with moisture and other products that react with isocyanates.
Contact with certain rubbers and plastics can cause imbrittlement of the material with subsequent loss in strength.

SECTION 11 - TOXICOLOGICAL INFORMATION

Toxicology Test Data:
Rat, Oral LD50 - > 10,000 MG/KG
Practically Nontoxic
Mouse, Acute Intraperitoneal LD50 - 100 MG/KG
Toxic
Rat, 1 hr Inhalation LC50 - >2240 MG/CU. M
Moderately Toxic

SECTION 12 - ECOLOGICAL INFORMATION

Environmental Toxicity Test Data:
Daphnia Magna, 24 hr EC/LC50 - > 500 MG/L
Practically Nontoxic
Zebra Fish, Static 24 hr LC50 - > 500 MG/L
Practically Nontoxic

SECTION 13 - DISPOSAL CONSIDERATION

Waste Disposal:
Incinerate or landfill in a licensed facility. Do not discharge into waterways or sewer systems.
Container Disposal:
Pressurized cylinders should be returned to BASF for reconditioning and reuse. If cylinder is damaged, please contact BASF for assistance. Empty cylinders (all sizes) must be depressurized before they are transported. This depressurization will not relieve all pressure. Use caution if servicing this cylinder. Always seal valves for return.
Steel drums must be emptied (as defined by RCRA, Section 261.7 or state regulations that may be more stringent) and can be sent to a licensed drum reconditioner for reuse, a scrap metal dealer, or an approved landfill. Check with reconditioner to determine if they require them to be decontaminated. Drums destined for a scrap dealer or landfill must be decontaminated and punctured or crushed to prevent reuse.

SECTION 14 - TRANSPORTATION INFORMATION

DOT Proper Shipping Name:
SEE BELOW
DOT Technical Name:
SEE BELOW
DOT Primary Hazard Class:
SEE BELOW
DOT Secondary Hazard Class:
SEE BELOW
DOT Label Required:
SEE BELOW
DOT Placard Required:
SEE BELOW
DOT Poison Constituent:
SEE BELOW
BASF Commodity Codes: UN/NA Code: E/R Guide:
Bill of Lading Description:
COMPRESSED GAS NOS, (NITROGEN), 2.2, UN1956
> 11,111 LBS PER CONTAINER ADD : RQ, (MDI)

SECTION 15 - REGULATORY INFORMATION

TSCA Inventory Status
Listed on Inventory: YES
SARA - 313 Listed Chemicals:
CAS: 28 AMOUNT: 100.0 %
NAME: DIIOSCYANATES

RCRA Haz. Waste No .: NO
CERCLA: YES Reportable Qty.: (If YES)
XXXXXXX XXXXXXXXXXXXX 5000 LBS

SECTION 16 - OTHER INFORMATION

Hazard Ratings:
BASF currently uses the National Paint & Coating Association (NPCA) rating system. The use of an asterisk (*) in the HMIS rating indicates the potential for chronic health effects.

	Health:	Fire:	Reactivity:	Special:
HMIS	2	1	1	NA

This product is hazardous or contains components which are hazardous according to the OSHA Hazard Communication Standard.
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SECTION 16 - OTHER INFORMATION (cont)

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END OF DATA SHEET