

Technical Datasheet

INEOS Composites

ENGUARD™ BP 6400 ACRW Bonding paste for sandwich core bonding

ENGUARD BP 6400 ACRW is a pre-accelerated vinyl ester bonding paste, for sandwich core material bonding. ENGUARD BP 6400 ACRW has low viscosity and low density and it offers excellent adhesion properties. ENGUARD BP 6400 ACRW has very low shrink enabling good surface quality for laminate. It is pigmented and contains catalyst indicator to help catalyst mixing.

Typical properties of bonding paste

Property at 23 °C	Value	Unit	Method
Density	0,5	kg/dm ³	ISO 2811
Viscosity Brookfield, Helipath E/3 rpm	450 000	mPas	ISO 2555
Thix index 3/30	5		ISO 2555
Geltime, 2 % MEKP-50	45 - 75	min	ASTM D2471
Peak exotherm	95	°C	ASTM D2471
Shrinkage, linear	< 1	%	ASTM D 2566-7

Physical properties of bonding paste

Curing 2% MEKP-50	Value	Unit	Method
Tensile strength*	16	MPa	ISO 527
Tensile modulus*	900	MPa	ISO 527
Elongation at break*	2	%	ISO 527
Heat Deflection temperature (HDT)*	80	°C	ISO 75
Hardness*	55	Shore D	ASTM D2240
) post cure 24h at 50°C			
**) post cure 24h 1h 65°C + 1h 85°C + 2h* 135°C			

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Application and use ENGUARD BP 6400 ACRW bonding paste is especially recommended for adhesion of core material to composites. This ready made bonding paste is easy to apply and it is easy to sand if needed afterwards. ENGUARD BP 6400 ACRW is used in sandwich constructions to bond polyester laminates to balsa, PVC or PU foam e.g. in wall and roof construction or in mold construction.

Recommended thickness of bonding paste is 3-10 mm and bonding paste must not start gelling before parts are attached together. For filling purposes bonding paste can be used up to 30 mm. Mechanical forces on bonded parts must not be used within three days from application.

Note: Temperature of workshop, raw materials and tools should be 18-25°C and relative humidity below 70%. Surfaces to be bonded must be cleaned eg. with acetone or by grinding. A high quality methyl ethyl ketone peroxide (MEKP) should be used, and the amount of 2% is recommended. The bonding paste with catalyst must be stirred well before use.

Certificates and approvals The manufacturing, quality control and distribution of products, by INEOS Composites, are complying with one or more of the following programs or standards: ISO 9001, ISO 14001 and OHSAS 18001.

Handling and storage It is highly recommended that all materials and tools are stored at stable temperature under 25 C preferably indoors and away from direct sunlight. Surfaces to be bonded must be cleaned eg. with acetone or by grinding. A high quality methyl ethyl ketone peroxide (MEKP) should be used, and the amount of 2% is recommended. The bonding paste with catalyst must be stirred well before taken in use.

The material should be used within 5 months from the date of manufacture. Prolonged storage or storage outside of recommended conditions can influence liquid bonding paste properties like viscosity and gel time and it is recommended to test these properties before starting application.

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INEOS Composites requests that the user reads, understands and complies with the information contained herein and the current Material Safety Data Sheet.