



## SAFETY DATA SHEET

### ARDEX X 60 PU FLEX Part B

#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

##### 1.1. Product identifier

**Product name** ARDEX X 60 PU FLEX Part B

##### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** Two-Part Reaction Resin Tile Adhesive

##### 1.3. Details of the supplier of the safety data sheet

**Supplier** Ardex UK Limited  
Homefield Road  
Haverhill  
Suffolk  
CB9 8QP  
01440 714939

**Contact person** safetydatasheets@ardex.co.uk

##### 1.4. Emergency telephone number

**Emergency telephone** +44 (0) 870 190 6777 (24 hours)

**National emergency telephone number** ROI:- +353 (0)1 809 2166 (available 8am-10pm, 7 days)

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

###### Classification (EC 1272/2008)

**Physical hazards** Not Classified

**Health hazards** Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 2 - H351 STOT SE 3 - H335 STOT RE 2 - H373

**Environmental hazards** Not Classified

##### 2.2. Label elements

###### Hazard pictograms



**Signal word** Danger

**Hazard statements** H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H335 May cause respiratory irritation.  
H351 Suspected of causing cancer.  
H373 May cause damage to organs through prolonged or repeated exposure.

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<b>Precautionary statements</b>	<p>P102 Keep out of reach of children.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P284 [In case of inadequate ventilation] wear respiratory protection.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P312 Call a POISON CENTRE/doctor if you feel unwell.</p> <p>P403+P233 Store in a well-ventilated place. Keep container tightly closed.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>
<b>Contains</b>	DIPHENYLMETHANEDIISOCYANATE -Isomers & homologues, DIPHENYLMETHANE-4,4'-DI-ISOCYANATE, DIPHENYLMETHANE-2,4'-DI-ISOCYANATE
<b>Supplementary precautionary statements</b>	<p>P201 Obtain special instructions before use.</p> <p>P202 Do not handle until all safety precautions have been read and understood.</p> <p>P261 Avoid breathing vapour/ spray.</p> <p>P272 Contaminated work clothing should not be allowed out of the workplace.</p> <p>P260 Do not breathe vapour/ spray.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P308+P313 IF exposed or concerned: Get medical advice/ attention.</p> <p>P314 Get medical advice/ attention if you feel unwell.</p> <p>P321 Specific treatment (see medical advice on this label).</p> <p>P302+P352 IF ON SKIN: Wash with plenty of water.</p> <p>P332+P313 If skin irritation occurs: Get medical advice/ attention.</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.</p> <p>P337+P313 If eye irritation persists: Get medical advice/ attention.</p> <p>P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P405 Store locked up.</p>

### 2.3. Other hazards

#### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

<b>DIPHENYLMETHANEDIISOCYANATE -Isomers &amp; homologues</b>	<b>60-100%</b>
CAS number: 9016-87-9	EC number: 618-498-9
<b>Classification</b>	
Acute Tox. 4 - H332	
Skin Irrit. 2 - H315	
Eye Irrit. 2 - H319	
Resp. Sens. 1 - H334	
Skin Sens. 1 - H317	
Carc. 2 - H351	
STOT SE 3 - H335	
STOT RE 2 - H373	

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<b>DIPHENYLMETHANE-4,4'-DI-ISOCYANATE</b>			<b>10-30%</b>
CAS number: 101-68-8	EC number: 202-966-0	REACH registration number: 01-2119457014-47-XXXX	
<b>Classification</b>			
Acute Tox. 4 - H332			
Skin Irrit. 2 - H315			
Eye Irrit. 2 - H319			
Resp. Sens. 1 - H334			
Skin Sens. 1 - H317			
Carc. 2 - H351			
STOT SE 3 - H335			
STOT RE 2 - H373			
<b>DIPHENYLMETHANE-2,4'-DI-ISOCYANATE</b>			<b>5-10%</b>
CAS number: 5873-54-1	EC number: 227-534-9	REACH registration number: 01-2119480143-45-XXXX	
<b>Classification</b>			
Acute Tox. 4 - H332			
Skin Irrit. 2 - H315			
Eye Irrit. 2 - H319			
Resp. Sens. 1 - H334			
Skin Sens. 1 - H317			
Carc. 2 - H351			
STOT SE 3 - H335			
STOT RE 2 - H373			
<b>DIPHENYLMETHANE-2,2'-DI-ISOCYANATE</b>			<b>&lt;1%</b>
CAS number: 2536-05-2	EC number: 219-799-4	REACH registration number: 01-2119927323-43-XXXX	
<b>Classification</b>			
Acute Tox. 4 - H332			
Skin Irrit. 2 - H315			
Eye Irrit. 2 - H319			
Resp. Sens. 1 - H334			
Skin Sens. 1 - H317			
Carc. 2 - H351			
STOT SE 3 - H335			
STOT RE 2 - H373			

The full text for all hazard statements is displayed in Section 16.

**Composition comments** Candidate List of Substances of Very High Concern Authorisation  
This product contains no substances of very high concern in concentrations where an information obligation applies (REACH Regulation (EC) No. 1907/2006, Article 57).

