



## SAFETY DATA SHEET

### R 701 CP Part B

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

PRODUCT NAME	R 701 CP 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	Conductive PU Flooring

#### 2. HAZARDS IDENTIFICATION

Harmful by inhalation. Irritating to eyes, respiratory system and skin. May cause sensitisation by inhalation and skin contact.

CLASSIFICATION Xn;R20. R42/43. Xi;R36/37/38.

Label elements

Pictogram:



#### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Names	CAS-No	Other Information	Concentration
P-MDI	9016-87-9	NA	100%

#### 4. FIRST-AID MEASURES

##### GENERAL ADVICE

Remove contaminated clothing

##### INHALATION

Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

##### INGESTION

Rinse mouth and then drink plenty of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.

##### SKIN CONTACT

Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

##### EYE CONTACT

In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Immediate medical attention required.

Most important symptoms and effects, both acute and delayed

##### SYMPTOMS

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11. Eye irritation, skin irritation, allergic symptoms

##### Hazards:

*Symptoms can appear later.*

*Information on: Diphenylmethane-4,4'-diisocyanate (MDI)*

*Hazards: Respiratory sensitization may result in allergic (asthma-like) signs in the lower respiratory tract including wheezing, shortness of breath and difficulty breathing, the onset of which may be delayed. Repeated inhalation of high concentrations may cause*

**R 701 CP Part B**

*lung damage, including reduced lung function, which may be permanent. Substances eliciting lower respiratory tract irritation may worsen the asthma-like reactions that may be produced by product exposures.*

Indication of any immediate medical attention and special treatment needed

Note to physician

Antidote: Specific antidotes or neutralizers to isocyanates do not exist.

Treatment: Treatment should be supportive and based on the judgement of the physician in response to the reaction of the patient.

**5. FIRE-FIGHTING MEASURES****EXTINGUISHING MEDIA**

Water spray, dry powder, carbon dioxide, foam

**Special hazards arising from the substance or mixture.****HAZARDS DURING FIRE-FIGHTING**

Nitrous gases, fumes/smoke, isocyanate, vapour

**PROTECTIVE MEASURES IN FIRE**

Fire-fighters should be equipped with self-contained breathing apparatus and turn-out gear.

**6. ACCIDENTAL RELEASE MEASURES****PERSONAL PRECAUTIONS:**

Clear area. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

**ENVIRONMENTAL PRECAUTIONS:** Do not discharge into drains/surface waters/groundwater

**SPILL CLEAN UP METHODS****FOR SMALL AMOUNTS**

Absorb isocyanate with suitable absorbent material (see § 40 CFR, sections 260, 264 and 265 for further information). Shovel into open container. Do not make container pressure tight. Move container to a well-ventilated area (outside). Spill area can be decontaminated with the following recommended decontamination solution: Mixture of 90 % water, 8 % concentrated ammonia, 2 % detergent. Add at a 10 to 1 ratio. Allow to stand for at least 48 hours to allow escape of evolved carbon dioxide.

**FOR LARGE AMOUNTS**

If temporary control of isocyanate vapor is required, a blanket of protein foam or other suitable foam (available from most fire departments) may be placed over the spill. Transfer as much liquid as possible via pump or vacuum device into closed but not sealed containers for disposal.

**FOR RESIDUES**

The following measures should be taken for final cleanup: Wash down spill area with decontamination solution. Allow solution to stand for at least 10 minutes. Dike spillage.

**7. HANDLING AND STORAGE****USAGE PRECAUTIONS:**

Provide suitable exhaust ventilation at the processing machines. Ensure thorough ventilation of stores and work areas. Avoid aerosol formation. When handling heated product, vapours of the product should be ventilated and respiratory protection used. Wear respiratory protection when spraying. Danger of bursting when sealed gastight. Protect against moisture. If bulging of drum occurs, transfer to well ventilated area, puncture to relieve pressure, open vent and let stand for 48 hours before resealing.

Protection against fire and explosion: No explosion proofing necessary.

**STORAGE PRECAUTIONS:**

Keep away from water. Segregate from foods and animal feeds. Segregate from acids and bases. Segregate from bases.

Suitable materials for containers: Carbon steel (Iron), high density polyethylene (HDPE), Low density polyethylene (LDPE), Stainless steel 1.4301 (V2)

Further information on storage conditions: Formation of CO<sub>2</sub> and build up of pressure possible. Keep container tightly closed and in a well-ventilated place. Outage of containers should be filled with dry inert gas at atmospheric pressure to avoid reaction with moisture.

**Storage stability:**

Storage temperature: 32 - 110°F Protect against moisture.

