

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

PRODUCT NAME Aquasure
 CHEMICAL NAME Isocyanate Prepolymer in Flammable Solvent
 PRODUCT NO. 10719
 APPLICATION Adhesive
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2 HAZARDS IDENTIFICATION

Highly flammable. Vapours may cause drowsiness and dizziness. Irritating to skin. May cause sensitisation by inhalation and skin contact. Possible risk of harm to the unborn child. Harmful: danger of serious damage to health by prolonged exposure through inhalation.

CLASSIFICATION Xn;R48/20. Rep 3;R63. R42/43. Xi;R38. F;R11. R67.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content	Classification
DIPHENYLMETHANE-4,4'-DI-ISOCYANATE	202-966-0	101-68-8	1-5%	Xn;R20 R42/43 Xi;R36/37/38
Polyurethane Prepolymer			60-100%	R43.
TOLUENE	203-625-9	108-88-3	10-30%	F;R11 Repr. Cat. 3;R63 Xn;R48/20,R65 Xi;R38 R67

The Full Text for all R-Phrases are Displayed in Section 16

4 FIRST-AID MEASURES

GENERAL INFORMATION

Chemical burns must be treated by a physician.

INHALATION

Move the exposed person to fresh air at once. Perform artificial respiration if breathing has stopped. Keep the affected person warm and at rest. Get prompt medical attention.

INGESTION

Rinse mouth thoroughly. Immediately give a couple of glasses of water or milk, provided the victim is fully conscious. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical attention if any discomfort continues.

SKIN CONTACT

Remove affected person from source of contamination. NOTE! Effects may be delayed. Keep affected person under observation. Promptly wash contaminated skin with soap or mild detergent and water. Promptly remove clothing if soaked through and wash as above. Get medical attention if irritation persists after washing.

EYE CONTACT

Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention immediately. Continue to rinse.

5 FIRE-FIGHTING MEASURES

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EXTINGUISHING MEDIA

Small fires: Foam, carbon dioxide or dry powder. DO NOT use water if avoidable. Larger fires: Water spray, fog or mist. Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.

SPECIAL FIRE FIGHTING PROCEDURES

Do not get water inside container. NOTE! Use air-supplied respirators to protect against gases/fumes. Keep run-off water out of sewers and water sources. Dike for water control. Move container from fire area if it can be done without risk. If risk of water pollution occurs, notify appropriate authorities. Keep up-wind to avoid fumes.

UNUSUAL FIRE & EXPLOSION HAZARDS

Prolonged exposure to heat may lead to formation of toxic gases. May ignite if heated. If heated, volume and pressure increases strongly, resulting in explosion of container.

SPECIFIC HAZARDS

Fire or high temperatures create: Toxic gases/vapours/fumes of Carbon dioxide (CO₂). Carbon monoxide (CO). Hydrogen cyanide (HCN).

6 ACCIDENTAL RELEASE MEASURES

ENVIRONMENTAL PRECAUTIONS

Do not allow to enter drains, sewers or watercourses. Collect and dispose of spillage as indicated in section 13.

SPILL CLEAN UP METHODS

DO NOT touch spilled material. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Clean-up personnel should use respiratory and/or liquid contact protection. Avoid contact with skin or inhalation of spillage, dust or vapour. Collect with absorbent, non-combustible material into suitable containers. Shovel into dry containers. Cover and move the containers. Flush the area with water. Provide ventilation and confine spill. Do not allow runoff to sewer. Containers with collected spillage must be properly labelled with correct contents and hazard symbol.

7 HANDLING AND STORAGE

USAGE PRECAUTIONS

Keep away from heat, sparks and open flame. Use mechanical ventilation in case of handling which causes formation of vapours. Static electricity and formation of sparks must be prevented. Avoid spilling, skin and eye contact. Use explosion proof electric equipment. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level. Wear full protective clothing for prolonged exposure and/or high concentrations. Do not use contact lenses. Avoid contact with water, alcohols, amines and other materials that may react with isocyanates. Vapours are heavier than air and may travel along the floor and in the bottom of containers.

STORAGE PRECAUTIONS

Store in tightly closed original container in a cool, dry well-ventilated place. Ground container and transfer equipment to eliminate static electric sparks. Keep in original container. Keep away from heat, sparks and open flame. Isocyanates react with water to liberate carbon dioxide. Any ingress of moisture into an isocyanate container, whether full or empty, can lead to a pressure build up and subsequent explosion.

