



TECHNICAL DATA SHEET

SK2TM181-1

High temperature two-component laminating resin system

► DESCRIPTION

SK2TM181-1 is a high temperature resistant two-component epoxy laminating resin designed for wet lay up production of composite moulds for following using of tools in prepreg, resin infusion and RIM application.

It has a very high heat resistance, precuring at room temperature and depending on post curing can be used till 181°C.

Since SK2TM181-1 laminating resin system contains no fillers, it has got good wetting properties and makes a high fabric content possible. This leads to a low coefficient of thermal expansion and high strength of the tooling.

Together with aluminium granules, SK2TM181-1 is suitable for back filling of heat resistant moulds and moulding tools.

This product is used in various manufacturing processes of parts made of composite materials.

► TECHNICAL DATA

PROCESSING DATA			
Composition	Mixing	Resin Part A	Hardener Part B
Colour	brown transparent	yellow transparent	brown transparent
Mixing ratio	-	100 p. b. w.	42 p. b. w.
Viscosity at 25°C (mPa.s)	2200 mPas	2000 mPas	2400 mPas
Density at 20°C	1,08 g/cm ³	1,12 g/cm ³	0,98 g/cm ³
Pot life 200g / 20°C	160-200 min	-	-
Curing time at RT	>48 hrs	-	-
Post curing	4-6 / 40 h/°C 4-6 / 60 h/°C 4-6 / 100 h/°C 4-6 / 150 h/°C	-	-



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PHYSICAL PROPERTIES			
Flexural strength	EN ISO 178	MPa	68
Flexural elongation at break	EN ISO 178	%	2,4
Flexural modulus	EN ISO 178	MPa	3100
Impact resistance (Charpy)	EN ISO 179	kJ/m ²	4,5
Compressive strength	EN ISO 604	MPa	100
Heat resistance (HDT)	DIN 53458	°C	181
TG in TMA Tg	method TMA	°C	200
Shore hardness	DIN ISO 7619-1	Shore D	88

► SIZE

Packing	Part A	Part B
Kit	20 kg	8,4 kg

► PROCESSING INSTRUCTIONS

The temperature of material and processing should be between 18 and 25° C. The mixing of resin and hardener should be made intensively and, if possible, without any bubbles at room temperature.

We recommend a post curing with a temperature rise of about 10°C/hour. Difficult geometries should be supported during the curing cycle. Afterwards the part should be cooled down at about 20°C/hour.

Through step-by-step curing a high heat resistance will be reached. Cool down slowly to room temperature.



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Postcuring in following steps:

- 4 - 6 h at 40°C
- 4 - 6 h at 60°C
- 4 - 6 h at 100°C
- 4 - 6 h at 150°C

By additional postcuring of 4 hrs. at 160-180°C Tg of about 200 °C will be reached. We recommend to perform the complete postcuring on the master model, at least the first one should be made this way.

► STORAGE

At appropriate storage 18-25°C.

Occuring crystallization due to unfavorable storage conditions can be eliminated by warming up the material at approx. 60° C for some hours. Opened containers should be closed immediately after use and be protected against moisture. This material should be used up as soon as possible.

Shelf life is indicated on the labels.

► SAFETY MEASURE

Please follow the precaution instructions of the Government Safety Organisation of the chemical industry when working with this material. Please follow safety advices.

► WASTE DISPOSAL

According to arrangement with local authorities cured material can be disposed as domestic or commercial waste. Non-cured products are waste which is subject to inspection and has to be disposed accordingly.

In case of further questions please do not hesitate to contact our Product Safety Data Sheet.

► GUARANTEE

The information of our technical data sheet is based on our present knowledge and the result of tests conducted under precise conditions. It is the responsibility of the user to determine the suitability of the products, under their own conditions before commencing with the proposed application. We refuse any guarantee about the compatibility of a product with any particular application. We disclaim all responsibility for damage from any incident, which results from the use of these products. The guarantee conditions are regulated by our general sale conditions.