SAFETY DATA SHEET
ARDIFLEX PU5 Part B

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

PRODUCT NAME: ARDIFLEX PU5 Part B

SUPPLIER:
ARDEX ENDURA (INDIA) PRIVATE LIMITED
Corporate Office & Regd. Office:
Unit No. 406 & 407, "Brigade Rubix", No. 20, Yeshwanthapur Hobli,
HMT Campus, Bangalore - 560022. Karnataka, INDIA.
CIN No: U24233KA1997PTC022383
Tel: +91 80 66746500
Email: customercare@ardexendura.com Visit us: www.ardexendura.com

PRODUCT USE: Two-part polyurethane adhesive

2. HAZARDS IDENTIFICATION

It causes burns. It may cause sensitisation by skin contact. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. It is harmful by inhalation and if swallowed.

CLASSIFICATION Xn;R20/22. C;R34. R43. R52/53..

Label elements

Pictogram:

3. COMPOSITION / INFORMATION ON INGREDIENTS

Names	CAS-No	Other Information	Concentration
Fatty Acids, C18unsatd, Dimers, Reaction productswith polyethylene polyamine	68410-23-1	NA	20 – 40%
2,4,6- Trisphenol (Dimethylaminomethyl)	90-72-2	NA	< 5 %
Calcium carbonate	1317-65-3	NA	60 – 80%

4. FIRST-AID MEASURES

GENERAL ADVICE
Seek medical advice. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately.

EYE CONTACT
Rinse immediately with plenty of water also under the eye lids for at least 20 minutes. Remove contact lenses.

SKIN CONTACT
Wash off immediately with plenty of water for at least 20 minutes. Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay. Take off contaminated clothing and shoes immediately. NOTE TO PHYSICIANS: Application of corticosteroid d cream has been effective in treating skin irritation.

INGESTION
Never give anything by mouth to an unconscious person. If a person vomits when lying on his back, place him in the recovery position. Prevent aspiration of vomit. Turn victim's head to the side.

INHALATION
If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately. Move to fresh air.

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5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA
Alcohol-resistant foam, Carbon dioxide (CO2), Dry chemical, Dry sand, Limestone powder.

SPECIFIC HAZARDS
Ammonia gas may be liberated at high temperatures. In case of incomplete combustion an increased formation of oxides of nitrogen (NOx) is to be expected. Incomplete combustion may form carbon monoxide. It may generate ammonia gas, May generate toxic nitrogen oxide gases. Burning produces noxious and toxic fumes. Downwind personnel must be evacuated.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS
Use personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS
Wear suitable protective clothing, gloves and eye/face protection. Use self contained breathing apparatus and chemically protective clothing. Evacuate personnel to safe areas.

ENVIRONMENTAL PRECAUTIONS
Construct a dike to prevent spreading.

METHODS FOR CLEANING UP
Contact us for advice. Approach suspected leak areas with caution. Place in appropriate chemical waste container.

ADDITIONAL ADVICE
Open enclosed spaces to outside atmosphere. If possible, stop flow of product.

7. HANDLING AND STORAGE

USAGE PRECAUTIONS
Do not use sodium nitrite or other nitrosating agents in formulations containing this product. Suspected cancer causing nitrosamines could be formed. Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations. Use only in well-ventilated areas. Avoid contact with eyes. Avoid breathing vapors and/or aerosols. Use personal protective equipment. When using, do not eat, drink or smoke.

STORAGE PRECAUTIONS
Do not store near acids. Keep containers tightly closed in a dry, cool and well-ventilated place. Product may partially freeze with extended exposure to cold temperatures, resulting in crystallization, haziness or separation. If this occurs, product should be warmed to 100-140F (38-60C) for one hour and stirred until clear.

TECHNICAL MEASURES/PRECAUTIONS
Do not store in reactive metal containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

PROTECTIVE EQUIPMENT

PROCESS CONDITIONS
Provide eyewash station.

ENGINEERING MEASURES:
Provide readily accessible eye wash stations and safety showers.
Provide natural or explosion-proof ventilation adequate to ensure concentrations are kept below exposure limits

RESPIRATORY EQUIPMENT
Wear appropriate respirator when ventilation is inadequate.

HAND PROTECTION
Butyl-rubber, Nitrile rubber. Neoprene gloves. Impervious gloves. The breakthrough time of the selected glove(s) must be greater than the intended use period.

EYE PROTECTION
Chemical resistant goggles must be worn.

SKIN AND BODY PROTECTION
Long sleeve shirts and trousers without cuffs.

ENVIRONMENTAL EXPOSURE CONTROLS
Construct a dike to prevent spreading.

