

**Polyurethane HS PART B
0525**Printed: 27-06-2003
Reviewed: 03-01-03**1. IDENTIFICATION OF THE COMPANY**Rang Afarin Paint Manufacturing Co.
Tel.: +98 21 6026051-4
Fax: +98 21 6026056
Tehran - Iran

Product nr: 510PU0000 / 510PZ0000

EMERGENCY PHONE No.:

+98 21 6026051-4

INTENDED USE: Paint and/or related product.

2. COMPOSITION/INFORMATION ON INGREDIENTS

Substances presenting a health hazard within the meaning of the Chemicals (Hazard Information & Packaging) Regulations 67/548 EEG.

Name	EG-no.	conc.range	symbol	R-phrases
ALIPHATIC POLYISOCYANATE	-	50-100	Xi	43-
1-METHOXY-2-PROPANOL-ACETATE	203-603-9	10-25	Xi	10-36-
XYLENE	215-535-7	10-25	Xn	10-20/21-38-
ETHYLBENZENE	202-849-4	1-5	Xn	11-20-
HEXAMETHYLENE-DI-ISOCYANATE	212-485-8	0-1	T	42/43-23-36/37/38-

3. HAZARDS IDENTIFICATION

R10 Flammable.
R20 Harmful by inhalation.
R42/43 May cause sensitisation by inhalation and skin contact.

Extended details regarding health and environment, see section 11 & 12.

4. FIRST AID**General:**

In all cases of doubt, or when symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.

Inhalation:

Remove to fresh air, keep the patient warm and at rest.
If breathing is irregular or stopped, administer artificial respiration.
If unconscious, place in the recovery position and seek medical advice.

Eye contact:

Contact lenses should be removed.
Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart, and seek medical advice.

Skin contact:

Remove contaminated clothing.
Wash skin thoroughly with soap and water or use a proprietary skin cleaner.
Do NOT use solvents or thinners.

Ingestion:

Rinse mouth and give water. If accidentally swallowed obtain immediate medical attention. Keep patient at rest.
Do not induce vomiting.

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0525printed: 27-06-2003
reviewed: 03-01-03**5. FIRE FIGHTING MEASURES****Extinguishing media:**Recommended: Alcohol resistant foam, CO₂, powder, water spray/mist.

Not to be used: Water jet. Zincdust containing products should not be extinguished with water.

Recommendations:

Fire will produce dense black smoke containing hazardous products of combustion (see Section 10). Decomposition products may be a hazard to health. Appropriate self-contained breathing apparatus may be required. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

6. ACCIDENTAL RELEASE MEASURES

Exclude sources of ignition and ventilate the area. Exclude non-essential personnel. Avoid breathing vapours. Refer to protective measures listed in Sections 7 and 8. Contain and collect spillages with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in suitable container for disposal in accordance with the waste regulations (see Section 13). Do not allow to enter drains or water courses. Clean preferably with a detergent; avoid the use of solvents. If the product enters drains or sewers the local water company should be contacted immediately; in the case of contamination of streams, rivers or lakes, the National Rivers Authority.

7. HANDLING AND STORAGE**Handling:**

Vapours are heavier than air and may spread along floors. They may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentrations higher than the occupational exposure limits.

Additionally, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. Keep the container tightly closed. Exclude sources of heat, sparks and open flame. Non-sparking tools should be used. Avoid skin and eye contact. Avoid inhalation of vapour and spray mist.

Smoking, eating and drinking should be prohibited in areas of storage and use.

For personal protection, see Section 8. Never use pressure to empty: the container is not a pressure vessel.

Always keep in containers made of the same material as the supply container.

Good housekeeping standards and regular safe removal of waste materials will minimize risks of spontaneous combustion and other fire hazards.

The product may charge electrostatically. Use earthing leads when transferring from one container to another. Operators should wear anti-static footwear and clothing and floors should be electrically conductive.

The Manual Handling Operations Regulations may apply to the handling of containers of this product.

Refer to the guide weight indicated on the container when carrying out assessments.

Storage:

Store in accordance with the conditions of the licence which is necessary under the Petroleum (Consolidation) Act. Further guidance is contained in the HSE guidance note Storage of Flammable Liquids in Containers.

Observe the label precautions. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorised access.

Containers which are opened should be properly resealed and kept upright to prevent leakage.

The principles contained in the HSE's guidance note Storage of Packaged Dangerous Substances should be observed when storing this product. Store separately from oxidising agents and strongly alkaline and strongly acidic materials.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Engineering measures:

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and/or solvent vapours below the relevant occupational exposure limits, suitable respiratory protective equipment should be worn. (see "Personal protection").

Exposure limits	MAC-TWA *1		MAC-TWA *2 Skin	
	ppm	mg/m3	ppm	mg/m3 Absorption
ALIPHATIC POLYISOCYANATE	-	-	-	-
1-METHOXY-2-PROPANOL-ACETATE	110	550	-	-
XYLENE	50	210	-	- H
ETHYLBENZENE	50	215	-	- H
HEXAMETHYLENE-DI-ISOCYANATE	0,005	0,04	0,02	0,14 -

*1 Long term exposure limit - 8 hours Time Weighted Average, 40 hours per week.

