

ARMOUR - SHIELD

Fire Resistant Polyurea Elastomer (to UNI 9174)

Product Description

ARMOUR - SHIELD R is a **pure polyurea** 100% solids, zero VOC resin system, which when combined with Armour - Shield H will produce a resilient, durable polyurea elastomer that has been tested to Class 1 in the UNI 9174 fire test. This material has been formulated to perform in a wet environment and exhibits good resistance to hydrolysis.

ARMOUR - SHIELD is available in a range of colours as indicated:

White	Black	Red
Yellow	Green	Blue
Orange	Grey	Brown

Typical Applications

- TV, film and exhibition scenery and costuming
- Theme parks
- Coating polystyrene to form convincing but lightweight architectural features

Processing

ARMOUR - SHIELD is processed through specially designed dispensing equipment having accurate metering pumps for the two components. The components should be maintained at 40-60°C and mixed and sprayed by the appropriate gun, on which Isothane technical staff can advise.

Cured elastomer to be repaired should be abraded and traces of dust removed. Maximum adhesion will be obtained if the surfaces to be repaired are heated to a minimum of 35°C. Some surfaces will require the use of an Isothane primer.

To bond **ARMOUR - SHIELD** to the substrate, the substrate must be dry and its temperature at least 3°C above the local dew point. **ARMOUR - SHIELD** is hydrophobic so unaffected by damp substrates if it is meant to be non - bonded or demoulded.



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Certificate No. FM 21549



INVESTOR IN PEOPLE



Certificate No. EMS 68443



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Storage, Handling and Personal Protection

- **ARMOUR - SHIELD** should be stored in dry conditions at a temperature 20-25° C.
- **ARMOUR - SHIELD R** Resin has a shelf life of 6 months. Armour - Shield H has a shelf life of 6 months if stored at 20-25° C.
- Opened, part used containers must be resealed immediately after use.

The recommendations in our Safety Data Sheet for this product must be followed at all times. More general information is included in our publication "A Guide to the Safe Handling of Polyurethane Chemicals" and in the following Technical Data Sheets which are available on request:-

- Decontamination of Isocyanates using Isothane Decontaminant.

Additional Information

ARMOUR - SHIELD R resin may require some agitation before use, in order to effect redispersion of any pigment. Recirculation of both components from the barrel, through the machine's heater blocks and back to the barrel, is recommended when using standard 2:1 or 1:1 transfer pumps, in order to prime the materials and machine. 30 minutes of recirculation to warm the components to around 40° C will be adequate.

Post Curing: articles need not be post cured.

<u>Typical Properties of</u> <u>Armour - Shield</u>	<u>Armour - Shield R Resin</u>	<u>Armour - Shield H</u>
Appearance	Liquid - varying colours	Clear Amber Liquid
Viscosity 25° C	700 cps	650 cps
Specific Gravity @ 25° C	1.2 - 1.3	1.2 - 1.3
Water Content	<0.01%	N/A
Mixing Ratio:	100 parts Armour - Shield R Resin: 100 parts Armour - Shield H (by volume, mix tolerance \pm 1%)	
Process:	Spray	

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Armour - Shield Properties

<u>Units</u>	<u>Typical Values</u>	<u>Test Method</u>
Shore Hardness ° D	45	
Tensile Strength MPa	15	ASTM D412
Elongation %	335	ASTM D412
Taber Abrasion mg	325	H18, 1000 revs, 1000g

Reaction Profile

Gel Time	8 secs
Walk On	5 mins



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