

Plastic Welder

ORDERING INFORMATION

	<u>Stock No.</u> 14300	<u>Package Size</u> 25ml Dev-tube
Description	Plastic Welder is a toughened structural adhesive which after curing produces superior strength on load bearing bonds. Ideal for engineered plastics.	
Features	<ul style="list-style-type: none"> • Excellent shear, peel and impact • Non-sagging • Excellent load bearing qualities 	<ul style="list-style-type: none"> • Resistant to weathering and humidity • Room temperature cure • Minimal surface preparation
Recommended applications	<ul style="list-style-type: none"> • PVC & Vinyl • FRT • PPO • Metton® • Valox® • GTX • Epoxy 	<ul style="list-style-type: none"> • ABS • PBT • PCBB • Lomod® • Noryl® • Minlon® • RIM Urethane

PRODUCT DATA

Physical Properties (Uncured)	Colour	Straw
	Mixed Viscosity, cps	50,000
	Mixed Density, g/cc	0.98
	Mix ratio by volume and weight	1:1
	Working Time ¹ @ 23°C	4 – 6 mins
	Fixture Time ² @ 23°C	10 – 15 mins
	Functional Cure	45 – 60 mins
	Full Cure	24 hours
	Flash Point	11°C
	Physical Properties (Cured)	7 days at 24°C
Tensile Lap Shear GBS		24 MPa
Tensile Lap Shear ABS		9 MPa
Tensile Lap Shear Polycarb		10 MPa
T Peel		60 – 70 N/10mm
Tensile Elongation		15 – 25%
Shore Hardness		78 D
Gap Fill		1 – 4 mm
Service temperature range		-55 – 121°C
Specific Volume		1020 cm ³ /kg

Note

(1) Working time

¹For bond lines less than 1 mm please contact ITW Devcon for advice

The time elapsed between the moment Part A and B are combined and thoroughly mixed and the time when the adhesive is no longer usable.

(2) Fixture time

The interval of time after which surfaces being joined will support a 1kg dead weight on a 12.7mm overlap joint 25.4mm wide without movement.

Chemical Resistance

7 days room temperature cure (30 days immersion)

Acetic (Dilute) 10%	Excellent	Ammonia	Very Good
Cutting Oil	Excellent	Glycols/Antifreeze	Excellent
Hydrochloric 10%	Fair	Mineral Spirits	Excellent
Motor Oil	Excellent	Sodium hydroxide 10%	Very Good
Sulphuric 10%	Excellent		

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APPLICATION INFORMATION

Mixing	<p>Plastic Welder 25ml Devtube, comes with its own plunger to extrude the two components at an equal rate.</p> <p>Proper homogenous mixing of the two components of adhesive and activator are essential for the curing and development of stated strengths. Always mix the two components with clean tools, preferably of a disposable design.</p>
Application	<p>Apply mixed adhesive directly to one surface in an even film or as a bead. Assemble with the mating part within the recommended working time. To assure maximum bond strength, surfaces must be mated within the specified working time of the adhesive. Use sufficient material to insure 100% joint fill when parts are mated and clamped. All adhesive applications, part positioning and clamping should occur before the working time of the mix has expired. Movement of the part after the working time has expired can result in bond strengths lower than normal. Ensure that the assembly remains undisturbed until fixture has occurred.</p>
Effect of Temperature	<p>Application of adhesive at temperatures between 18°C and 26°C will ensure proper cure. Temperatures below 18°C will slow cure speed; above 26°C will increase cure speed. The viscosity's of Parts A and B of this adhesive are affected by temperature.</p>
Storage and Shelf life	<p>All Devcon Adhesives should be stored in a cool, dry place when not used for a long period of time. A shelf life of 1 year from date of manufacture can be expected when stored at room temperature 22°C in their original containers. Shelf life may be extended by refrigeration (7°C - 12°C). This product should never be frozen.</p>
Handling and Storage	<p>WARNING! This product is flammable (Parts A and B). Contents include Methacrylate Ester. Keep containers closed after use. Avoid skin and eye contact. Wash with soap and water after skin contact. In case of eye contact, flush with water for 15 minutes and get medical attention. Harmful if swallowed. Keep out of the reach of children. Keep away from heat, sparks and open flames.</p> <p>NOTE: Because of the rapid curing features of this product, large amounts of heat are generated when large masses of material are mixed at one time (film thickness cures in excess of 4mm should be avoided wherever possible). The heat generated by the exotherm resulting from the mixing of large masses of adhesive can result in the release of entrapped air and volatile components as evidenced by gassing. To prevent this, use only enough material as needed for use within the working time for the product, and confine gap thickness to no more than 4mm. Do not dispense waste material into plastic cups as heat may melt container. Do not hold metal containers of Devweld adhesive during curing or else heat generated may cause burning.</p>
Clean up	<p>Clean up is best accomplished before the adhesive cures. For cured adhesive carefully scrape it away and wipe with a solvent. Spills should be cleaned up with an absorbent material and disposed of as flammable material.</p>
Precaution	<p>For complete safety and handling information, please refer to Material Safety Data Sheets prior to using this product.</p>
Warranty	<p>Devcon will replace any material found to be defective. Because the storage, handling and application of this material is beyond our control we can accept no liability for the results obtained.</p>
Disclaimer	<p>All information on this data sheet is based on laboratory testing and is not intended for design purposes. ITW Devcon makes no representations or warranties of any kind concerning this data.</p> <p>For product information visit www.devconeurope.com alternatively for technical assistance please call +44 (0) 870 458 7388 (UK) or +49 431 718830 (Germany)</p>