

Material Safety Data Sheet

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BASF CORPORATION
1609 BIDDLE AVENUE

WYANDOTTE, MI 48192

(734) 324-5244

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-existing 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-existing 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)

Incompatibility:

Water, alcohols and strong bases.

Conditions/Hazards to Avoid:

Reaction with moisture may form CO₂.

Hazardous Decomposition/Polymerization:

Hazardous decomposition products: CO, NO_x, 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 embrittlement of the material with subsequent loss in strength.

SECTION 11 - TOXICOLOGICAL INFORMATION

Toxicology Test Data:

Rat, 4 hr Inhalation LC₅₀ - AEROSOL 490 MG/CU. M

Highly Toxic

Rat, Oral LD₅₀ - > 10,000 MG/KG

Practically Nontoxic

Rat, Inhalation Oncogenicity Study - @ ~0.2, 1, 6 MG/CU. M

URT irritant; Carcinogenic @ 6 mg/m³

Rat, 4 hr Inhalation LC₅₀ - VAPOR 11 MG/L

Toxic

SECTION 12 - ECOLOGICAL INFORMATION

Environmental Toxicity Test Data:

REPLACE CODE WITH ADE24 - > 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

SECTION 13 - DISPOSAL CONSIDERATION (cont)

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 XXXXXXXXXXXXXXXX 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.

"IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE, IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU MAKE TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR

SECTION 16 - OTHER INFORMATION (cont)

PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY BASF HEREUNDER ARE GIVEN GRATIS AND BASF ASSUMES NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK". BASF CORPORATION WILL NOT MAKE ITS PRODUCTS AVAILABLE TO CUSTOMERS FOR USE IN THE MANUFACTURE OF MEDICAL DEVICES WHICH ARE INTENDED FOR PERMANENT IMPLANTATION IN THE HUMAN BODY OR IN PERMANENT CONTACT WITH INTERNAL BODILY TISSUES OR FLUIDS. WE AT BASF TAKE PRIDE IN OUR PRODUCTS, AND OUR TRADITION OF DEVELOPING INNOVATIVE APPLICATIONS IN PARTNERSHIP WITH OUR CUSTOMERS. HOWEVER, THE POSSIBILITY OF BEING REQUIRED TO RESPOND TO UNFOUNDED LITIGATION AND/OR CLAIMS ARISING OUT OF CONCERNS RELATING TO SUCH USE PRESENTS AN UNACCEPTABLE RISK TO THE COMPANY.

END OF DATA SHEET

Material Safety Data Sheet

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WYANDOTTE, MI 48192

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SECTION 1 - PRODUCT INFORMATION

AUTOFROTH@102-B-9453 RESIN

Product ID: NPU 554238

Common Chemical Name:

URETHANE SYSTEM RESIN COMPONENT

Synonyms:

NONE

Molecular Formula:

MIXTURE

Chemical Family: Not Applicable

Molecular Wt.: NOT ESTABLISHED

SECTION 2 - INGREDIENTS

Chemical Name:	CAS	Amount
SURFACTANT	PROPRIETARY	< 5.0 %
PEL/TLV NOT ESTABLISHED		
CATALYST	PROPRIETARY	< 2.0 %
PEL/TLV NOT ESTABLISHED		
BUTYL BENZYL PHTHALATE	85-68-7	< 10.0 %
PEL/TLV NOT ESTABLISHED		
POLYOL	PROPRIETARY	> 45.0 %
PEL/TLV NOT ESTABLISHED		
FLAME RETARDANT	PROPRIETARY	> 20.0 %
PEL/TLV NOT ESTABLISHED		
CHLORODIFLUOROMETHANE (HCFC-22)	75-45-6	17.0 %
ACGIH TLV	TWA 1000 PPM	

SECTION 3 - HAZARDS IDENTIFICATION

Emergency Overview

Color: Dark Brown

Form/Appearance: Liquid

Odor: Amine

WARNING STATEMENT:

DANGER: COMPRESSED GAS

CONTACT WITH THE EYES AND SKIN MAY RESULT IN IRRITATION. INHALATION

OF THE VAPORS OR MISTS MAY RESULT IN RESPIRATORY IRRITATION.

INGESTION MAY RESULT IN GASTRIC DISTURBANCES.