*2 Short time exposure limit - 15 minutes reference period.

H: indicates a risk of absorption through the skin.

Personal protection:
Respiratory protection:

Air-fed respiratory protective equipment should be worn when this product is sprayed if the exposure of the sprayer or other people nearby cannot be controlled to below the occupational exposure limit and engineering controls and cannot reasonably be improved. This can be done by e.g. compressed air or half-mask with appropriate filters, A2 for organic vapours (combined with dustfilter P3).

Hand protection:

At repeated or prolonged contact; gloves. Viton-gloves offer good protection for intense contact with most solvents, complete immersion in solvent. Nitrile gloves offer good protection during spray application. Dependent on application intensity of contact with the product, manufacturer, the gloves they need to be replaced; consult the supplier of the gloves for details. Breakthroughtime nitrile gloves: Methylketone 7 min, Toluene 25 min, Xylene 53 min, White Spirit >480 min and Isopropyl alcohol >480 min. Barrier creams may help to protect exposed areas of the skin but not substitutes for full physical protection. They should not be applied once exposure has occurred.

Eye protection:

Eye protection designed to protect against liquid splashes should be worn.

Skin protection:

Cotton or cotton/synthetic overalls or coveralls are normally suitable.

Grossly contaminated clothing should be removed and the skin washed with soap and water.

Protection of environment: see section 12

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid	Flashpoint:	38°C
Viscosity ISO Cup 6:	45s	Viscosity Ford Cup 4:	170s
Specific Gravity:	1,07 g/cm3	Solubility in water:	Not Soluble
Explosion limits	ALIPHATIC POLYISOCYANATE		N.A.
	1-METHOXY-2-PROPANOL-ACETATE		-
	XYLENE		1.0-7.0%
	ETHYLBENZENE		1.0 -6.7 %
	HEXAMETHYLENE-DI-ISOCYANATE		0.9 - 9.5 %

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Stable under the recommended storage and handling conditions. (See Section 7).

In a fire, hazardous decomposition products such as smoke, carbon monoxide, carbon dioxide and oxides of nitrogen may be produced.

Keep away from oxidising agents, strongly alkaline and strongly acidic materials to prevent the possibility of exothermic reaction.

11. TOXICOLOGICAL INFORMATION

There is no experimental data available on the product itself.

Exposure to organic solvent vapours may result in adverse health effects such as irritation of the mucous membrane and the respiratory system and adverse effects on the renal and central nervous systems. Symptoms include dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Repeated or prolonged contact with the product may lead to removal of natural fats from the skin resulting in non-allergic contact dermatitis and absorption through the skin. Splashes in the eyes may cause irritation and irreversible local damage.

This product contains isocyanates. When exposed to isocyanates during spray application, without wearing the recommended protective equipment, irritation of skin, eyes, nausea and respiratory system can occur. These effects can occur with a delay. Some people can get allergic reactions when exposed to isocyanates even when the concentration is below the MAC value.

May cause sensitisation by inhalation and skin contact.

12. ECOLOGICAL INFORMATION

There is no experimental data available on the product itself.

The product should not be allowed to enter drains or water courses.

13. DISPOSAL CONSIDERATION

Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with regulations made under the Control of Pollution Act and the Environmental Protection Act or consult EC disposal guide.

14. TRANSPORT INFORMATION

ADR/RID:	Class:	3		
	Subsidiar risc:	-	Packing group:	III
	UN-number:	1263		
	& Proper Shipping Name:			
IMDG:	Class:	3		
	UN-number:	1263	Subsidiar risc:	-
	Proper Shipping Name:			
	Marine Pollutant:	No	Packing group:	III
	EMS:	F-E, S-E		
IATA:	Class:	3	Subsidiar risc:	-
	UN-number:	1263	Packing group:	III
	Proper Shipping Name:			

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The product is classified and labelled for supply in accordance with the Chemicals (Hazard Information and Packaging) Regulations 67/548/EEC and 1999/45/EC as follows:

Symbol Xn
Contains ALIPHATIC POLYISOCYANATE
HEXAMETHYLENE-DI-ISOCYANATE

R10 Flammable.
R20 Harmful by inhalation.
R42/43 May cause sensitisation by inhalation and skin contact.

S36/37 Wear suitable protective clothing and gloves.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Spray application:

S23 Do not breath vapor/spray.
S38 In case of insufficient ventilation, wear suitable respiratory equipment.

16. OTHER INFORMATION

R10 Flammable.
R11 Highly Flammable
R20 Harmful by inhalation.
R20/21 Harmful by inhalation and in contact with skin.
R23 Toxic by inhalation.
R36 Irritating to eyes.
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.