



Material Safety Data Sheet

Prepared in accordance with ISO 11014-1/ANSI standard Z400.1-2004

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1. PRODUCT AND COMPANY IDENTIFICATION

Product code 223790RP
Product name Special Urethane Clear (Part B)
Product description Ink Product

Manufacturer or supplier's details

UNITED STATES
Nazdar Company
8501 Hedge Lane Terrace
Shawnee, KS 66227
Tel: 1-913-422-1888
Tel: 1-800-677-4657
Fax: 1-913-422-2294

UNITED KINGDOM
Nazdar Limited
7 Barton Road
Heaton Mersey Industrial Estate
Stockport, Chesire SK4 3EG
Tel: +44 161 442 2111

Emergency Telephone Number

USA: Chemtrec: 1-800-424-9300
Outside USA: Chemtrec: 1-703-527-3887

Website: www.nazdar.com
MSDS Information: 1-913-422-1888 ext 2305
MSDS Contact: Regulatory Compliance
email: regcomp@nazdar.com

2. HAZARDS IDENTIFICATION

This product is a preparation. Health hazard information is based on its components.

Appearance Water-white
Emergency Overview Persons allergic to isocyanates, and particularly those suffering from asthma or other respiratory conditions, should not work with isocyanates. Harmful. Irritant. Sensitizer.

Eyes May cause eye irritation. May cause eye irritation with susceptible persons.
Skin May cause skin irritation and/or dermatitis. May be harmful in contact with skin (after often repeated exposure). May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Inhalation Harmful by inhalation. Avoid breathing vapors or mists. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Inhalation of vapours is irritating to the respiratory system, may cause throat pain and cough. May be harmful by inhalation (after often repeated exposure). May cause allergic respiratory reaction.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. May be harmful if swallowed. May cause additional affects as listed under "Inhalation".

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Hexamethylene diisocyanate homopolymer	28182-81-2	60 - 100
Hexamethylene diisocyanate	822-06-0	< 0.5

4. FIRST AID MEASURES

Skin Contact Wash off immediately with soap and plenty of water. Use a mild soap if available. Rinse immediately with plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation develops, get medical attention. Wash off immediately with soap and plenty of water. In the case of skin irritation or allergic reactions see a physician.

Eye Contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately if irritation develops and persists. May produce an allergic reaction. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Inhalation	Move to fresh air. If breathed in, move person into fresh air. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately. May cause allergic respiratory reaction.
Ingestion	If swallowed, DO NOT induce vomiting. Call a physician or Poison Control Centre immediately. Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

Flammable Properties	No information available
Suitable Extinguishing Media	Foam. Carbon dioxide (CO ₂). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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. Keep away from fire, sparks and heated surfaces. Keep container tightly closed. Cool containers / tanks with water spray. Fire or intense heat may cause violent rupture of packages.
Specific Hazards Arising from the Chemical	Thermal decomposition can lead to release of irritating gases and vapours. Burning produces obnoxious and toxic fumes. May cause sensitization by inhalation and skin contact.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Remove all sources of ignition. Heat, flames and sparks. Ventilate the area. Avoid breathing dust or vapor. Avoid contact with skin, eyes and clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Methods for Cleaning Up	Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Do not use sparking tools.
Environmental Precautions	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

7. HANDLING AND STORAGE

Handling	Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Remove and wash contaminated clothing before re-use. Discard contaminated shoes. When using do not smoke. Take notice of labels and material safety data sheets for the working chemicals. Do not take internally. Harmful or fatal if swallowed.
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep out of the reach of children. Keep away from heat and sources of ignition. Take notice of the directions of use on the label.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Component	Weight %	ACGIH TLV	OSHA PEL	Ontario TWAEV
Hexamethylene diisocyanate	< 0.5	TWA: 0.005 ppm		TWA: 0.005 ppm TWA: 0.2 µmol/m ³ CEV: 0.02 ppm CEV: 0.8 µmol/m ³

Component	Weight %	Manufacturer Exposure Limit
Hexamethylene diisocyanate	< 0.5	Ceiling Limit Value: 0.02 ppm

