

1. IDENTIFICATION

Product Identifier

Product Name UL-2289-3

Other means of identification

Product Code(s) YUL-2289-3
Product Type Polyurethane Adhesive

Recommended use of the chemical and restrictions on use

Recommended Use For industrial use only.
Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Address

IFS Industries
400 Orrton Ave
PO Box 1053
Reading PA 19603

Emergency telephone number

Company Phone Number 610-378-1381
Emergency Telephone Number CHEMTREC (800) 424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Respiratory sensitization	Category 1
Skin sensitization	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2

Label elements

Emergency Overview

Signal Word Danger

Hazard Statements

CAUSES SKIN IRRITATION
Causes serious eye irritation
May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause an allergic skin reaction
Suspected of causing cancer
May cause respiratory irritation. May cause drowsiness or dizziness



Appearance Light brown

Physical State Liquid

Odor Slight resinous

Precautionary Statements - Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection
Wash face, hands and any exposed skin thoroughly after handling
In case of inadequate ventilation wear respiratory protection
Contaminated work clothing must not be allowed out of the workplace
Do not breathe dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention
Specific treatment (see Section 4 on this SDS)
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of water and soap
Take off contaminated clothing and wash it before reuse
If skin irritation or rash occurs: Get medical advice/attention
If experiencing respiratory symptoms: Call a POISON CENTER or doctor
IF INHALED: Remove person to fresh air and keep comfortable for breathing

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed
Keep from freezing

Precautionary Statements - Disposal

Dispose of in accordance with federal, state and local regulations

Hazards not otherwise classified (HNOC)

Vapors may be irritating to eyes, nose, throat, and lungs
May be harmful if inhaled

Other Information

Unknown acute toxicity 0 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Components	CAS No.	Weight-%	Trade Secret
Methylene diphenyl diisocyanate (MDI)	101-68-8	5.0-15	*
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]-	5873-54-1	<1.0%	*
Benzene, 1,1-methylenebis[2-isocyanato-	2536-05-2	<1.0%	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

Eye Contact

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.
Consult a physician.

Skin Contact

Wash off immediately with soap and plenty of water. Take off contaminated clothing and wash before reuse. In the case of skin irritation or allergic reactions see a physician.

Inhalation	If symptoms persist, call a physician.
Ingestion	None under normal use conditions. Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician if necessary.
Most Important Symptoms and Effects	Signs and symptoms may include coughing, gasping, choking and difficulty breathing.
Notes to Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use, Foam, Dry chemical or CO2

Unsuitable Extinguishing Media

Do not use a solid water stream as it may scatter and spread fire.

Specific Hazards Arising from the Chemical

Do not allow run-off from fire-fighting to enter drains or water courses. May cause sensitization by inhalation and skin contact. The product causes irritation of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. Dried product is capable of burning.

Explosion Data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions

Use personal protection equipment. Ensure adequate ventilation. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

Environmental precautions

Environmental precautions

See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for Cleaning Up

Prevent environmental discharge consistent with regulatory requirements. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Where possible allow molten material to solidify naturally. Pick up and transfer to properly labeled containers. Neutralize material and area with decontamination solution (95% water, 2% detergent, 3% concentrated ammonium hydroxide) letting stand for at least 15 minutes. May evolve CO2. Loosely cover for 24-48 hrs to allow CO2 to escape before disposal. Disposal should be in accordance with applicable regional, national and local laws and regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling

Use personal protection equipment. Avoid contact with eyes, skin and clothing. Handle product only in closed system or provide appropriate exhaust ventilation. Do not ingest. Do not breathe vapor or mist. Do not breathe dust. Take off contaminated clothing and wash before reuse. Do not breathe (dust, vapor, mist, gas). Isocyanates are known to be strong sensitizers. May cause sensitization by inhalation and skin contact. People who suffer from skin sensitization problems, asthma, allergies, chronic or recurring respiratory illnesses

should not be deployed in any process using this preparation.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a cool, well-ventilated place. Keep from freezing. Will slowly evolve carbon dioxide if exposed to moisture.

Incompatible Products Alcohols. Acids. Bases. Amines.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Components	ACGIH TLV	OSHA PEL	NIOSH IDLH	AIHA - WEEL
Methylene diphenyl diisocyanate (MDI) 101-68-8	TWA: 0.005 ppm	(vacated) Ceiling: 0.02 ppm (vacated) Ceiling: 0.2 mg/m ³ Ceiling: 0.02 ppm Ceiling: 0.2 mg/m ³	IDLH: 75 mg/m ³ Ceiling: 0.020 ppm Ceiling: 0.2 mg/m ³ TWA: 0.005 ppm TWA: 0.05 mg/m ³	-
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]- 5873-54-1	-	Ceiling: 0.02 ppm Ceiling: 0.2 mg/m ³	-	-
Benzene, 1,1-methylenebis[2-isocyanato- 2536-05-2	-	Ceiling: 0.02 ppm Ceiling: 0.2 mg/m ³	-	-

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Avoid contact with eyes. Eye protection.

