# **Technical Data Sheet**





# **TS880**

TS880 Acrylic-based Structural Adhesive is a two-part adhesive (10:1 ratio by volume), which can bond many low surface energy plastics without special surface preparation, including many grades of polypropylene, polyethylene, TPO, etc. TS880 can replace screws, rivets, plastic welding, and two-step processes which include chemical etchants, priming or surface treatments in many applications. Typical applications include bonding plastics, metals, glass and rubbers.

Technology / Base	Modified Acrylic	
Type of Product	Structural Adhesive	
Components	Two component	
Curing	Room Temperature Cure	
Appearance / Color	Off White	
Consistency	Viscous Liquid	

### **Features and Benefits**

- Low surface energy substrate bonding modified acrylate adhesive
- Room temperature cure
- Ability to bond PE/PP/LDPE/HDPE/TPO
- No pre-treatment of the substrates needed
- · Excellent water and humidity resistance
- Solvent-free of adhesive system

Technical Data			
Rheology		Condition/Method	
Viscosity - Resin	250,000 to 500,000 cPs @ 25°C	Brookfield DV-II #7, 2 rpm	
Viscosity - Activator	40,000 to 60,000 cPs @ 25°C	Brookfield DV-II #7, 2 rpm	
Viscosity - Mixed			
Density			
Mixed Density	1.00 g/cc	GB/T 13477.2	
Mix Ratio			
Volume Mix Ratio	10:1		
Weight Mix Ratio			
<b>Uncured Material Characteristics</b>			
Open Time	2 - 3 minutes		
Fixture Time			
Cure Temperature and Time	Room Temperature, 24 hr		
Cured Mechanical Properties			
Over Lap Shear Strength			
Carbon Steel	7.2 MPa (AF)	GB/T 7124*	
Aluminum	7.3 MPa (AF)	GB/T 7124*	
Stainless Steel			
Galvanized Steel			
ABS	4.9 MPa (SF)	GB/T 7124*	
FRP	5.2 MPa (CF)	GB/T 7124*	
Polycarbonate	3.2 MPa (CF)	GB/T 7124*	
HDPE	5.7 MPa (SF)	GB/T 7124*	
Polypropylene	6.0 MPa (SF)	GB/T 7124*	

\* NOTE

CF = Cohesive Failure

AF = Adhesive Failure

MM = Mixed (Mode of AF and CF)

SF = Substrate Failure/Break/Yield

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#### **General Instructions**

- For best performance bond surfaces should be clean, free of grease and all other surface contaminants.
- It is recommended that either meter mix equipment or cartridges with static mix nozzles be used to ensure the proper 10:1 mix ratio and dispense the adhesive. Hand mixing is not recommended and may result in unpredictable results.
- Lower temperature will diminish the reactivity of the product, and higher temperature will speed up curing process. The recommended temperature of the working circumstance is 15~30°C.
- To assure maximum bond strength, surfaces must be mated within the adhesive's open time. Use enough material to completely fill the joint when parts are clamped.
- Do not return unused material to container as it would result in contamination and/or premature hardening of contents.

## Handling and Clean-Up

Clean up is best before the adhesive has cured. Cleaners containing NMP (N-methyl pyrolidone) or Citrus terpene provide the best results. On cured adhesive repeat use may be required.

# Storage and Shelf Life

For maximum shelf life, TS880 Acrylic-based Structural Adhesive should be stored in a cool, dry area at below 4°C. When stored at the recommended temperatures in the original unopened containers, this product has a shelf life of six months from date of shipment.

### **Typical Packaging**

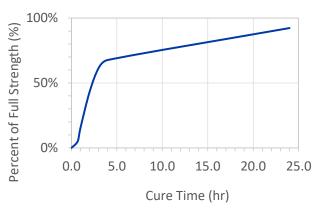
Please contact your local Sales Office for available packaging options.

### Safety and Disposal

For safe handling information on this product, consult the Safety Data Sheet (SDS)

### Time Until Full Cure (% of RT strength)

Overlap Shear Strength on Polypropylene



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