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POLYESTER 26/71 + HARDENER MEK-PEROXIDE

DESCRIPTION:

Polyester 26/71 is an unsaturated polyester orthophthalic modified resin, pre-accelerated, light blue colored and COLORFUL after curing with methyl ethyl ketone peroxide (MEKP).
 It is a general purpose resin because of its wide application capacity, both as is and filled.
 Polyester 26/71 is a medium reactive resin, is hard and has a medium viscosity.
 Compared to the other resins with the same viscosity characteristics and the same styrene content, it is more elastic but stiffer, therefore less vulnerable but more resistant to the blows.
 It is suitable for objects which must come into contact with water and aqueous solutions containing mineral or basic salts, but not with sodium and potassium hydroxides.
 It is also chemically resistant to many mineral acids, while having low resistance to the oxidizing agents.
 It is also suitable for many organic substances, such as hydrocarbon fuels (gasoline and diesel fuel).
 The list of chemical resistances of the 26/71 is available on request.
 It can be processed with all techniques of hand working, casting, cutting and spraying, centrifuging and pressure (low) casting.

HARDENER:

Polyester 26/71 is used with our hardener (methyl ethyl ketone peroxide) or with ketone peroxides in general. The choice of the MEKP is important to obtain the transparent effect after curing.
 The addition of cobalt-based accelerators and inhibitors made with t-butyl-catecolo and hydroquinone cause discoloration of the resin. Contact your supplier under such circumstances, especially if you need a resin with parameters other than the standard.

PROCESSING:

Polyester 65.15 can be used with manual or automatic impregnation technologies.
 Gel time and curing performance are dependent on the resin and shop temperature.
 It is recommended to apply the resin at a temperature between 15°C and 40°C.

CURING CONDITIONS:

Curing catalyst should be 1.5% - 2.5% methyl ethyl ketone peroxide or acetyl acetone peroxide (AAP). To improve curing, it is possible to add 0.1% - 0.2% Cobalt Accelerator n.6 (cobalt octoate 6% conc.) or 0.1% - 0.2% Promoter DA (N, N-Diethylacetoacetamide).

CHARACTERISTICS OF LIQUID RESIN:

Polyester 26/71

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|---|--|
| ✓ Appearance: | clear liquid |
| ✓ Colour: | light blue |
| ✓ Density at 20°C: | 1.11-1.15 gr/cm ³ |
| ✓ Viscosity at 25°C: | 500-700 mPas |
| ✓ Styrene: | 31-35% |
| ✓ Acidity: | < 30 mg KOH/gr |
| ✓ Monomeric Styrene Compatibility | practically endless |
| ✓ Stability of the resin in the dark at 20°C: | 4 months - if stored in the closed original container, in the dark, in a dry place at a temperature between 5°C and 25°C. Stability decreases drastically at higher temperatures or when exposed to light. |

CHARACTERISTICS OF THE TYPICAL SYSTEM:

Processing Data:

- | | |
|-------------------------------|-----------|
| ✓ Ratio of resin to hardener: | 100gr-2gr |
| ✓ Gel time: | 5-6 min |



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- ✓ Exothermic peak: 158-175°C
- ✓ Curing time: 14-17 min

POLYESTER RESIN EMISSIONS 26/71:

Determination on polyester resin 26/71 statistically obtained at 23°C, with 2 % MEKP, on thicknesses of 3.3 ± 0.2 mm.

Total vapour emission after 90 minutes after catalysis = 36 ± 2 g/m².

Total vapour emission after 4 days after catalysis = 37 ± 2 g/m².

The released fumes consist mainly of monomer styrene.

INFORMATION ON 26/71 RESIN STABILITY:

1. Polyester resin 26/71 has good storage stability, but at temperatures above 40°C it tends to form polystyrene "popcorn" in the empty space of the container.
 For this reason, we do not recommend the export of 26/71 resins to warm countries, especially during the summer months.
2. Polyester resin 26/71 should be kept in closed metal containers and once opened, should be closed immediately if any product remains in it, to prevent the possible formation of lumps (or of the whole mass) of hardened resin, which may occur on the surface in contact with the welding zone of the container.

APPLICATIONS:

GFRP LAMINATE:

Polyester resin 26/71 is used for the production of transparent and colourless laminates, mostly for skylights and transparent covers.

It is compatible with different types of glass reinforcements.

PLASTIC MARBLE AND GRANITE:

The polyester resin 26/71 is used in the production of plates and details of synthetic marble with the depth effect.

In this kind of production, in order to have a good transparency effect, the basilair is the filler selection. Polyester resin 26/71, because of its transparency properties, color and refractive index, enhances the depth effect of these objects.

Polyester resin is also used in the production of slabs worked with the mosaic art, both to glue the stones and as a finishing resin that can enhance the beauty of the finished manufacture. For the finishing surface, we recommend the polyester resin 26/71 which has low yellowing over time.

It is suitable for the production of marble and quartz plates, for hot casting.

CHARACTERISTICS OF THE CURED RESIN:

Curing conditions. The resin at 23°C. is cured with 2% MEKP, 6 hours post-cured at 80°C.

<u>Features</u>	<u>Value</u>	<u>Method</u>
✓ Volume shrinkage (%):	9,1	ISO 3521
✓ Barcol hardness:	47	ASTM D 2583
✓ HDT at 1820 KPa (°C):	59	ASTM D 648
✓ Tensile strength (MPa):	70	ISO R 527
✓ Tensile modulus (MPa):	4.037	
✓ Prolongation at maximum voltage (%)	2,1	
✓ Elongation at break (%)	2,4	
✓ Bending strength (MPa):	100	ISO R 178
✓ Bending modulus (MPa)	3.682	
✓ Deflection under maximum stress (%)	3,0	
✓ Deflection at break:	3,0	
✓ Tension (mm):	5,3	



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|---|------|------------|
| ✓ Water absorption at 23°C after 24 hours (% by weight) | 0,16 | ASTM D 570 |
| ✓ Water absorption at 23°C after 28 days (% by weight) | 1,9 | |

HANDLING AND STORAGE INSTRUCTIONS:

Unsaturated polyester resins are intended for professional use only. Use protective clothing, safety glasses and gloves suitable for organic solvents.

Ensure good ventilation, especially at floor level (Smoking and fumes are heavier than air).

Use approved masks (type A) for short exposures, wear a respirator for the most intense and prolonged exposures. Use explosion-proof equipment and spark-proof tools and instruments, do not smoke.

Store the product in tightly closed original containers, away from sunlight, in a cool and ventilated place.

Outdoor storage, especially in translucent plastic containers (such as PP-PE polyethylene or polypropylene), may cause gels to form and significantly reduce the stability of the product (up to several weeks).

The proper storage temperature is below 25°C. Heat increases pressure and the risk of explosion. Proceed with caution when reopening drums.

For fixed storage facilities, i.e. tanks, containers and pipes, use the stainless steel.

Take precautions against static electricity. The fumes released in accidental spills are heavier than air and may present a fire or explosion hazard. They may accumulate in low areas or may spread at ground level. Ensure the presence of loss monitoring equipment and verify the absence of ignition sources.

Unsaturated polyester resins shall be stored separately from oxidizing agents and catalysts (organic peroxides).

Operators should carefully read this data sheet and the product safety data sheet.

The information in this technical data sheet has been developed through our experience and our customers should test the products thoroughly before starting an industrial application. Our company is continuously improving all its products. Therefore, we rely on your understanding if any modifications to the characteristics of the products need to be reported. The specifications given here are indicative only; with regard to material properties, you should refer to the specific certificate of analysis and sales specifications. The present data sheet removes and replaces those previously given.