CRYSTIC 406COS

Unsaturated polyester resin for artificial marble

Introduction
Crystic 406COS is a non thixotropic, non accelerated, orthophtalic unsaturated polyester resin. It contains UV absorbers allowing a very good resistance to yellowing and to UV radiation.

Application
CRYSTIC 406COS has been designed especially for the production of filled castings, polyester concrete and composite stone.

Features and Benefits

Features	**Benefits**
Low viscosity…….…….……	High filler content
Low shrinkage……..	Possibility to cast large mouldings
Fast curing ……..……	Fast mould turn round, high production rate

Formulation
The following cold curing formulation is recommended:

CRYSTIC 406COS	:	100 parts
Catalyst M	:	1 to 2 parts
Accelerator E	:	4 parts

Catalyst M is a Méthyl Ethyl Kétone Peroxyde at 50% (MEKP 50.)
Accelerator E is a cobalt octoate with 0,4% active cobalt.
Catalyst and accelerator should not be mixed directly together, as they will react with explosive violence.

Gel time
The ambient temperature, the quantity and the type of catalyst will control the gel time of the resin. The typical gel time at 25°C of 100g of resin with 4 ml of Accelerator E and 2ml of catalyst M is 5 minutes.

Trial before use
It is recommended to try the product on a small scale production before the resin is used for long runs.

Additives
Since certain pigments, fillers or extra styrene may the affect properties of **CRYSTIC 406COS** their effect should be evaluated before addition to the formulation.

Post-Curing
For most applications satisfactory result will be obtained by curing at room temperature (20°C). Some improvement in properties may be obtained by post-curing 16 hours at 40°C after release from the mould

Typical properties

On liquid resin

Viscosity at 25°C Rhéomat at 37,35 sec^{-1}	dPa.s	3,9 – 4,7
Specific gravity at 25°C		1,11
Acid index	mg KOH/g	19 – 23
Solid content (1H at 150°C)	%	63 - 67
Aspect		Very clear
Stability under recommended storage conditions	Month from date of production.	6
Geltime at 25°C for 100 g of resin + 4 ml acc. E + 2 ml catalyst M	Min.	4.5 – 5.5

On cured resin

Barcol hardness (GYZJ 934-1)		46
Heat Deflection Temperature (ISO 75-2/A) under load (1,8 MPa)	°C	65
Specific gravity at 20°C		1,18
Elongation at break (IS0 527-2)	%	2
Tensile strength (ISO 527-2)	MPa	60
Tensile modulus (ISO 527-2)	MPa	3800

Test according to BS 2782 :1980 $1MPa = 1MN/m^2 = 1N/mm^2 = 10,2\ kgf/cm^2$

* cured 24 h at 20°C then 3 h à 80°C except for the HDT where the schedule was 24 h at 20°C then 5 h at 80°C then 3h at 120°C.

Packaging

CRYSTIC 406COS is supplied in 225 kg drums, 1100 kg containers or by road tanker.

Storage

CRYSTIC 406COS should be stored under cover in the dark in the container in which it is supplied. Recommended storage temperature is 5 - 25°C, and should not exceed 25°C. Storing the resin above 25°C will modify the properties of the product and will significantly reduce the shelf life. If stored outside, keep horizontal to avoid water ingress.

Health and safety

Please read and understand the specific MSDS of the product.

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