Devcon®

Technical Data Sheet

8/24/2004

Composite Welder FS

Description:

A 2-component 10:1 flexible methacrylate adhesive with fast fixturing and cure times.

Intended Use:

Bonds steel furniture, speaker magnets, and dissimilar substrates. Bonds FRP/GRP/SMC, gel coat, honeycomb painted and plated metals (with primer), phenolics, polycarbonate, PVC polyesters, urethanes and vinyl esters along with ceramics.

Product features:

Excellent environmental resistance
Excellent impact, peel, and shear resistance
Superb salt spray durability, including aluminum

Limitations:

Typical Physical Properties:

Technical data should be considered representative or typical only and should not be used for specification purposes.

Cured 7 days @ 75° F

T-peel	60-65 pli
Impact Resistance	22 ft.lb./in.[2]
Tensile Elongation	100-125%
Shore Hardness	74 Shore D
Gap-Fill	.375 in.
% Solids by Volume	100 %
Adhesive Tensile Lap Shear [galvanized]	2,000 psi [with MP 90]
Adhesive Tensile Lap Shear[AL]	2,525 psi [with MP 90]
Adhesive Tensile Lap Shear[GBS]	2,250 psi
Adhesive Tensile Lap Shear[SS]	2,800 psi [with MP 90]
Specfic Volume	28.55 in[3]/lb.

TESTS CONDUCTED

Adhesive Tensile Shear ASTM D 1002
Cured Hardness Shore D ASTM D 2240
T-Peel Strength ASTM D 1876
Impact Resistance ASTM D 950

Uncured

Color	Blue/Green
Viscosity	Adhesive: 120,000 cps: Activator: 60,000 cps
Weight	Adhesive:8.0/lbs./gal.; Activator: 8.95lbs./gal.
Mixed Viscosity	120,000 cps
Mix Ratio by Volume	10:1
Mix Ratio by Weight	89:10
Mixed Density	8.09 lbs/gal / 0.97gm/cc
Flashpoint	51°F
Working Time	4-8 min. @ 75°F
Fixture Time	10-15 min. @ 75°F
Functional Cure	3/4 - 1 hrs.
Full Cure	24 hours
Service Temperature	-40°F to 250°F

Surface Preparation:

Clean surface by solvent-wiping any deposits of heavy grease, oil, dirt, or other contaminants. Surface can also be cleaned with industrial cleaning equipment such as vapor phase degreasers or hot aqueous baths. If working with metal, abrade or roughen the surface to significantly increase the microscopic bond area and optimize the bond strength.

Mixing Instructions:

---- Proper homogenous mixing of resin and hardener is essential for the curing and development of stated strengths. ----

25 ML DEV-TUBE
1. Squeeze material into a small container the size of an ashtray.
2. Using mixing stick included on Dev-tube handle, vigorously mix components for one (1) minute.
3. Immediately apply to substrate.

35ML/50 ML/380ML/400 ML CARTRIDGES
1. Attach cartridge to Mark 5 dispensing system.
2. Open tip.
3. Burp cartridge by squeezing out some material until both sides are uniform (ensures no air bubbles are present during mixing).

4. Attach mix nozzle to end of cartridge.
5. Apply to substrate.

Application Instructions:

1. Apply mixed product directly to one surface in an even film or as a bead.
2. Assemble with mating part within recommended working time.
3. Apply firm pressure between mating parts to minimize any gap and ensure good contact (a small fillet of product should flow out the edges to display adequate gap fill).
4. Bond line thickness of mixed adhesive should be @ .030" for optimum adhesion.

For very large gaps:
1. Apply product to both surfaces.
2. Spread to cover entire area OR make a bead pattern to allow flow throughout the joint.

Let bonded assemblies stand for recommended functional cure time prior to handling.

ADDITIONAL PRODUCT INFORMATION:
- Can withstand processing forces
- Do not drop, shock load, or heavily load
- Intermittent exposure to temperatures above 250°F do not reduce performance characteristics

STAINLESS STEEL AND ALUMINUM APPLICATIONS:
Apply Devcon Metal Prep 90 to prime and condition aluminum and stainless steel surfaces prior to using Compossite Welder FS. Metal Prep 90 is fast-drying at ambient temperatures. Composite Welder FS can be applied within minutes of its use. Overlap shear strength will improve 30-40% if Metal Prep 90 is used.

Storage: Store in a cool, dry place.

Compliances: None

Chemical Resistance:

Chemical resistance is calculated with a 7 day, room temp. cure (30 days immersion) @ 75°F)

Acetic (Dilute) 10%	Very good	Sulfuric 10%	Very good
Ammonia	Very good		
Cutting Oil	Excellent		
Glycols/Antifreeze	Excellent		
Hydrochloric 10%	Very good		
Mineral Spirits	Excellent		
Motor Oil	Excellent		
Sodium Hydroxide 10%	Very good		

Precautions: Please refer to the appropriate material safety data sheet (MSDS) prior to using this product.

For technical assistance, please call 1-800-933-8266

FOR INDUSTRIAL USE ONLY

Warranty: 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.

Disclaimer: 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.

Order Information:

14165 490 ml cartridge
14160 250 ml cartridge