Skin and Body Protection Wear protective gloves/protective clothing.

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Take off contaminated clothing and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	Odor	Slight resinous
Appearance	Light brown	Odor Threshold	No data available
Color	Tan		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	Specific test data for the substance or mixture is not available	
Melting point / freezing point	No information available	
Boiling Point / Boiling Range	Specific test data for the substance or mixture is not available	
Flash Point	Specific test data for the substance or mixture is not available	
Evaporation Rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air	No information available	

Upper Explosive Limits	Specific test data for the substance or mixture is not available
Lower Explosive Limits	Specific test data for the substance or mixture is not available
Vapor pressure	Negligible
Vapor Density	Specific test data for the substance or mixture is not available
Specific Gravity	1.11
Water Solubility	Immiscible in water
Solubility in other solvents	Specific test data for the substance or mixture is not available
Partition coefficient	No information available
Autoignition Temperature	
Decomposition Temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	Specific test data for the substance or mixture is not available
Explosive Properties	No information available
Oxidizing Properties	No information available

Other Information

Softening Point	Specific test data for the substance or mixture is not available
Solids	Not Available

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions. Decomposes slowly on exposure to water. Evolves CO₂.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to Avoid

Excessive heat.

Incompatible Materials

Alcohols. Acids. Bases. Amines.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors. Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	Avoid breathing vapors or mists. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause irritation of respiratory tract.
Eye Contact	Contact with eyes may cause irritation.
Skin Contact	Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Repeated exposure may cause skin dryness or cracking. May cause irritation.
Ingestion	Not an expected route of exposure. May be harmful if swallowed.

Components	Oral LD50	Dermal LD50	Inhalation LC50
Methylene diphenyl diisocyanate (MDI) 101-68-8	= 31600 mg/kg (Rat) > 7400 mg/kg (Rat)	> 6200 mg/kg (Rabbit)	= 369 mg/m ³ (Rat) 4 h = 0.369 mg/L (Rat) 4 h
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]- 5873-54-1	> 7400 mg/kg (Rat)	> 6200 mg/kg (Rabbit)	= 0.369 mg/L (Rat) 4 h
Benzene, 1,1-methylenebis[2-isocyanato- 2536-05-2	> 7400 mg/kg (Rat)	> 6200 mg/kg (Rabbit)	= 0.369 mg/L (Rat) 4 h

Information on toxicological effects

Symptoms

Specific test data for the substance or mixture is not available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Sensitization**

May cause sensitization in susceptible persons.

Mutagenic Effects

Specific test data for the substance or mixture is not available.

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Components	ACGIH	IARC	NTP	OSHA
Methylene diphenyl diisocyanate (MDI) 101-68-8	-	Group 3	-	-
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]- 5873-54-1	-	Group 3	-	-
Benzene, 1,1-methylenebis[2-isocyanato- 2536-05-2	-	Group 3	-	-

Reproductive Toxicity

No information available.

STOT - single exposure

No information available.

STOT - repeated exposure

No information available.

Aspiration Hazard

No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	95,238.00
ATEmix (dermal)	35,962.00
ATEmix (inhalation-dust/mist)	16.70

12. ECOLOGICAL INFORMATION**Ecotoxicity**

24.9095 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Persistence and Degradability

No information available.

Bioaccumulation/Accumulation

No information available.

Components	log Pow
Methylene diphenyl diisocyanate (MDI) 101-68-8	4.5
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]- 5873-54-1	4.5
Benzene, 1,1-methylenebis[2-isocyanato- 2536-05-2	4.5

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS**Waste treatment methods****Disposal Methods**

Dispose of in accordance with federal, state and local regulations.

Contaminated Packaging

Do not reuse empty containers.

14. TRANSPORT INFORMATION

DOT Not Regulated (Single Container < RQ)

IATA Not regulated.

IMDG/IMO Not regulated.

15. REGULATORY INFORMATION

TSCA 8(b) All components are listed or exempt
DSL All components are listed or exempt

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Components	Weight-%	SARA 313 - Threshold Values %
Isocyanic acid, polymethylenepolyphenylene ester - 9016-87-9	10.29	1.0
Methylene diphenyl diisocyanate (MDI) - 101-68-8	9	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard Yes
Chronic Health Hazard Yes
Fire Hazard No
Sudden Release of Pressure Hazard No
Reactive Hazard No

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Components	Weight-%	HAPS data
Methylene diphenyl diisocyanate (MDI) 101-68-8	5.0-15	Present

CWA (Clean Water Act)

See information supplied by the manufacturer

CERCLA

See information supplied by the manufacturer

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. EPA Label Information

EPA Pesticide Registration Number No data available

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA Health Hazard 2 Flammability 0 Instability 0 Physical and Chemical Hazards -
HMIS / WHMIS Health Hazard 2 Flammability 0 Physical hazards 0 Personal Precautions X

Revision Date 06-Jun-2016

Revision Note

No information available

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief

at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet