



TECHNICAL DATASHEET

Structalit 3446®

(HIGH TEMPERATURE EPOXY ADHESIVE
FOR BONDING TEFLON AND RULON)

STRUCTALIT 3446 is a new high temperature adhesive, with the unique capability of bonding Teflon, Rulon and similar fluorocarbon polymers to themselves or other substrates. STRUCTALIT 3446 when exposed continuously for five day at 260°C, lost only 20% of its bond strength! This unique adhesive can be successfully subjected intermittently to temperatures of 530°C. In addition to heat resistance, STRUCTALIT 3446 is highly chemically resistant to corrosive atmospheres.

Technical Data Bulletin n° 3.001 is available on request from the Dupont Company describing their recommended procedure for the installation of Dupont FEP Teflon shrink fit tubing with STRUCTALIT 3446 high temperature epoxy adhesive which is available both in liquid and paste forms.

Our data sheets have been compiled to the best of our knowledge. The information included in our data sheet is exclusive information for the intended users and describes characteristics, with no declaration of commitment. We recommend trials in order to confirm that our products satisfy the particular application requirements. For an additional technical consultation, please contact our RD department. In general, for guarantee claims please refer to our standard terms and conditions.

TYPICAL CHARACTERISTICS*

Viscosity, (cps at 25°C):	4000
Specific Gravity, 25°C/25°C:	1.12
Heat Distortion Temp. (°C)	300
Weight per gallon (lbs)	9.30
Working life (100 gm. mass ambient at 25°C) (hrs)	48
Coverage (sq.ft./gallon)	150-200
Dielectric strength (volts/mil)	450
Volume resistivity at 25°C (ohm cm)	4×10^{14}
Dissipation factor	0.015
Total mass loss at 125°C Pot life	2½ hours for a 100 gram mass @t 25°C

Adhesives
and more...

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Collected volatile condensables at 25°C	0.00%
Tensile Shear Bond Strengths (lap joints ½" x ½" area, kg/cm ²)	
Stainless Steel	195 to 225
Mild Steel	185 to 245
Aluminum to Aluminum	210 to 295
Aluminum to Teflon	25 to 26
Aluminum to Rulon	26 to 28

*Values listed are typical and are not specifications.

INSTRUCTIONS FOR USE

- 1) Surfaces must be clean and grease free. The appropriate surface preparations for the substrate should be utilized for optimum adhesion. Pre-etched fluorocarbon plastics require no further surface preparation.
- 2) Add 1 to 2 % catalyst T-9 to the STRUCTALIT 3446 Base and mix thoroughly.
- 3) Apply STRUCTALIT 3446 by any conventional method, maintaining a glue line of 0,025 - 0,125 mm. Although pressure is not required, clamping or other means of positioning is desirable during cure.

Use the following cure schedule:

- a) Preset adhesive at 95 to 105°C for 2 to 3 hours.
- b) Post cure of 150 to 200°C for 16 to 24 hours provides maximum properties.

Teflon and Rulon are registered trade marks of E.I. Dupont de Nemours Co.,
Wilmington,

Delaware and Dixon Corp., Bristol, Rhode Island respectively.

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(CHEMICAL RESISTANCE)

6-MONTH IMMERSION ENVIRONMENT		WEIGHT GAIN, %	FLEXURAL STRENGTH RETAINED %
Salt Resistance:			
Sodium chloride,	10%	0,30	98
	25%	---	117
Sodium bisulfite,	10%	---	115
Acid Resistance:			
Sulfuric acid,	3%	0,15	81
	10%	---	120
	30%	---	102
Hydrochloric acid,	10%	0,40	95
Nitric acid,	10%	1.60	113
Acetic acid,	10%	0,50	125
Base Resistance:			
Caustic soda,	1%	0,51	58
	10%	---	55
	25%	3.00	75
Sodium carbonate,	25%	---	103
Ammonia,	25%	---	77
Solvent Resistance			
Gasoline		0.15	115
Benzene		---	120
Ethanol		0,15	120
Ethylene glycol		0.25	120
Hydraulic oil		0.10	100
Water Resistance			
	@ 25°C	0.45	90
	@ 100°C	---	38

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