SECTION 3 - HAZARDS IDENTIFICATION (cont)

THE PLASTICIZER CAUSED LIVER, KIDNEY, BONE MARROW AND TESTICULAR CHANGES IN FEEDING STUDIES WITH RATS. INHALATION STUDIES RESULTED IN ATROPHY OF THE SPLEEN AND REPRODUCTIVE ORGANS. EXPOSURES HAVE BEEN KNOWN TO PRODUCE CENTRAL AND PERIPHERAL NEUROPATHY IN ANIMALS. PREGNANT RATS FED HIGH DOSES PRODUCED EMBRYOFETAL LETHALITY AND TERATOGENICITY.

INHALATION OF THE VAPORS SHOULD BE AVOIDED. AT LEVELS ABOVE THE P.E.L., THE FLUOROCARBON COMPONENT ACTS AS A WEAK NARCOTIC. OVEREXPOSURE CAUSES TREMORS, CONFUSION, IRRITATION AND POSSIBLE CARDIAC SENSITIZATION.

CONTACT WITH THE EYES AND SKIN MAY CAUSE IRRITATION. INHALATION MAY RESULT IN IRRITATION.

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:

Contact with the eyes and skin may result in irritation. Ingestion of plasticizer may result in G.I. disturbances. Changes in the liver and testes were observed in male rats fed 480 and 1600 mg/kg/day for 14 days. Another 14 day feeding study resulted in enlarged liver and kidneys; bone marrow changes; and testicular changes in male rats. Exposures have also been known to produce central and peripheral neuropathy in animals. High dietary administration of BBP to pregnant rats during first and second half of pregnancy up to a dose of 2% in diet has been shown to produce embryofetal lethality and teratogenicity.

At levels above the recommended exposure limit, the fluorocarbon acts as a weak narcotic. Acute overexposure causes tremors, confusion, irritation, suffocation, and may result in cardiac sensitization. Inhalation of the vapors or mists may result in respiratory irritation. Ingestion may result in gastric disturbances.

Chronic Overexposure Effects:

An inhalation study with plasticizer in rats resulted in atrophy of the spleen and reproductive organs. In a National Toxicology Program (NTP) feeding study, rats fed plasticizer at 0, 6000 and 12000 ppm, did not exhibit any adverse effects; however, an increased incidence of myelomonocytic leukemia was observed in female rats at 12000 ppm. NTP concluded that plasticizer is probably carcinogenic for the female rats.

Based on animal studies and human experience, the organophosphorus flame retardant does not affect nervous system function.

First Aid Procedures - Aggravated Medical Conditions:

Individuals with preexisting diseases of the central nervous system, respiratory or cardiovascular system may have increased susceptibility to excessive exposures.

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 and immediately 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:

None known.

First Aid Procedures - Aggravated Medical Conditions:

Individuals with preexisting diseases of the central nervous system, respiratory or cardiovascular system may have increased susceptibility to excessive exposures.

First Aid Procedures - Special Precautions:

None

SECTION 5 - FIRE FIGHTING MEASURES

	Typical	Low/High	Deg.	Method
Flash Point:	NOT AVAILABLE			
Autoignition:	NOT AVAILABLE			
Extinguishing Media:				

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

Fire Fighting Procedures:

Firefighters should be equipped with self-contained breathing apparatus and turn out gear.

Unusual Hazards:

There are no known unusual fire or explosion hazards.

Flash Point: Fluorocarbon masks end point

SECTION 6 - ACCIDENTAL RELEASE MEASURES

General:

Spills should be contained, solidified and placed in suitable containers for disposal in a licensed facility. This material is regulated by CERCLA ("Superfund").

SECTION 7 - STORAGE AND HANDLING

General:

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.

Store in a ventilated storage area between 70-80F. Avoid excessive

SECTION 7 - STORAGE AND HANDLING (cont)

temperatures, low or high. Avoid moisture.

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:

Gloves, coveralls, apron, boots as necessary to prevent skin contact.

Eyes:

Chemical goggles; also wear a face shield if splashing hazard exists.

Respiration:

Approved organic vapor mist respirator as necessary.

Ventilation:

Use local exhaust to control vapors/mists.

Explosion Proofing:

None required.

Other Personal Protection Data:

Avoid contact with skin as required by good normal hygiene practices.

