

Aerospace Adhesives  
Uralane® 5779 A/B  
Two component urethane adhesive

Key properties

- Caulking compound
- Easy to use 1:1 ratio
- Self extinguishing
- UV and humidity stable

Description

Uralane 5779 A/B is a two component, polyurethane adhesive which cures at room temperature or with heat to form tough, impact resistant bonds to metal or plastic substrates. The mixed compound is a paste for application to vertical or overhead surfaces, and can be used as a sealant or caulking compound.

Typical product  
data

Property	Uralane 5779 A	Uralane 5779 B	Mixed adhesive	Test Method
Colour (visual)	pale blue	white	white	visual
Specific gravity (g/cm <sup>3</sup> )	ca. 1.4	ca. 1.4	ca. 1.4	ASTM-D-792
Viscosity (Pas)	ca. 45	ca. 150	paste	ASTM-D-2393
Pot life (100 gm at 25°C) mins	-	-	8 - 15	ASTM-D-1338

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
Uralane 5779 A	100	100
Uralane 5779 B	98	100

The resin and hardener should be blended until they form a homogeneous mix. It is advisable to mix that amount which can be used in 5 minutes at 25°C.

Resin and hardener are also available in cartridges incorporating mixers and can be applied as ready to use adhesives with the aid of the tool recommended by Vantico.

**Application of adhesive**

The resin/hardener mix is applied with a spatula, to the pretreated and dry joint surfaces. The joint components should be assembled and clamped as soon as the adhesive has been applied. An even contact pressure throughout the joint area will ensure optimum cure.

**Mechanical processing**

Specialist firms have developed metering, mixing and spreading equipment that enables the bulk processing of adhesive.  
Vantico will be pleased to advise customers on the choice of equipment for their particular needs.

**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.

**Typical cure Schedules**

24 - 48 hours at 20 - 25°C  
or  
45 minutes at 50 - 55°C

**Typical cured properties**

The figures were determined with typical production batches using standard testing methods. They are provided solely as technical information and do not constitute a product specification.

Test	Result	Test Method
Maximum service temperature	71°C	ASTM-D-648
Tensile Lap Shear (Aluminium at 25°C)	8.3 MPa	ASTM-D-1002
T-peel (Aluminium at 25°C)	1.75 N/mm	ASTM-D-1876
Tensile Lap Shear (Polycarbonate at 25°C)	6.9 MPa	ASTM-D-1002
T-peel (Polycarbonate at 25°C)	1.75 N/mm	ASTM-D-1876
Shore D Hardness at 25°C	52	ASTM-D-2240
Flammability, 60 Second Ignition, Vertical		
Self extinguishing Time	< 2 seconds	
Burn Length	< 20.3 cms	
Drip Self extinguishing Time	< 1 second	

**Storage**

This product has an assigned shelf life of 6 months at 6-28°C as supplied but quality is maintained well beyond this period if stored in the original unopened packaging. When cartridges are removed from the moisture barrier envelope, they should be used within 2 - 3 weeks.

**Handling precautions**

**Caution**  
Vantico 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 Vantico publication No. 24264/3/e Hygienic precautions for handling plastics products of Vantico and in the Vantico Material Safety Data sheets for the individual products. These publications are available on request and should be referred to for fuller information.

**Vantico Limited**  
**Adhesives and Tooling**

**Duxford, Cambridge**  
**England CB2 4QA**  
  
**Tel: +44 (0) 1223 832121**  
**Fax: +44 (0) 1223 493322**  
**www.vantico.com**

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