STORAGE CLASS

Flammable liquid storage.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	Std	LT - ppm	LT - mg/m ³	ST - ppm	ST - mg/m ³
TOLUENE	WEL	50 ppm(Sk)	191 mg/m ³ (Sk)	150 ppm(Sk)	574 mg/m ³ (Sk)
DIPHENYLMETHANE-4,4'-DI-ISOCYANATE	WEL		0.02 mg/m ³ (Sen)		0.07 mg/m ³ (Sen)
Polyurethane Prepolymer		No std.		No std.	

INGREDIENT COMMENTS

Exposure limits for isocyanates are quoted as NCO. WEL = Workplace Exposure Limit.

PROTECTIVE EQUIPMENT



PROCESS CONDITIONS

Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station.

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ENGINEERING MEASURES

Provide adequate general and local exhaust ventilation.

RESPIRATORY EQUIPMENT

GENERAL RESPIRATORY PROTECTION. No specific recommendation made, but respiratory protection must be used if the general level exceeds the Recommended Workplace Exposure Limit. Use chemical cartridge protection with appropriate cartridge. FILTER. Gas cartridge suitable for organic substances.

HAND PROTECTION

GENERAL GUIDANCE ON HAND PROTECTION. Chemical resistant gloves required for prolonged or repeated contact. Protective gloves must be used if there is a risk of direct contact or splash. SPECIFIC RECOMMENDATIONS. Use protective gloves made of: Nitrile. or Neoprene.

EYE PROTECTION

Wear splash-proof eye goggles to prevent any possibility of eye contact. Contact lenses should not be worn when working with this chemical!

OTHER PROTECTION

Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station and safety shower. Wear appropriate clothing to prevent any possibility of skin contact.

HYGIENE MEASURES

Wash at the end of each work shift and before eating, smoking and using the toilet. DO NOT SMOKE IN WORK AREA! Wash promptly if skin becomes contaminated. Change work clothing daily if contamination is reasonably probable. Promptly remove any clothing that becomes contaminated. Contaminated clothing to be placed in closed container until disposal or decontamination. Warn cleaning personnel of chemical's hazardous properties.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Liquid		
COLOUR	Clear Colourless		
ODOUR	Characteristic of solvents		
VOLATILITY DESCRIPTION	Volatile.		
SOLUBILITY	Soluble in Organic solvents		
PHYSICAL DATA COMMENTS	Information given concerns the concentrated solution.		
RELATIVE DENSITY	1.0 - 1.1 @25°C	VAPOUR DENSITY (air=1)	3.2
VOLATILE BY VOL. (%)	~22	VISCOSITY	40,000 - 60,000 mPas @25°C
FLASH POINT (°C)	16 CC (Closed cup).		

10 STABILITY AND REACTIVITY

STABILITY

Stable under normal temperature conditions. Avoid: Heat, sparks, flames. Moisture.

CONDITIONS TO AVOID

Avoid contact with water. Avoid heat, flames and other sources of ignition.

MATERIALS TO AVOID

Acids, oxidising. Amines. Acids, non-oxidising. Acids - organic. Bases, alkalies (inorganic). Alcohols, glycols. Water, steam, water mixtures.

HAZARDOUS DECOMPOSITION PRODUCTS

Toxic gases/vapours/fumes of: Carbon dioxide (CO₂). Carbon monoxide (CO). Oxides of: Nitrogen. Hydrogen cyanide (HCN). Nitrous gases (NO_x).

11 TOXICOLOGICAL INFORMATION

GENERAL INFORMATION

Preparation contains small volumes of isocyanate which may cause allergic reaction and irritation of respiratory system. Prolonged and repeated contact with solvents over a long period may lead to permanent health problems. Known or suspected teratogen.

INHALATION

May cause sensitisation by inhalation. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Vapours may cause drowsiness and dizziness. High concentrations of vapours may irritate respiratory system and lead to headache, fatigue, nausea and vomiting.

INGESTION

May cause discomfort if swallowed.

SKIN CONTACT

Irritating to skin. Prolonged or repeated exposure may cause severe irritation. May cause sensitisation by skin contact. Acts as a defatting agent on skin. May cause cracking of skin, and eczema.

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EYE CONTACT

Spray and vapour in the eyes may cause irritation and smarting.

HEALTH WARNINGS

This chemical can be hazardous when inhaled and/or touched. **INHALATION.** Preparation contains small volumes of isocyanate which may cause allergic reaction and irritation of respiratory system. Prolonged inhalation of high concentrations may damage respiratory system. Pulmonary sensitiser. Severe pulmonary irritant. Recognised allergen. **SKIN CONTACT.** Irritating to skin. May cause sensitisation by skin contact. **EYE CONTACT.** May cause severe irritation to eyes. **INGESTION.** May cause discomfort. **RESPIRATORY SYSTEM.** Repeated exposure may cause chronic upper respiratory irritation. Asthma, pulmonary sensitisation.