SECTION 9 - PHYSICAL PROPERTIES

Color:	Dark Brown				
Form/Appearance:	Liquid				
Odor:	Amine				
Odor Intensity:	Moderate				
	Typical	Low/High	U.O.M.		
Specific Gravity:	NOT AVAILABLE				
Bulk Density:	10.37		LB/GAL		
Viscosity:	300		CENTIPOISE @	25	DEG.
pH:	NOT AVAILABLE				
	Typical	Low/High	Deg.	@	Pressure
Boiling Pt:	NOT AVAILABLE				
Freezing Pt:	NOT AVAILABLE				
Decomp. Tmp:	NOT AVAILABLE				
Solubility in Water Description:	Slightly Soluble				
pH:	Slightly basic				

SECTION 10 - STABILITY AND REACTIVITY

Stability Data:

Stable

Incompatibility:

Avoid water; addition of water will change the solubility of the resin and can cause release of HCFC-22. In a closed system, pressure build-up may cause a rupture in the absence of relief devices.

SECTION 10 - STABILITY AND REACTIVITY (cont)

Conditions/Hazards to Avoid:

Exposure to moisture and temperatures > 80F.

Hazardous Decomposition/Polymerization:

HCl, HF (from HCFC-22), CO, CO2, and HCN (from AN).

Corrosive Properties:

Not corrosive.

Oxidizer Properties:

Not an oxidizer

Other Reactivity Data:

None known.

SECTION 11 - TOXICOLOGICAL INFORMATION

No applicable data for this section.

SECTION 12 - ECOLOGICAL INFORMATION

No applicable data for this section.

SECTION 13 - DISPOSAL CONSIDERATION

Waste Disposal:

Incinerate or bury in a RCRA licensed facility. Do not discharge into waterways or sewer systems without proper authority.

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.

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, CHLORODIFLUOROMETHANE), 2.2, UN1956
BULK CONTAINERS RQ, COMPRESSED GAS, NOS, (NITROGEN, CHLORODIFLUOROMETHANE), 2.2, UN1956, MARINE POLLUTANT, (BUTYL BENZYL PHTHALATE)

SECTION 15 - REGULATORY INFORMATION

TSCA Inventory Status

Listed on Inventory: YES

SARA - 313 Listed Chemicals:

CAS: 75-45-6 AMOUNT: 17.0 %
NAME: CHLORODIFLUOROMETHANE (HCFC-22)

RCRA Haz. Waste No .: NA

CERCLA: YES Reportable Qty.: (If YES)

XXXXXXXXXXXXXXXXXXXX 100 LBS

This product contains one or more ingredients which are known to the State of California to cause cancer, birth defects, or other reproductive harm.

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 1 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)

END OF DATA SHEET

Material Safety Data Sheet

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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@91-B-9592 RESIN

Product ID: NPU 555823

Common Chemical Name:

URETHANE SYSTEM RESIN COMPONENT

Synonyms:

NONE

Molecular Formula:

MIXTURE

Chemical Family: Not Applicable

Molecular Wt.: NOT ESTABLISHED

SECTION 2 - INGREDIENTS

Chemical Name:	CAS	Amount
CATALYST	PROPRIETARY	< 1.0 %
PEL/TLV NOT ESTABLISHED		
SURFACTANT	PROPRIETARY	< 2.0 %
PEL/TLV NOT ESTABLISHED		
POLYOL	PROPRIETARY	< 85.0 %
PEL/TLV NOT ESTABLISHED		
FLAME RETARDANT	PROPRIETARY	< 10.0 %
PEL/TLV NOT ESTABLISHED		
TERTRAFLUOROETHANE (HFC-134a)	811-97-2	< 10.0 %
PEL/TLV NOT ESTABLISHED		

SECTION 3 - HAZARDS IDENTIFICATION

Emergency Overview

Color: Amber

Form/Appearance: Liquid

Odor: Aromatic

WARNING STATEMENT:

DANGER: COMPRESSED GAS

INHALATION OF THE VAPORS SHOULD BE AVOIDED. AT LEVELS ABOVE THE P.E.L., THE FLUOROCARBON COMPONENT ACTS AS A WEAK NARCOTIC. OVEREXPOSURE CAUSES TREMORS, CONFUSION, IRRITATION AND POSSIBLE CARDIAC SENSITIZATION.

BASED ON ANIMAL STUDIES AND HUMAN EXPERIENCE, THE ORGANOPHOSPHORUS

SECTION 3 - HAZARDS IDENTIFICATION (cont)

FLAME RETARDANT DOES NOT AFFECT NERVOUS SYSTEM FUNCTION.
CONTACT WITH THE EYES AND SKIN MAY CAUSE IRRITATION. INHALATION MAY
RESULT IN IRRITATION.

