Product Information

Molds

EP 4206 Epoxy gelcoat

FEATURES

- Chemical resistance
- Temperature resistance
- Aluminium-like polishable

COMPOSITION

- Part A: epoxy resin EP4206
- Part B: amine H4206

EP 4206 is a two-component, aluminium filled epoxy surface coating that can be applied by brush. Curing at room temperature, hardness 87 shore D.

APPLICATIONS

- Designed for the production of pre-preg carbon fibre tooling, RTM tools, RIM tools, PU moulds, vacuum forming tools, applications requiring high heat and chemical resistance and negatives where very surface finishes are required.

TYPICAL PROPERTIES

Specifications writers: These values are not intended for use in preparing specifications. Please contact your local sales representative prior to writing specifications on this product.

Property	Unit	Value
Colour (Resin A/Hardener B)	visual	Grey / Amber
Density at 23°C (Resin A/Hardener B)	g/cm^3	1.45 – 1.65 / 0.92 – 0.97
Viscosity at 23°C (Resin A/Hardener B)	mPa.s	100000-200000/100-160
Colour (Mixture)	visual	Grey
Density at 23°C (Mixture)	g/cm^3	1.09 – 1.14
Viscosity at 23°C (Mixture)	mPa.s	22000 – 30000
Mixing ratio	pbw	100 : 15
Pot life at 23°C (150g)	minutes	50 – 80
Tack free time	minutes	60 - 120
Curing	hours	24
Hardness	Shore D	80 – 85
Tensile strength	MPa	33 – 37
Elongation at break	%	1.0 – 3.0
Flexural strength	MPa	70 - 75
Flexural modulus	MPa	3000 – 3300
HDT	°C	150 – 160
Max service temp. (for pre-preg tools)	°C	125

SETTINGS

The surface of the pattern should be treated with waxy release agent. Porous materials should be well sealed with sealer.

USE

Mix the two components in the indicated proportions. Both components must be mixed thoroughly, paying attention to the material on the edges of the container and not to incorporate too much air. The mixed material should be applied at least in two separate hands on the mold with a brush, to have a thickness of at least 0.5mm per layer. Recommended final film thickness should not exceed 2.5mm. To ensure good adhesion before applying the second coat, wait until the first coat has gelled to a tack free state. The gelcoat is tack free if when a finger is lightly drawn across the surface, no material sticks to it, but if firmly pressed, a mark will remain on the surface.

CURING & POST-CURING

To achieve full high temperature resistance, a step wise post cure treatment is recommended. Allow the product to cure at room temperature for a

least 24 hours, then heat to 40°C for 1 hour, followed by 60°C for 1 hour, followed by 80°C for 1 hour, followed by 100°C for 1 hour, followed by 120°C for 3 hours. To prevent any distorsion during the post cure cycle, the unit should be placed on a conformer. Then allow the product to slowly return to room temperature. The product can be used without post cure but will not achieve full temperature resistance. The product can be post-cured at higher temperatures (up to 160°C), however, care should be taken if using the product at these temperatures as any air voids from the laminating process can cause bubbling or delamination between the layers.

HANDLING PRECAUTIONS

The information for a correct and safe handling of the products are contained in the safety data sheet. Consult the safety data sheets before use for complete information on the risks for health and environment and for suitable protective devices to be adopted. Share the safety data sheets with all the staff involved in the use of the products.

PACKAGING

Resin is supplied in 1kg and 5kg containers, hardener in 150g and 750g containers.

USABLE LIFE - STORAGE

Resin and hardener must be stored in the original unopened containers at a temperature between +10°C and +35°C. Be sure to close the containers after use. Resin and hardener, if stored under certain conditions, have a shelf life of 12 months from the date of manufacture.

LIMITATIONS

This product is neither tested nor represented as suitable for food contact, skin contact or medical uses.

LIMITED WARRANTY

The information contained in this document is offered in good faith based on Chemix research and is believed to be accurate. However, as the conditions and methods of use of our products are beyond our control, this information should not be used as a substitute for the tests that customers must first perform to ensure that Chemix products are fully satisfactory for their specific applications. The warranty is only applicable to the values indicated in the Product Sales Specifications. The sole and exclusive compensation for products with values that are out of specification is limited to the replacement of the product or the refund of the purchase price.

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