

AGM TP300

Low density, high performance thermal paste adhesive

PRODUCT DESCRIPTION

A high thermal conductivity pumpable epoxy paste adhesive, with a low cured resin density and very good mechanical performance. AGM **TP300** is a two part epoxy system specifically designed for use as a thermally conductive bonding or gap filling adhesive on Satellite and Space applications.

PRODUCT DESCRIPTION

- High thermal conductivity
- Lower viscosity pumpable system
- Low cured resin density
- Low outgassing
- Good adhesion and lap shear properties
- Easy to mix and apply
- Room temperature cure
- Cost competitive
- Long shelf life (12 months)

PRODUCT INFORMATION

2 Part Epoxy

Part A: TP300R (epoxy)

Part B: TP300H (amine hardener)

Appearance

TP300R: Dark grey

TP300H: Clear liquid

Viscosity

TP300R: Moderate paste

TP300H: 30mPa.s @ 20°C

Mix Ratio

100 : 14.6

Kit Size

TP300R: 200g / 5.0kg

TP300H: 30g / 0.75kg

Curing Time (5°C to 25°C)

(For alternative conditions, contact AGM)

4 days

Appearance (Cured)

Dark grey

Density (Cured) (g/ml)

(ISO 1183-1 Method B)

1.30-1.40

Lap Shear Strength (MPa)

(ASTM D1002)

> 5.5

Thermal Conductivity (W/m·K)

(Modified MLP1201)

> 3

Shelf Life

12 months



MIXING INSTRUCTIONS

Weigh out the required amount of **TP300R**. **TP300H** should be added at 14.6 parts per 100 parts of **TP300R** and mixed thoroughly until there is no streaking apparent and the **TP300H** is fully incorporated to create a homogeneous paste.

NB. If is to be used as an additive to other material formulations, please contact AGM Technical Staff for further information as particle stability and mixing instructions may change.

OUTGASSING DATA

TML	0.91%
RML	0.61%
CVCM	0.020%

Tested in accordance with ECSS-Q-70-02C.

Testing is at 125°C for a duration of 24 hours and collectors maintained at 25°C.

THERMAL ANALYSIS

21°C Room Temperature Cure

DMA Result	Tan Delta:	74.8°C
	Tg Onset:	54.7°C
DSC Result	Tg Mid point:	64.5°C
	Delta H:	8.9 (J/g)

STORAGE

Store in ambient conditions for up to 12 months. Dispersion may show slight sedimentation during transportation or storage. User may need to re-agitate by mixing thoroughly with spatula, palette knife or mechanical stirrer before use.

Product should be stored at room temperature in the original containers kept tightly closed. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials and food and drink. Keep container sealed until ready for use.

SAFETY

Wear appropriate PPE. Use the minimum quantity of product required for a particular process. Use only in well-ventilated areas, preferably in an enclosed system. Provide appropriate exhaust ventilation at places where aerosols/dust may be formed. Handle and open container with care. Keep in the original container or an approved alternative made from a compatible material. Always close containers tightly after removal of the product. Empty containers retain product residue and can be hazardous. Do not re-use container. Dispose of materials in accordance with local regulations. Safety Data Sheet available on request.

You will follow any instructions and all applicable guidelines, laws, regulations, government agency guidelines and best industry practice regarding the use, transport, security, and disposal of the products. All statements and technical information contained in this data sheet are given in good faith and are based on information believed to be reliable, but their accuracy and completeness are not guaranteed and no representation or warranty (express or implied) is given. Any statements and technical information do not constitute an offer to any person and do not form the basis of any contract. All products are sold subject to Applied Graphene Materials' standard terms and conditions of sale. The user will determine the suitability of the products for their intended use prior to purchase and will assume all risk and liability (to the fullest extent permitted under applicable law) in connection with that purchase and intended use. It is the responsibility of those wishing to sell items made from or using the products to inform other users of the properties of the products and the purposes for which they may be suitable, together with all precautionary measures required in handling those products. The information in this datasheet is under constant review and subject to ongoing modification, however, Applied Graphene Materials shall be under no obligation to notify the user of any modifications made.