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:

Contact with the eyes and skin may result in irritation. At levels above the recommended exposure limit, the fluorocarbon acts as a weak narcotic. Acute overexposure causes tremors, confusion, irritation, suffocation, and may result in cardiac sensitization. Inhalation may result in respiratory irritation. Ingestion may result in gastric disturbances.

Chronic Overexposure Effects:

There are no known chronic effects associated with this material. Based on animal studies and human experience, the organophosphorus flame retardant does not affect nervous system function.

First Aid Procedures - Aggravated Medical Conditions:

Individuals with preexisting diseases of the central nervous system, respiratory or cardiovascular system may have increased susceptibility to excessive exposures.

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 and immediately 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:

Because of possible disturbances of cardiac rhythm, catecholamine drugs such as epinephrine should be considered only as a last resort in a life-threatening emergency.

First Aid Procedures - Aggravated Medical Conditions:

Individuals with preexisting diseases of the central nervous system, respiratory or cardiovascular system may have increased susceptibility to excessive exposures.

First Aid Procedures - Special Precautions:

None

SECTION 5 - FIRE FIGHTING MEASURES

	Typical	Low/High	Deg.	Method
Flash Point:	~ 200			C TAG OPEN CUP
Autoignition:	NOT AVAILABLE			
Extinguishing Media:				

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

Fire Fighting Procedures:

Firefighters should be equipped with self-contained breathing apparatus and turn out gear.

Unusual Hazards:

There are no known unusual fire or explosion hazards.
Blowing Agent masks end pt.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

General:

Spills should be contained, solidified and placed in suitable containers for disposal at a licensed facility.

SECTION 7 - STORAGE AND HANDLING

General:

Store in a ventilated storage area between 70-80F. Avoid excessive temperatures, low or high. Avoid moisture.

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:

Gloves, coveralls, apron, boots as necessary to prevent skin contact.

Eyes:

Chemical goggles; also wear a face shield if splashing hazard exists.

Respiration:

Approved organic vapor mist respirator as necessary.

Ventilation:

Use local exhaust to control vapors/mists.

Explosion Proofing:

None required.

Other Personal Protection Data:

Avoid contact with skin as required by good normal hygiene practices.

SECTION 9 - PHYSICAL PROPERTIES

Color:	Amber		
Form/Appearance:	Liquid		
Odor:	Aromatic		
Odor Intensity:	Slight		
	Typical	Low/High	U.O.M.
Specific Gravity:	NOT AVAILABLE		

SECTION 9 - PHYSICAL PROPERTIES (cont)

	Typical	Low/High	U.O.M.		
Bulk Density:	9.16		LB/GAL		
Viscosity:	500		CENTIPOISE @	25	DEG.
pH:	NOT AVAILABLE				
	Typical	Low/High	Deg.	@	Pressure
Boiling Pt:	NOT AVAILABLE				
Freezing Pt:	NOT AVAILABLE				
Decomp. Tmp:	NOT AVAILABLE				
Solubility in Water Description:	Slightly Soluble				
pH: Basic					

SECTION 10 - STABILITY AND REACTIVITY

Stability Data:

Stable

Incompatability:

Avoid moisture to protect product quality.

Conditions/Hazards to Avoid:

Exposure to moisture and temperatures > 80F.

Hazardous Decomposition/Polymerization:

HAZARDOUS DECOMPOSTION PRODUCTS: Hydrofluorocarbons (HFC) can decompose by high temperatures (open flames, glowing metal surfaces, etc.) forming hydrofluoric acid and possibly carbonyl fluoride.

Corrosive Properties:

Not corrosive.

Oxidizer Properties:

Not an oxidizer

Other Reactivity Data:

None known.

SECTION 11 - TOXICOLOGICAL INFORMATION

No applicable data for this section.

SECTION 12 - ECOLOGICAL INFORMATION

No applicable data for this section.

SECTION 13 - DISPOSAL CONSIDERATION

Waste Disposal:

Incinerate in a licensed facility. Do not discharge into waterways or sewer systems without proper authority.

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.

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, TETRAFLUOROETHANE), 2.2, UN1956

SECTION 15 - REGULATORY INFORMATION

TSCA Inventory Status

Listed on Inventory: YES

RCRA Haz. Waste No .: N/A

CERCLA: NO Reportable Qty.: (If YES)

SARA TITLE III; SECTION 313: NOT LISTED.

THIS PRODUCT MAY CONTAIN ONE OR MORE CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS AND/OR OTHER REPRODUCTIVE HARM.

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	1	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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