Engineering Measures	Use only with adequate ventilation. Use ventilation adequate to keep exposures below recommended exposure limits. See MSDS. In case of insufficient ventilation, wear suitable respiratory equipment.
Personal Protective Equipment	
Respiratory Protection	Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust). Respirator with a vapour filter.
Eye Protection	Ensure that eyewash stations and safety showers are close to the workstation location. Avoid contact with eyes. Safety glasses with side-shields. Goggles. Face-shield.
Skin Protection	Wear protective gloves/clothing. Solvent-resistant apron and boots.
General Hygiene Considerations	Handle in accordance with good industrial hygiene and safety practice. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before eating, drinking, or smoking. Remove and wash contaminated clothing before re-use. Regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Water-white	Physical State	Liquid
Odor	Characteristic	Odor Threshold	No information available
pH	No information available	Autoignition Temperature	No information available
Boiling point/Boiling Range	>149°C / >300°F	Melting Point/Range	No information available
Freezing Point/Range	No information available	Solubility	No information available
Evaporation Rate	No information available	Partition Coefficient (n-octanol/water)	No information available
Vapour Pressure	No information available	Vapour Density	Heavier than air
Flammability (solid, gas)	No information available	Flash Point	> 93°C / > 200°F
Flammability Limits in Air		Method	Setaflash closed cup
Upper	No information available	Photochemically Reactive	No
Lower	No information available		
Weight Per Gallon (lbs/gal)	9.76	Specific Gravity	1.17
VOC by weight	0.2	VOC by volume	0.2
VOC lbs/gal	0.02	VOC grams/liter	2.341

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Heat, flames and sparks.
Incompatible Products	Strong acids. Strong bases. Strong oxidizing agents. Reducing agents.
Hazardous Decomposition Products	Thermal decomposition can lead to release of irritating gases and vapours. Carbon dioxide (CO ₂). Carbon monoxide.
Possibility of Hazardous Reactions	None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hexamethylene diisocyanate homopolymer			18500 mg/m ³ (Rat) 1 h

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hexamethylene diisocyanate	710 mg/kg (Rat)	570 mg/kg (Rabbit)	0.15 mg/L (Rat) 4 h 0.29 mg/L (Rat) 1 h

Chronic Toxicity

Sensitisation	May cause sensitization of susceptible persons.
Mutagenic Effects	No information available
Reproductive Effects	No information available
Developmental Effects	No information available
Teratogenicity	No information available
Chronic Effects	Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effect, such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Repeated contact may cause allergic reactions in very susceptible persons. Avoid repeated exposure.
Target Organ Effects	No information available

12. ECOLOGICAL INFORMATION**Ecotoxicity**

We have no quantitative data concerning the ecological effects of this product. Should not be released into the environment.

Component	Freshwater Algae	Freshwater Fish	Water Flea
Hexamethylene diisocyanate		96 Hr LC50 Brachydanio rerio: 26.1 mg/L [static]	

Persistence and Degradability	No information available
Bioaccumulation	No information available
Mobility in Environmental Media	No information available

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods	Dispose of contents/container in accordance with local regulation.
Contaminated Packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION**DOT**

Printing Ink Related Material, Liquid, Not Regulated

ICAO/IATA

Not classified as dangerous in the meaning of transport regulations

IMDG/IMO

Not classified as dangerous in the meaning of transport regulations

15. REGULATORY INFORMATION**International Inventories**

Listed on TSCA. For further information, please contact: Manufacturer, importer, supplier

U.S. Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any HAPs.

U.S. State Regulations**State Right-to-Know**

Component	Minnesota	Florida	New Jersey	Pennsylvania	Massachusetts	Rhode Island
Hexamethylene diisocyanate homopolymer	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Hexamethylene diisocyanate	Not Listed	Not Listed	X	Not Listed	X	Not Listed

Canada

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR

Component	WHMIS Classifications of Components
Hexamethylene diisocyanate	D1A, D2A, D2B

REACH: Substances of Very High Concern (SVHC): Article 57 of Regulation (EC) No 1907/2006

Does NOT contain a listed substance

HMIS:	Health 3*	Flammability 1	Reactivity 1	PPE X
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16. OTHER INFORMATION

Revision Date Apr-24-2009

Revision Summary New MSDS format

Disclaimer

The information provided in this 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 MSDS