SPECIAL INSTRUCTIONS FOR PROTECTION AND HYGIENE:
Discard contaminated leather articles. Provide readily accessible eye wash stations and safety showers. Wash at the end of each work shift and before eating, smoking or using the toilet..

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Viscous Liquid
Colour	: Off white
Odour	: Irritating
Density	: 1.15 g/cc (20 C)

10. CHEMICAL STABILITY AND REACTIVITY INFORMATION

STABILITY
Stable under normal temperature conditions.

MATERIALS TO AVOID
CAUTION! N-Nitrosamines, many of which are known to be potent carcinogens, may be formed when the product comes in contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations.
Nitrous acid and other nitrosating agents. Organic acids (i.e. acetic acid, citric acid etc.). Mineral acids. Sodium hypochlorite.
Product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion. Oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS
Nitric acid. Ammonia. Nitrogen oxides (NOx). Nitrogen oxide can react with water vapors to form corrosive nitric acid. Carbon monoxide. Carbon dioxide (CO2). Nitrosamine.

11. TOXICOLOGICAL INFORMATION

INHALATION
Harmful by inhalation. It may cause sensitization by inhalation, May cause respiratory allergy.

INGESTION
Harmful if swallowed. May cause chemical burns in mouth and throat.

SKIN CONTACT
Causes burns. It may cause allergic contact eczema. It acts as a defatting agent on skin, May cause cracking of skin, and eczema. It may cause sensitization by skin contact.
EYE CONTACT
Causes burns. Extreme irritation of eyes and mucous membranes, including burning and tearing

12. ECOLOGICAL INFORMATION

Acute fish toxicity
LC50 > 1 - <= 10 mg product/l. Method: ISO 7346/2 (semi-static)

Acute invertebrate toxicity
EC50 > 0,1 - <= 1 mg product/l. Method: Acute daphnia toxicity according to test method OECD 202.
Chronic bacterial toxicity
EC0 > 100 mg product/l. Method: Chronic bacterial toxicity according to test method DIN 38 412 p. 8.

Data for Triethylenetetramine
Material is harmful to aquatic organisms (LC50/EC50/IC50 between 10 and 100 mg/L in the most sensitive species). May increase pH of aquatic systems to > pH 10 which may be toxic to aquatic organisms.

Fish Acute & Prolonged Toxicity
LC50, Pimephales promelas (fathead minnow), static test, 96 h: 330 mg/l Aquatic Invertebrate Acute Toxicity: EC50, Daphnia magna (Water flea), static test, 48 h, immobilization: 31.1 mg/l

Aquatic Plant Toxicity
EC50, Pseudokirchneriella subcapitata (green algae), semi-static test, Growth rate inhibition, 72 h: 20 mg/l Aquatic Invertebrates Chronic Toxicity Value: Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, NOEC: 1.9 mg/l

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13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS
Dispose of waste and residues in accordance with local authority requirements.

14. TRANSPORT INFORMATION

Land transport (ADR / RID / GGVSE) 14.1 UN number UN 3082 14.4 Packing group III
14.2 UN proper shipping name SUBSTANCE, LIQUID, N.O.S. (dimer fatty acid(C18)poly amido amine resin) ENVIRONMENTALLY HAZARDOUS hazard 14.5 Environmental Yes, marine pollutant

14.3 Transport hazard class(es) 9 14.6 Special precautions for user Hazard identification (Kemler) Not applicable

Air transport (ICAO-IATA / DGR)
14.1 UN number UN 3082 14.4 Packing group III
14.2 UN proper shipping name SUBSTANCE, LIQUID, N.O.S. (dimer fatty acid(C18)poly amido amine resin) ENVIRONMENTALLY HAZARDOUS hazard 14.5 Environmental Yes, marine pollutant

14.3 Transport hazard class(es) 9 14.6 Special precautions for user No data available

15. REGULATORY INFORMATION

RISK PHRASES	Causes burns. May cause sensitisation by skin contact. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Harmful by inhalation and if swallowed.
SAFETY PHRASES	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show label where possible). Avoid release to the environment. Refer to special instructions/safety data sheets. After contact with skin, wash immediately with plenty of water
STATUTORY INSTRUMENTS	Chemicals (Hazard Information and Packaging) Regulations. Control of Substances Hazardous to Health.
APPROVED CODE OF PRACTICE	Classification and Labelling of Substances and Preparations Dangerous for Supply.
GUIDANCE NOTES	Workplace Exposure Limits Eh40

16. OTHER INFORMATION

TRAINING ADVICE: The details of this data sheet must be passed on to all personnel handling the product.

RISK PHRASES IN FULL

Harmful by inhalation and if swallowed.
Harmful in contact with skin and if swallowed.
Harmful if swallowed.
Causes burns.
Risk of serious damage to eyes.
May cause sensitisation by skin contact.
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

DISCLAIMER

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.