**SECTION 4: First aid measures****4.1. Description of first aid measures**

**General information** Instantly remove any clothing soiled by the product

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<b>Inhalation</b>	Take the person into the fresh air and keep him warm, let him rest; if there is difficulty in breathing, medical advice is required.
<b>Ingestion</b>	IF SWALLOWED: Do not induce vomiting. Get medical attention immediately.
<b>Skin contact</b>	Remove contamination with soap and water or recognised skin cleansing agent. Remove contaminated clothing. Get medical attention if symptoms are severe or persist after washing.
<b>Eye contact</b>	Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Seek medical attention and bring along these instructions.

### 4.2. Most important symptoms and effects, both acute and delayed

<b>Inhalation</b>	May cause sensitisation by inhalation.
<b>Skin contact</b>	May cause sensitisation by skin contact.

### 4.3. Indication of any immediate medical attention and special treatment needed

<b>Notes for the doctor</b>	Treat symptomatically.
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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

<b>Suitable extinguishing media</b>	Extinguish with the following media: Water spray. Carbon dioxide (CO <sub>2</sub> ). Alcohol-resistant foam. Powder.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.

### 5.2. Special hazards arising from the substance or mixture

<b>Hazardous combustion products</b>	Thermal decomposition or combustion products may include the following substances: Carbon dioxide (CO <sub>2</sub> ). Carbon monoxide (CO). Hydrogen cyanide (HCN). Nitrous gases (NO <sub>x</sub> ). Isocyanates.
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### 5.3. Advice for firefighters

<b>Protective actions during firefighting</b>	Use water to keep fire exposed containers cool and disperse vapours. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.
<b>Special protective equipment for firefighters</b>	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

<b>Personal precautions</b>	Wear protective clothing as described in Section 8 of this safety data sheet. Provide adequate ventilation. Use suitable respiratory protection if ventilation is inadequate.
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### 6.2. Environmental precautions

<b>Environmental precautions</b>	Do not discharge into drains or watercourses or onto the ground. Collect and dispose of spillage as indicated in Section 13.
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### 6.3. Methods and material for containment and cleaning up

<b>Methods for cleaning up</b>	Small Spillages: Wipe up with an absorbent cloth and dispose of waste safely. Dispose of contents/container in accordance with local regulations. Neutralize with a solution of 5 - 10 % Sodium Carbonate, 0.2 - 2 % detergents and 90 - 95 % water. Large Spillages: Pump off product.
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### 6.4. Reference to other sections

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**Reference to other sections** For personal protection, see Section 8. For waste disposal, see Section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

**Usage precautions** Use only in well-ventilated areas. Provide adequate ventilation. Do not breathe gas, fume, vapours or spray. Protect from moisture. Clean contamination as soon as it occurs.

#### 7.2. Conditions for safe storage, including any incompatibilities

**Storage precautions** Protect from moisture. Keep away from food, drink and animal feeding stuffs. Store away from the following materials: Acids.

#### 7.3. Specific end use(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.2.

### SECTION 8: Exposure controls/Personal protection

#### 8.1. Control parameters

##### Occupational exposure limits

##### DIPHENYLMETHANEDIISOCYANATE -Isomers & homologues

Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m<sup>3</sup>(Sen)

Short-term exposure limit (15-minute): WEL 0.07 mg/m<sup>3</sup>(Sen)

##### DIPHENYLMETHANE-4,4'-DI-ISOCYANATE

Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m<sup>3</sup>(Sen)

Short-term exposure limit (15-minute): WEL 0.07 mg/m<sup>3</sup>(Sen)

##### DIPHENYLMETHANE-2,4'-DI-ISOCYANATE

Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m<sup>3</sup>(Sen)

Short-term exposure limit (15-minute): WEL 0.07 mg/m<sup>3</sup>(Sen)

##### DIPHENYLMETHANE-2,2'-DI-ISOCYANATE

Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m<sup>3</sup>(Sen)

Short-term exposure limit (15-minute): WEL 0.07 mg/m<sup>3</sup>(Sen)

WEL = Workplace Exposure Limit

#### 8.2. Exposure controls

##### Protective equipment



##### Appropriate engineering controls

As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapour or mist.

##### Eye/face protection

Wear eye protection.

##### Hand protection

To protect hands from chemicals, gloves should comply with European Standard EN374.

##### Other skin and body protection

Wear suitable coveralls to prevent exposure to the skin.

##### Hygiene measures

Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.

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**Respiratory protection**      Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Gas and combination filter cartridges should comply with European Standard EN14387.