Other Health Effects

Toxic to Reproductive Health Categ. 3. Possible risk of harm to the unborn child.

ROUTE OF ENTRY

Inhalation.

TARGET ORGANS

Respiratory system, lungs.

MEDICAL SYMPTOMS

EYES AND MUCOUS MEMBRANES. Irritation, burning, lachrymation, blurred vision after liquid splash. **RESPIRATORY SYSTEM.** Severe pulmonary irritation. General respiratory distress, unproductive cough. **SKIN.** Severe skin irritation. **DIGESTIVE SYSTEM.** Nausea, vomiting. Severe abdominal pain.

MEDICAL CONSIDERATIONS

Chronic respiratory and obstructive airway diseases. Skin disorders and allergies.

Employees ought to be examined by physician prior to work with diisocyanates. Allergic reactions may develop after inhalation of low concentrations, also several hours after exposure. Regular medical checks, including lung function, are recommended for long term and repeated use of isocyanates.

SPECIFIC EFFECTS

Contains a substance/a group of substances which may cause harm to the unborn child.

12 ECOLOGICAL INFORMATION

ECOTOXICITY

Not regarded as dangerous for the environment. The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

13 DISPOSAL CONSIDERATIONS

DISPOSAL METHODS

Dispose of waste and residues in accordance with local authority requirements. Do not allow runoff to sewer, waterway or ground.

14 TRANSPORT INFORMATION



PROPER SHIPPING NAME	RESIN SOLUTION, flammable.		
UN NO. ROAD	1866	ADR CLASS NO.	3
ADR CLASS	Class 3: Flammable liquids.	ADR PACK GROUP	II
HAZARD NO. (ADR)	33 Highly flammable liquid (flash-point below 23°C).	IMDG CLASS	3
IMDG PACK GR.	II	MARINE POLLUTANT	No.

15 REGULATORY INFORMATION

LABELLING

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Harmful



Highly Flammable

CONTAINS

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE
Polyurethane Prepolymer
TOLUENE

RISK PHRASES

R11	Highly flammable.
R38	Irritating to skin.
R42/43	May cause sensitisation by inhalation and skin contact.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R63	Possible risk of harm to the unborn child.
R67	Vapours may cause drowsiness and dizziness.

SAFETY PHRASES

S16	Keep away from sources of ignition - No smoking.
S23	Do not breathe vapour/spray.
S36/37	Wear suitable protective clothing and gloves.
S38	In case of insufficient ventilation, wear suitable respiratory equipment.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).
S60	This material and its container must be disposed of as hazardous waste.
P4	Contains isocyanates. See information supplied by the manufacturer.
U5	Do not allow ingress of moisture - Risk of pressure build up.

UK REGULATORY REFERENCES

Chemicals (Hazard Information & Packaging) Regulations. Occupational Exposure Limits EH40. Control of Substances Hazardous to Health.

EU DIRECTIVES

Dangerous Preparations Directive 1999/45/EEC.

Complies with

Directive 2002/95/EC (on the restriction and use of certain hazardous substances in electrical and electronic equipment)

GUIDANCE NOTES

Isocyanates toxic hazards and precautions EH16.

INTERNATIONAL REGISTRATIONS

The components of this preparation are either listed on the following national registers or are exempt from any requirement of those registers:

Australia - NICNAS

Canada - DSL

Korea - TCCL

USA - TSCA

EU – EINECS/ELINCS

16 OTHER INFORMATION

INFORMATION SOURCES

Material Safety Data Sheet, Misc. manufacturers.

REVISION COMMENTS

Section 9 Revised due to change in specification.

REVISION DATE

23rd August 2007

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REV. NO./REPL. SDS GENERATED 30th november 2005

SDS NO. 11931

SAFETY DATA SHEET STATUS

Approved.

RISK PHRASES IN FULL

R11	Highly flammable.
R20	Harmful by inhalation.
R36/37/38	Irritating to eyes, respiratory system and skin.
R38	Irritating to skin.
R42/43	May cause sensitisation by inhalation and skin contact.
R43	May cause sensitisation by skin contact.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R63	Possible risk of harm to the unborn child.
R65	Harmful: may cause lung damage if swallowed.
R67	Vapours may cause drowsiness and dizziness.

Generic number

20385