Dow Automotive

BETAMATE™ 73305

Structural Adhesive

Description

BETAMATE 73305 is a one-part, high performance, heat curing, epoxy adhesive. It is capable of bonding oily galvanized steel, cold rolled steel and aluminum without a primer and has excellent corrosion resistance. BETAMATE 73305 also has sag resistance and good peel strength. It accepts E-coat primer which also enhances corrosion resistance.

Typical Applications

BETAMATE 73305 can be used for hem flange and lap joint bonding in automotive applications. It can also be used for general product assembly.

Application Technique

BETAMATE 73305 can be dispensed manually or robotically. A pumping system equipped with a follower plate is recommended.

Safety Precautions

Avoid breathing vapors. If swallowed, call physician immediately. For eye contact, flush with water for 15 minutes and get medical attention. For skin contact, wash with soap and water. Refer to Material Safety Data Sheet for details.

Packaging

BETAMATE 73305 is available in 5 gallon pails and 55 gallon metal drums.

Storage

Containers of epoxy adhesives, when improperly heated, can cause the epoxy to reach decomposition temperatures and give off noxious fumes. If heating is needed to thaw out the adhesive, the only acceptable method would be to let the container warm up over 3 days at ambient temperatures from 20-40ºC."

When not in use, this product should be stored at temperatures less than 77ºF (25ºC)

Storage Stability

Shelf life is dependent upon storage temperature of the material. Shelf stability is assured for 90 days from date of shipment when stored according to the storage requirements.

Uncured Physical Properties

Composition	Epoxy
Appearance	Black
Solids Content, Wt %	>99
VOC, Wt %	0
Flash Point, ?F (?C)	>400 (205)
Weight per Volume, lbs/gal (g/cc)	11.7 (1.4)
Flow Rate, Seconds (65 psi, 0.7 oz, 0.104" orifice) (0.45 Mpa, 20 grams, 2.64mm)	15 - 25

Cured Physical Properties

Nominal Cure (Metal Temperature)	20 minutes @ 350?F (177?C)
Hardness, Shore D	70
Young's Modulus, Mpa (psi)	4100 (595,000)
Poisson's ratio	0.36
Shear modulus Mpa (psi)	1862 (270,000)
Elongation, %	<3

Performance Properties

Test Substrate	Oily cold rolled steel
Bondline Thickness	0.005" (0.127mm)
Overlap	½" (12.7mm)

Test Temperature	Lap Shear -psi (Mpa)	Side Impact -in-lbs (N-m)
75?F (23?C)	2378 (17)	>60 (6.8) -No Failure
-22?F (-31?C)	2727 (19)	>60 (6.8) -No Failure
180?F (82?C)	2219 (15)	>60 (6.8) -No Failure
Peel Strength @ RT, pli (N/m)		27 (4750)

HEADQUARTERS

Dow Automotive
1250 Harmon Road
Auburn Hills, MI 48326
(248) 391-6300

All values are typical and not intended for specification use.
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Distributed by:
Rudolph Bros. & Co.
6550 Oley Speaks Way
Canal Winchester, OH 43110
Phone: 614-833-0707
Fax: 800-600-9508
e-mail: rbcsupport@rudbro.com
www.rudbro.com