**Environmental exposure controls**      Keep container tightly sealed when not in use.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Liquid.
<b>Colour</b>	Brown.
<b>Odour</b>	Musty (mouldy).
<b>Odour threshold</b>	Not determined.
<b>pH</b>	Not applicable.
<b>Initial boiling point and range</b>	>300°C @ 1013 hPa
<b>Flash point</b>	~ 229°C
<b>Evaporation rate</b>	Not determined.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Vapour pressure</b>	ca. 11 hPa @ 20°C ca. 20 hPa @ 50°C ca. 22 hPa @ 55°C
<b>Relative density</b>	~ 1.23 @ 20°C
<b>Auto-ignition temperature</b>	>500°C
<b>Decomposition Temperature</b>	Not determined.
<b>Viscosity</b>	ca. 145 mPa s @ 20°C
<b>Oxidising properties</b>	Not determined.

#### 9.2. Other information

**Other information**      Not applicable.

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

**Reactivity**      The product reacts with water and will generate heat.

#### 10.2. Chemical stability

**Stability**      Stable at normal ambient temperatures. Polymerises at about 200 degrees Celsius with the evolution of carbon dioxide.

#### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions**      The following materials may react with the product: Water, moisture. Forms CO<sub>2</sub>. May generate heat.

#### 10.4. Conditions to avoid

**Conditions to avoid**      Water, moisture.

#### 10.5. Incompatible materials

**Materials to avoid**      Avoid contact with the following materials: Acids. Alcohols. Amines. Alkalis. Water, moisture.

#### 10.6. Hazardous decomposition products

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**Hazardous decomposition products** Does not decompose when used and stored as recommended.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### Acute toxicity - inhalation

**ATE inhalation (dusts/mists mg/l)** 1.5

##### Respiratory sensitisation

**Respiratory sensitisation** May cause sensitisation or allergic reactions in sensitive individuals. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

##### Reproductive toxicity

**Reproductive toxicity - fertility** No information available.

**General information** Known or suspected carcinogen for humans.

**Inhalation** Harmful if inhaled.

**Ingestion** May cause stomach pain or vomiting.

**Skin contact** Prolonged or repeated exposure may cause severe irritation. The liquid is irritating to eyes and skin.

**Eye contact** Irritation, burning, lachrymation, blurred vision after liquid splash.

### SECTION 12: Ecological information

#### 12.1. Toxicity

##### Acute aquatic toxicity

**Acute toxicity - fish** LC<sub>50</sub>, 96 hour: > 1000 mg/l, Brachydanio rerio (Zebra Fish)

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 24 hours: > 1000 mg/l, Daphnia magna

**Acute toxicity - aquatic plants** ErC<sub>50</sub>, 72 hours: > 1640 mg/l, Algae

**Acute toxicity - microorganisms** EC<sub>50</sub>, 3 hours: > 100 mg/l, Activated sludge

#### 12.2. Persistence and degradability

**Persistence and degradability** Not readily biodegradable.

**Stability (hydrolysis)** Reacts with water.

**Biodegradation** Not readily biodegradable.

#### 12.3. Bioaccumulative potential

**Bioaccumulative potential** The product is not bioaccumulating.

#### 12.4. Mobility in soil

**Mobility** No data available.

**Henry's law constant** 0.0229 Pa m<sup>3</sup>/mol @ °C

#### 12.5. Results of PBT and vPvB assessment

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**Results of PBT and vPvB assessment** This product does not contain any substances classified as PBT or vPvB.

### 12.6. Other adverse effects

**Other adverse effects** Not applicable.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**General information** Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

**Disposal methods** For disposal, local regulations issued by the authorities must be observed. Dispose of liquid components at a suitable incineration plant. After curing, the product can be disposed of with household waste.

## SECTION 14: Transport information

**General** The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

### 14.1. UN number

Not applicable.

### 14.2. UN proper shipping name

Not applicable.

### 14.3. Transport hazard class(es)

No transport warning sign required.

### 14.4. Packing group

Not applicable.

### 14.5. Environmental hazards

**Environmentally hazardous substance/marine pollutant**

No.

### 14.6. Special precautions for user

Not applicable.

### 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

**EU legislation** Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).  
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).  
Commission Regulation (EU) No 2015/830 of 28 May 2015.



## ARDEX X 60 PU FLEX Part B

### Restrictions (Annex XVII Regulation 1907/2006)

This product contains substances subject to EU Regulation 1907/2006 (REACH) Annex XV11.

Diphenylmethane-4,4'-diisocyanate  
CAS-No.: 101-68-8, EC-No.: 202-966-0  
Subject to REACH Annex XV11, No. 56

Diphenylmethane-2,4'-diisocyanate  
CAS-No.: 5873-54-1  
Subject to REACH Annex XV11, No. 56

2,2'-Methylenediphenyl diisocyanate  
CAS-No.: 2536-05-2, EC-No.: 219-799-4  
Subject to REACH Annex XV11, No. 56

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

### SECTION 16: Other information

<b>Revision comments</b>	2
<b>Issued by</b>	Research and Development Manager
<b>Revision date</b>	01/02/2019
<b>Supersedes date</b>	12/06/2018
<b>SDS number</b>	20434
<b>Hazard statements in full</b>	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H332 Harmful if inhaled. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation. H351 Suspected of causing cancer. H373 May cause damage to organs through prolonged or repeated exposure.

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.