STORAGE CLASS : Chemical storage.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with occupational exposure limits

Diphenylmethane-4,4'-  
diisocyanate (MDI)

OSHA PEL  
ACGIH TLV

CLV 0.02 ppm 0.2 mg/m<sup>3</sup> ; CLV 0.02 ppm 0.2 mg/m<sup>3</sup>  
TWA value 0.005 ppm

**R 701 CP Part B****PROTECTIVE EQUIPMENT**

PROCESS CONDITIONS: Provide eyewash station.

**ENGINEERING MEASURES:**

Provide adequate ventilation. Observe Workplace Exposure Limits and minimise the risk of inhalation of vapours.

**RESPIRATORY EQUIPMENT**

When workers are facing concentrations above the occupational exposure limits they must use appropriate certified respirators. When atmospheric levels may exceed the occupational exposure limit (PEL or TLV) NIOSH-certified air-purifying respirators equipped with an organic vapor sorbent and particulate filter can be used as long as appropriate precautions and change out schedules are in place. For emergency or non-routine, high exposure situations, including confined space entry, use a NIOSH-certified full face piece pressure demand self-contained breathing apparatus (SCBA) or a full face piece pressure demand supplied-air respirator (SAR) with escape provisions.

**HAND PROTECTION**

Chemical resistant protective gloves should be worn to prevent all skin contact. Suitable materials may include, chloroprene rubber (Neoprene), nitrile rubber (Buna N), chlorinated polyethylene, polyvinylchloride (Pylox), butyl rubber, depending upon conditions of use.

**EYE PROTECTION**

Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

**OTHER PROTECTION**

Cover as much of the exposed skin as possible to prevent all skin contact. Suitable materials may include, saran-coated material, depending upon conditions of use

**HYGIENE MEASURES**

Wear protective clothing as necessary to prevent contact. Eye wash fountains and safety showers must be easily accessible. Observe the appropriate PEL or TLV value. Wash soiled clothing immediately. Contaminated equipment or clothing should be cleaned after each use or disposed of.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical State	: Liquid
Appearance	: Brownish Liquid
Colour	: Brownish
Odour	: faint odour, aromatic
Boiling Point/Range ( C)	: 200 C (5 mmHg)
Auto ignition	:> 250 C
Vapour pressure	: 0.00016 mmHg (20 C)
Density	: 1.22 g/cc (20 C)
Relative density	: 1.22 (25 C)
Bulk density	: 10.17 lb/USg (25 C)
Flash Point (closed, C)	: 220 C (open cup)
Auto flammability ( C)	: Not self-igniting
Oxidizing Properties	: NA
Water Solubility	: Reacts with water

**10. CHEMICAL STABILITY AND REACTIVITY INFORMATION****REACTIVITY**

CORROSION TO METALS: No corrosive effect on metal.

OXIDIZING PROPERTIES: Not fire-propagating

STABILITY: The product is stable if stored and handled as prescribed/indicated.

POSSIBILITY OF HAZARDOUS REACTIONS: Reacts with water, with formation of carbon dioxide. Risk of bursting.

It reacts with alcohols. Reacts with acids. Reacts with alkalis. Reacts with amines. Risk of exothermic reaction.

Risk of polymerization. Contact with certain rubbers and plastics can cause brittleness of the substance/product with subsequent loss in strength.

CONDITIONS TO AVOID : Avoid moisture.

INCOMPATIBLE MATERIALS : Acids, amines, alcohols, water, Alkalines, strong bases, Substances/products that react with isocyanates.

**HAZARDOUS DECOMPOSITION PRODUCTS:**

DECOMPOSITION PRODUCTS: Hazardous decomposition products: carbon monoxide, carbon dioxide, nitrogen oxide, hydrogen cyanide, nitrogen oxides, aromatic isocyanates, gases/ vapours

THERMAL DECOMPOSITION: No decomposition if stored and handled as prescribed/indicated

## R 701 CP Part B

**11. TOXICOLOGICAL INFORMATION****PRIMARY ROUTES OF EXPOSURE**

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

**ACUTE TOXICITY/EFFECTS**

Acute toxicity: Assessment of acute toxicity: Inhalation of vapours may cause irritation of the mucous membranes of the nose, throat or trachea, breathlessness, chest discomfort, difficult breathing and reduced pulmonary function. Inhalation exposure well above the PEL may result additionally in eye irritation, headache, chemical bronchitis, asthma-like findings or pulmonary edema. Isocyanates have also been reported to cause hypersensitivity pneumonitis, which is characterized by flu-like symptoms, the onset of which may be delayed.

Assessment other acute effects

Assessment of STOT single: Causes temporary irritation of the respiratory tract.

Irritation / corrosion

Assessment of irritating effects: Irritating to eyes, respiratory system and skin. Skin contact may result in dermatitis, either irritative or allergic.

**SENSITIZATION**

Assessment of sensitization: Sensitization after skin contact possible. The substance may cause sensitization of the respiratory tract.

