

# Araldite<sup>®</sup> Kit K138

Araldite <sup>®</sup> Kit K138	Part A	100	pbw
Araldite <sup>®</sup> Kit K138	Part B	40	pbw

**Araldite<sup>®</sup> Kit K138 is a two-part, formulated epoxy based adhesive.**

## Application

This is especially suitable for bonding operations where the use of a hot-setting adhesive is not possible.

## Processing methods

Manual Mixing

## Key Properties

Easy to mix and apply  
Gap filling  
Excellent resistance to chemicals  
Solvent free  
Heat resistance up to 120°C  
Cures @ 5-100°C

## Product Data (Guideline Values)

### Araldite® Kit K138

		Resin	Hardener
Colour	TM02	Pale Beige	Grey
Consistency		Thixotropic Paste	Thixotropic Paste
Specific Gravity gm/cm <sup>3</sup>	TM16	1.65 - 1.75	1.65 - 1.75
Flash Point° C	TM23	110	104
Shelf Life		At least 1 year	At least 1 year

## Processing Data (Guideline Values)

### Mix Ratio

	Parts by weight	Parts by volume
Araldite® Kit K138 Part A	100	
Araldite® Kit K138 Part B	40	

### Gel Time, Viscosity and Curing

Usable Life	@ 25°C		30-40 mins (depending on quantity mixed)
Initial Mix Viscosity	@ 25°C		60000 - 100000 mPa.s
Minimum Cure Time	@ 5°C	ISO 291	3 days
	@ 10°C		36 hours
	@ 25°C		18 hours
	@ 60°C		1 hour
	@ 100°C		10 minutes
Full cure	@ 25°C	ISO 291	48 hours

# Processing and Storage (Guideline Values)

## Preparation

It is essential that the correct mixing ratio be used and that the resin and hardener are thoroughly mixed before use. Inaccuracies will result in a lowering of physical properties of the cured system, and if the error is sufficiently great, the system may not cure satisfactorily.

## Mixing

Blend both components together well to achieve a homogenous mix. Mixing of the components can be done at room temperature.

## Curing

To determine whether cross linking 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 cross linking and thus a different glass transition temperature

## Surface Pretreatment

To obtain completely satisfactory and durable joints, the surfaces to be bonded must be properly pretreated. All traces of dirt, oil and grease must be removed using a solvent, such as Eposolve 70 (Huntsman Advanced Materials) or acetone etc. Alcohol, petrol or paint thinners should never be used

Maximum bond strength is obtained by mechanically abrading or chemically etching the surface to provide a better key for the adhesives. Mechanical abrading must be followed by a second, thorough degreasing treatment.

For more specific information, please refer to Araldite Adhesives Surface Preparation and Pretreatments.

## Clean Up

Any spillages should be cleaned up as they occur. Use dry sand or sawdust to soak up bulk of large spillages, and deposit into waste drums. Clean up small spillages before they set with Eposolve 70 (Huntsman Advanced Materials) or warm water and detergent.

**CAUTION:** Eposolve 70 contains Toluene and should only be used in well ventilated areas. Avoid direct skin contact. For further information, refer to the specific instruction sheet.

## 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/RT + 6h/80°C

Glue Line Colour			Opaque grey
Tensile Bond Strength (AL/AL)	@ 0°C	ISO	11 - 15 N/mm <sup>2</sup>
	@ 40°C		12 - 16 N/mm <sup>2</sup>
	@ 80°C		15 - 19 N/mm <sup>2</sup>
	@ 100°C		11 - 15 N/mm <sup>2</sup>
Maximum Operating temperature		ASTM E 1356	120°C
Coefficient of linear thermal expansion		D 3386	60 - 75 x 106mm/mm.K
Tensile strength (Cure: 16 hours at 40°C)			43 N/mm <sup>2</sup>
1 N/mm <sup>2</sup> = 1 MPa =145 psi			
*Typical figures only, will vary with time and temperature			

## 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:

Of workshop	Deposit in plastic-lined bin.
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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## HUNTSMAN ADVANCED MATERIALS

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