

Advanced Materials

Araldite® 90 Seconds

DIY Adhesives

TECHNICAL DATA SHEET

Araldite® 90 Seconds

Two part epoxy adhesive for DIY

Other commercial names

- Araldite® Super Glue +
- Araldite® Instant Clear
- Araldite® Fusion
- Araldite® 90 Segundos Fusion
- Araldite® 90 seconds Fusion
- Araldite® 90 secondes

Key properties

- Very rapid curing at room temperature
- Transparent / pale coloured
- 1 : 1 mixing
- Solvent free

Description

Araldite® 90 Seconds is a two part transparent epoxy adhesive gelling in 90 seconds. The product may be used to bond metals, ceramics and many common plastics.

Typical product data

Property	Araldite® 90 Seconds Resin	Araldite® 90 Seconds Hardener	Mixed Adhesives
Colour (visual)	transparent	pale yellow	pale yellow
Specific gravity	1.16	1.14	1.16
Viscosity at 25°C (Pas)	18 - 45	10 - 20	ca. 25
Pot Life (2 gm at 25°C)	-	-	90 seconds

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, trichloroethylene or proprietary degreasing agent 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® 90 Seconds Resin	100	100
Araldite® 90 Seconds Hardener	100	100

The resin and hardener should be blended until they form a homogeneous mix.

Application of adhesive

The resin/hardener mix may be applied directly or with a spatula to the pretreated and dry joint surfaces. 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 with hot water and soap 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.

Times to minimum shear strength

Temperature	°C	10	15	23	40	60
Cure time to reach	hours	-	-	-	-	-
LSS > 1N/mm ²	minutes	15	10	5	2	1
Cure time to reach	hours	-	-	-	-	-
LSS > 10N/mm ²	minutes	150	100	60	20	5

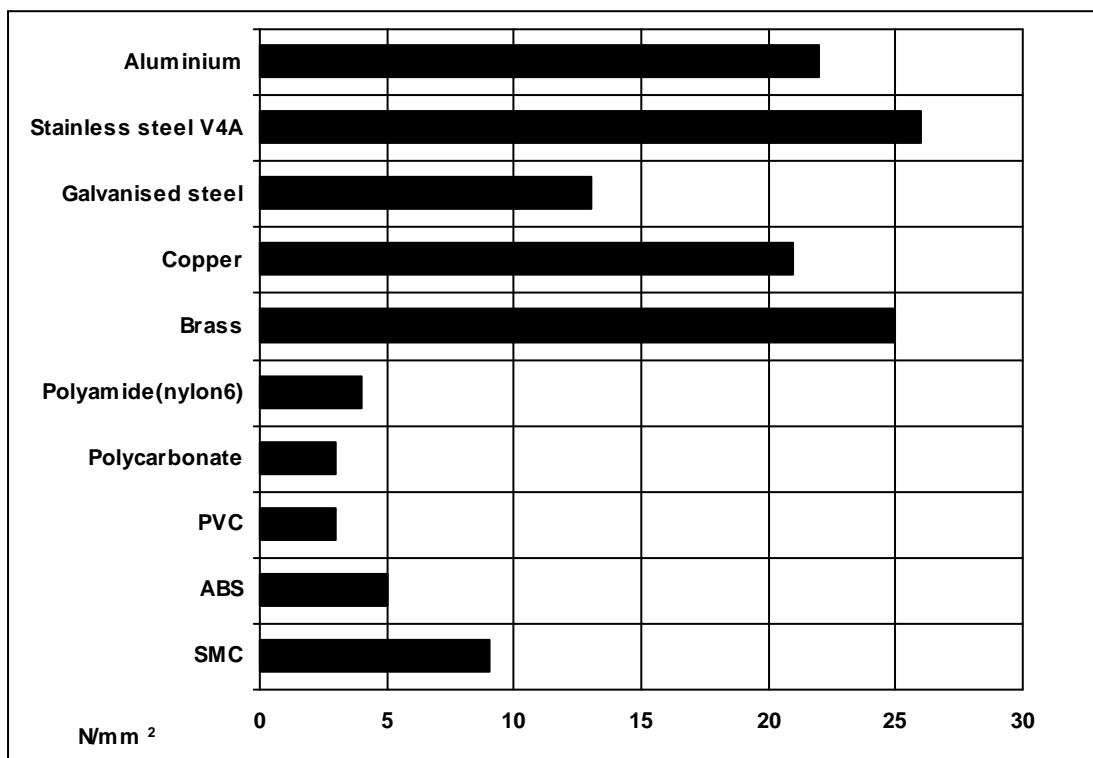
LSS = Lap shear strength.

Typical cured properties

Average lap shear strengths of typical metal-to-metal joints (ISO 4587)

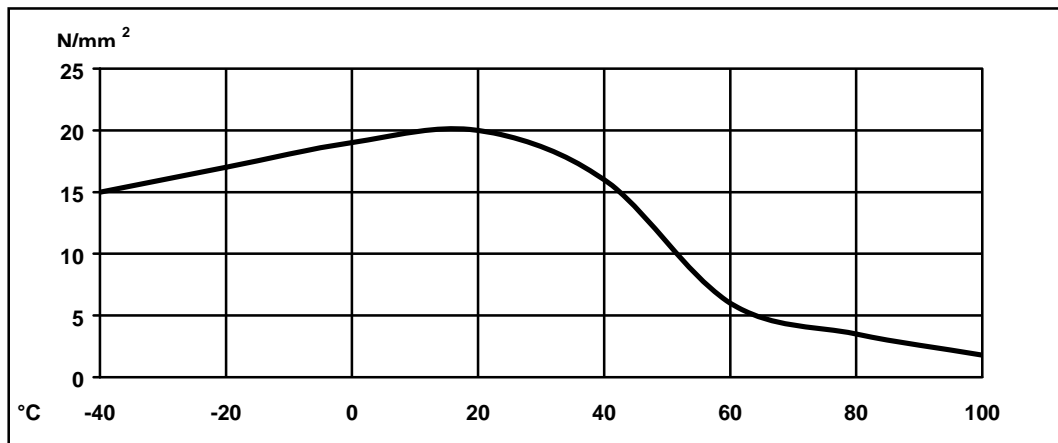
Cured for 16 hours at 40°C and tested at 23°C.

Pre-treatment: plastics abraded, metals sandblasted.



Lap shear strength versus temperature (ISO 4587) (typical average values)

Carried out on aluminium, cure= 16 hours at 40°C.



Storage

Araldite® 90 Seconds may be stored for up to 3 years at 2 - 40°C. The expiry date is indicated on the label.

**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 food-stuffs 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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