

# Araldite<sup>®</sup> Kit K105

Araldite <sup>®</sup> KIT K 105	Part A	100	pbw	100	pbv
Araldite <sup>®</sup> KIT K 105	Part B	50	pbw	50	pbv

**Araldite<sup>®</sup> Kit K105 is a two part epoxy based adhesive.**

## **Application**

It is particularly recommended for the manufacture of insulated and standard rail joints

## **Processing methods**

Manual mixing

## **Key Properties**

Easy to mix and apply  
Gap filling and sag resistant  
Solvent-free  
Forms high strength permanent bonds  
Excellent electrical properties  
Cures with negligible shrinkage  
Good weathering and water resistance  
Minimum application temperature 15°C

## Product Data (Guideline Values)

### Araldite® Kit K105

	<b>Resin</b>	<b>Hardener</b>
Colour	Light Beige	Black
Consistency	Thixotropic Paste	Thixotropic Paste
Specific Gravity gm/cm <sup>3</sup>	1.45	1.45
Flash Point°C	172	>110
Shelf Life	At least two years	At least two years

## Processing Data (Guideline Values)

### Mix Ratio

	Parts By Weight	Parts By Volume
Araldite Kit K 105 Part A	100	100
Araldite Kit K 105 Part B	50	50

### Gel Time, Viscosity and Curing

Useable Life At:	15°C	100ml	100 Minutes
	25°C	100ml	60 Minutes
	35°C	100ml	30 Minutes
Minimum Cure Time At:	25°C		24 Hours
Full Cure At	25°C		7 Days
	35°C		3-4 Days

## Processing and Storage(Guideline Values)

### Application

Mixing must be thorough, and should be continued until Resin and Hardener are a uniform grey colour.

This system can be applied manually by spatula, putty knife, trowel or notched spreader. Although Araldite® Kit K105 is generally used as a rail bonding adhesive, it can be used to bond or grout metals, concrete, ceramics, rigid plastics and many other materials

### Surface Pretreatment

Complete durable adhesion can only be achieved if the surfaces to be bonded are properly pre-treated.

In all cases except for concrete, the following pretreatment procedure should be followed:

Degrease, Abrade And Degrease Again.

For concrete, the final degreasing step should be omitted but all loose material and dust must be removed.

Degreasing: The removal of all traces of dirt, oil and grease can be achieved by using a solvent such as EPOSOLVE 70 (Huntsman Advanced Materials), etc. Methylated spirits, petrol and paint thinners should not be used (see Note below). Concrete should be degreased by washing with a strong detergent solution.

Important: Most solvents are highly flammable. The prescribed safety precautions must always be taken.

### Curing

To determine whether crosslinking has been carried to completion and the final properties are optimal, it is necessary to carry out relevant measurements on the actual object or to measure the glass transition temperature. Different gel and cure cycles in the customer's manufacturing process could lead to a different degree of crosslinking and thus a different glass transition temperature.

### Storage Conditions

Store the components in a dry place at RT, in tightly sealed original containers. Under these conditions, the shelf life will correspond to the expiry date stated on the label. After this date, the product may be processed only after reanalysis. Partly emptied containers should be tightly closed immediately after use.

For information on waste disposal and hazardous products of decomposition in the event of a fire, refer to the Material Safety Data Sheets (MSDS) for these particular products.

## Mechanical and Physical Properties (Guideline Values)

Determined on standard test specimen at 23°C. Cured for 24h at RT + 6h at 80°C

Glue Line Colour				Grey
Tensile Strength (Al/Al)	Cure Schedule	5 Days At 25°C	MPa	> 10
Maximum Operating Temperature	Cure Schedule	7 Days At 25°C		70 - 75°C
	Cure Schedule	16 Hours At 60°C		95 - 100°C
Tensile Strength (Al/Al)	Cure For 16 Hrs	At 60°C	MPa	>14
Volume Resistivity(Dry)	Cure For 16 Hrs	At 40°C	JIS K6911	1.9 x 10 <sup>15</sup> ohm.cm
Volume Resistivity(Wet)*	Cure for 16 hrs	At 40°C		2.5 x 10 <sup>15</sup> ohm.cm
	*Test specimen was immersed in Water for 24 hrs			

## Industrial hygiene

Mandatory and recommended industrial hygiene procedures should be followed whenever our products are being handled and processed. For additional information please consult the corresponding Safety Data Sheets and the brochure "Hygienic precautions for handling plastics products".

### Handling Precautions

Safety precautions at workplace:

protective clothing

Yes.

gloves

Essential.

arm protectors

Recommended when skin contact likely.

goggles/safety glasses

Yes.

respirator/dust mask

Recommended.

Skin protection:

before starting work

Apply barrier cream to exposed skin.

after washing

Apply barrier or nourishing cream.

Cleaning of contaminated skin

Dab off with absorbent paper, wash with warm water and alkali-free soap, then dry with disposable towels. Do not use solvents.

Clean shop requirements

Cover workbenches, etc. with light coloured paper. Use disposable beakers, etc.

Disposal of spillage

Soak up with sawdust or cotton waste and

Ventilation:

deposit in plastic-lined bin.

of workshop

of workplace

Renew air 3 to 5 times an hour.

Exhaust fans. Operatives should avoid inhaling vapors.

## First Aid

Contamination of the eyes by resin, hardener or casting mix should be treated immediately by flushing with clean, running water for 10 to 15 minutes. A doctor should then be consulted.

Material smeared or splashed on the skin should be dabbed off, and the contaminated area then washed and treated with a cleansing cream (see above). A doctor should be consulted in the event of severe irritation or burns.

Contaminated clothing should be changed immediately.

For more detailed information please read Huntsman Advanced Material safety data sheets for the individual products.

## Note

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