

Advanced Materials**Araldite® 1570 FST A/B****Aerospace Adhesives****DATA SHEET****KEY PROPERTIES**

- **Two component epoxy adhesive**
- **Flame retardant**
- **Room temperature curing**

DESCRIPTION

Araldite® 1570 FST A/B is an halogen-free two-component epoxy adhesive. It is designed for aerospace applications which require flame retardant properties, its first application being PE foam to phenolic GRP bonding in cargo areas.

Araldite® 1570 FST A/B is qualified to AIMS 10-04-006 and meets following FST (Flame Smoke Toxicity) standards: FAR 25.853 (a), FAR 25.853 (a-1) and AITM 3.0005.

TYPICAL PRODUCT DATA

Property	Araldite® 1570 FST A	Araldite® 1570 FST B	Mixed Adhesive
Colour (visual)	Black	White	Dark grey
Appearance	Thixotropic paste	Thixotropic paste	Thixotropic paste
Specific gravity	1.3 – 1.5	1.1 – 1.3	1.2 – 1.4
Viscosity at 25°C (Pas)	100 - 200	250 - 350	
Pot life (100g at 25°C)	-	-	ca. 140 min
Shelf life at 2-8 °C	1 year	1 year	

PROCESSING**Pretreatment**

The strength and durability of a bonded joint are dependant on proper treatment of the surfaces to be bonded.

At the very least, joint surfaces should be cleaned with a good degreasing agent such as acetone or other proprietary degreasing agents in order to remove all traces of oil, grease and dirt. Alcohol, gasoline (petrol) or paint thinners should never be used.

The strongest and most durable joints are obtained by either mechanically abrading or chemically etching (“pickling”) the degreased surfaces. Abrading should be followed by a second degreasing treatment.

Mix ratio	Parts by weight	Parts by volume
Araldite® 1570 FST A	100	100
Araldite® 1570 FST B	87.8	100

Araldite® 1570 FST A/B is available in bulk and in cartridges for ease of mixing and application.

Application

The resin/hardener mix may be applied manually or robotically to the pretreated and dry joint surfaces. Huntsman's technical support group can assist the user in the selection of an suitable application method as well as suggest a variety of reputable companies that manufacture and service adhesive dispensing equipment.

A layer of adhesive 0.05 to 0.10 mm thick will normally impart the greatest lap shear strength to the joint. Huntsman stresses that proper adhesive joint design is also critical for a durable bond. The joint components should be assembled and secured in a fixed position as soon as the adhesive has been applied.

Equipment maintenance

All tools should be cleaned before adhesives residues have had time to cure. The removal of cured residues is a difficult and time-consuming operation.

If solvents such as acetone are used for cleaning, operatives should take the appropriate precautions and, in addition, avoid skin and eye contact.

Recommended cure cycle

48 hrs at 23°C

TYPICAL CURED PROPERTIES

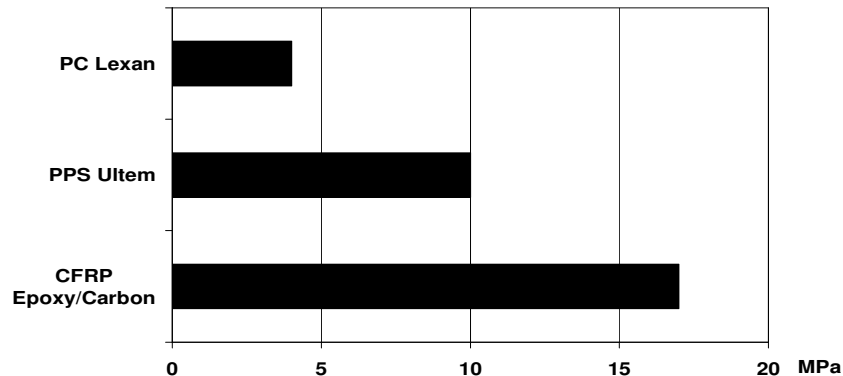
(Not for specification purposes)

Lap Shear Strength on Aluminium (ISO 4587)

Test Temperature (°C)	Results (MPa)	Failure Mode
- 55	18 - 23	cohesive
+ 23	14 - 20	cohesive
+ 80	3 - 6	cohesive

Tested on chromic acid etched Al 2024 T3, Cure cycle: 48 hrs at 23°C

Lap Shear Strength of typical plastic-plastic joints (ISO 4587)



Glass transition temperature Cure cycle: 48 hrs at 23°C

ca. 60°C

Flammability

Test Method : Bunsen Burner Test, Vertical – 60s Ignition Time

Standard : FAR 25.853 (a)

Cure cycle: 4 hrs at 60°C

	Unit	Results	Requirements
Burn Length	mm	42	152
Flame Time	s	0	15
Drip Flame Time	s	0	3

Smoke

Test Method : Smoke density, Flaming Mode

Standard : FAR 25.853 (a-1) / AITM 2.0007

Cure cycle: 4 hrs at 60°C

After 4 minutes, Specific optical smoke density **Ds = 46** (maximum limit of 200).**Toxicity**

Standard : AITM 3.0005 / ABD 0031

Cure cycle: 4 hrs at 60°C

Gas	Unit	Results	Requirements
HCN	ppm	5	150
CO		90	1000
NO_x		7	100
SO₂ + H₂S		2	100
HF		0	100
HCl		0	150

STORAGE

Araldite® 1570 FST A and Araldite® 1570 FST B may be stored for up to 1 year at 2-8 °C provided the components are stored in sealed containers. The expiry date is indicated on the label.

Keep containers in dry atmosphere, avoid exposure of the containers to moisture and direct sources of heat.

**HANDLING
PRECAUTIONS****Caution**

Our products are generally quite harmless to handle provided that certain precautions normally taken when handling chemicals are observed. The uncured materials must not, for instance, be allowed to come into contact with foodstuffs or food utensils, and measures should be taken to prevent the uncured materials from coming in contact with the skin, since people with particularly sensitive skin may be affected. The wearing of impervious rubber or plastic gloves will normally be necessary; likewise the use of eye protection. The skin should be thoroughly cleansed at the end of each working period by washing with soap and warm water. The use of solvents is to be avoided. Disposable paper - not cloth towels - should be used to dry the skin. Adequate ventilation of the working area is recommended. These precautions are described in greater detail in the Material Safety Data sheets for the individual products and should be referred to for fuller information.

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