

Advanced Materials

CG-1305 Resin/Hardener

EPOXY SYNTACTIC

- Medium Density Syntactic
- High Strength
- Pourable

DESCRIPTION:

CG-1305 resin/hardener epoxy syntactic is a medium-density, pourable material for aircraft production and other industrial applications requiring high strength and low weight. This system combines good handling and good physical properties. CG-1305 resin/hardener epoxy syntactic is designed for reinforcing high stress areas in honeycomb structures and for potting applications. CG-1305 Resin / Hardener epoxy syntactic is qualified to BMS 5-28, Type 7, Class 1.

TYPICAL PROPERTIES AS RECEIVED:

<u>Property</u>	<u>Resin</u>	<u>Hardener</u>	<u>Mixed</u>	<u>Test Method</u>
Color	White	Amber	Off-White	Visual
Density, g/cc	0.82	0.98	0.90 max.	ASTM-D-792
Viscosity, cP at 77°F (25°C)	90,000	450	21,500	ASTM-D-2196
Gel Time, 60 g mass at 77°F (25°C)	--	--	>60 min.	ASTM-D-2471

MIX RATIO :

To 100 parts by weight of CG-1305 resin, add 20 parts by weight of CG-1305 hardener. Mix both components thoroughly for several minutes to insure complete and uniform mixing.

CURE SCHEDULE:

Cure #1 - 7 Days @ 77 $\pm$ 2°F (25°C $\pm$ 1°C)

*Cure #2 - Gel @ Room Temperature + 90 minutes @ 260 $\pm$ 10°F (127°C $\pm$ 6°C)

Cure #3 - Gel @ Room Temperature + 60 minutes @ 350 $\pm$ 10°F (177°C $\pm$ 6°C)

*Optimum cure

TYPICAL CURED PROPERTIES (Not for specification purposes)

Test	Results	Test Method
Compressive strength/modulus, Ksi (MPa)		
after 7 days at 77 $\pm$ 2°F (25°C $\pm$ 2°C)	8.5/400 (58.6/2,758)	ASTM-D-695
after R.T. gel + 90 minutes at 260°F $\pm$ 10°F (127°C $\pm$ 6°C)	8.8/420 (60.7/2,896)	--
after R.T. gel + 60 minutes at 350°F (177°C)	9.0/450 (62/3,103)	--
Lap shear, AL/AL, psi (MPa)		
after 7 days at 77 $\pm$ 2°F (25°C $\pm$ 1°C)	1500 (10.3)	ASTM-D-1002
after R.T. gel + 90 minutes at 260 $\pm$ 10°F (127°C $\pm$ 6°C)	1800 (12.4)	--
after R.T. gel + 60 minutes at 350 $\pm$ 10°F (177°C $\pm$ 6°C)	1800 (12.4)	--
Weight gain % after 24 hour immersion		
TT-S-735 test fluid	0.30	ASTM-D-543
Mil-M-5606 hydraulic fluid	0.40	--
Skydrol 500	0.60	--
Distilled water	0.50	--
Flammability,		
Horizontal Direction (15 seconds ign.)		
Burn Rate, inches per minutes (mm / min.), maximum	3.0 (76)	--

STORAGE:

CG-1305 resin/hardener should be stored in a dry place, in the sealed original container, at temperatures between 40°F and 90°F (+4.5°C and +32.2°C). The product should not be exposed to direct sunlight. Under these storage conditions, and when supplied under Huntsman standard certification, this product has a shelf life of 1 year (expiration date may differ based on customer specification).

Material temperatures should be above 18°C (65°F) when mixing. Tightly reseal containers after use.

When exposed to cold temperatures over extended periods of time, some small globules may form within the resin component (this condition may also be referred to as "caking"). Per BMS 5-28, Type 7, Class 1, CG 1305 Resin / Hardener can be restored to its original condition by gently heating the component to 120 °F $\pm$ 5 °F for 24 hours, or until material is fully dispersed. The material should be allowed to cool down to room temperature prior to mixing the resin and hardener together for further processing.

PRECAUTIONARY STATEMENT:

Huntsman Advanced Materials Americas LLC maintains up-to-date Material Safety Data Sheets (MSDS) on all of its products. These sheets contain pertinent information that you may need to protect your employees and customers against any known health or safety hazards associated with our products. Users should review the latest MSDS to determine possible health hazards and appropriate precautions to implement prior to using this material.

First Aid!

Refer to MSDS as mentioned above.

KEEP OUT OF REACH OF CHILDREN**FOR PROFESSIONAL AND INDUSTRIAL USE ONLY**

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