**CHRONIC TOXICITY/EFFECTS**

Repeated dose toxicity: Assessment of repeated dose toxicity: The substance may cause damage to the olfactory epithelium after repeated inhalation. The substance may cause damage to the lung after repeated inhalation. These effects are not relevant to humans at occupational levels of exposure.

Genetic toxicity: Assessment of mutagenicity: The substance was mutagenic in various bacterial test systems; however, these results could not be confirmed in tests with mammals.

Carcinogenicity: Assessment of carcinogenicity: A carcinogenic potential cannot be excluded after prolonged exposure to severely irritating concentrations. These effects are not relevant to humans at occupational levels of exposure. IARC Group 3 (not classifiable as to human carcinogenicity)

Reproductive toxicity: Assessment of reproduction toxicity: Repeated inhalative uptake of the substance did not cause damage to the reproductive organs

**12. ECOLOGICAL INFORMATION****ECOTOXICITY:****AQUATIC TOXICITY****Assessment of aquatic toxicity:**

There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. Based on long-term (chronic) toxicity study data, the product is very likely not harmful to aquatic organisms.

The product may hydrolyse. The test result maybe partially due to degradation products. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Toxicity to fish: LC0 (96 h) > 1,000 mg/l, Brachydanio rerio (OECD Guideline 203, static)

Aquatic invertebrates: EC50 (24 h) > 1,000 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

Aquatic plants: EC0 (72 h) 1,640 mg/l (growth rate), Scenedesmus subspicatus (OECD Guideline 201, static)

**Microorganisms/Effect on activated sludge**

Toxicity to microorganisms OECD: Guideline 209 aquatic aerobic bacteria from a domestic water treatment plant/EC50 (3 h): > 100 mg/l

**Persistence and degradability**

Assessment biodegradation and elimination (H2O): Poorly biodegradable. The product is unstable in water. The elimination data also refer to products of hydrolysis.

Elimination information: 0 % BOD of the ThOD (28 d) (OECD Guideline 302 C) (aerobic, activated sludge) Poorly biodegradable.

Assessment of stability in water: In contact with water the substance will hydrolyse slowly.

Information on Stability in Water (Hydrolysis): t<sub>1/2</sub> 20: h (25 °C)

**Bio-accumulative potential**

Assessment bioaccumulation potential: Significant accumulation in organisms is not to be expected.

Bioaccumulation potential: Bio-concentration factor: 200 (28 d), Cyprinus carpio (OECD Guideline 305 E)

R 701 CP Part B

MOBILITY

Assessment transport between environmental compartments: The substance will not evaporate into the atmosphere from the water surface. Adsorption to solid soil phase is not expected.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS

Waste disposal of substance: Incinerate or dispose of in a licensed facility. Do not discharge substance/product into sewer system.

Container disposal: DRUMS: Steel drums must be emptied and can be sent to a licensed drum reconditioner for reuse, a scrap metal dealer or an approved landfill. Do not attempt to refill or clean containers since residue is difficult to remove. Under no circumstances should empty drums be burned or cut open with gas or electric torch as toxic decomposition products may be liberated. Do not reuse empty containers.

14. TRANSPORT INFORMATION

ROAD TRANSPORT NOTES (USDOT) Not classified as a dangerous good under transport regulations

RAIL TRANSPORT NOTES Not Classified.

SEA TRANSPORT NOTES (IMDG) Not classified as a dangerous good under transport regulations.

AIR TRANSPORT NOTES (IATA/ICAO) Not classified as a dangerous good under transport regulations.

Further information

DOT: This product is regulated if the amount in a single receptacle exceeds the Reportable Quantity (RQ). Please refer to Section 15 of this MSDS for the RQ for this product

15. REGULATORY INFORMATION

RISK PHRASES	R20	Harmful by inhalation.
	R36/37/38	Irritating to eyes, respiratory system and skin.
	R42/43	May cause sensitisation by inhalation and skin contact
SAFETY PHRASES	S23	Do not breathe vapour/spray.
	S24/25	Avoid contact with skin and eyes.
	S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	S37	Wear suitable 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

STATUTORY INSTRUMENTS: Control of Substances Hazardous to Health. Chemicals (Hazard Information and Packaging) Regulations.

APPROVED CODE OF PRACTICE: Classification and Labelling of Substances and Preparations Dangerous for Supply.

GUIDANCE NOTES: Workplace Exposure Limits EH40. Introduction to Local Exhaust Ventilation HS (G) 37. CHIP for everyone HSG(108)

16. OTHER INFORMATION

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

PHRASES IN FULL	R20	Harmful if swallowed.
	R36/37/38	Irritating to eyes, respiratory system and skin
	R42	May cause sensitisation by inhalation
	R42/43	May cause sensitisation by inhalation and skin contact

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.