

CRYSTIC 406 COS PA FC

Unsaturated polyester resin for clear casting

Introduction

CRYSTIC 406 COS PA FC is a specially promoted, orthophthalic unsaturated polyester resin. It contains UV absorbers allowing a very good resistance to yellowing and to UV radiation.

Application

CRYSTIC 406 COS PA FC has been designed specially for the production of Clear castings , filled castings and polyester concrete.

Features and Benefits

Features Benefits

Low viscosity..... High filler loading
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 406 COS PA FC: 100 parts
Catalyst M : 1 to 2 parts

Catalyst M is a Méthyl Ethyl Kétone Peroxyde at 50% such as the Butanox M 50 from AKZO. 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.

Parts of catalyst M for 100 parts of resin	1.5
Gel time at 25°C in min.	15

Curing should not be carried out at temperature below 15°C.

Additives

Since certain pigments, fillers or extra styrene may affect properties of **CRYSTIC 406 COS PAFC** 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 406 COS PA ⁻¹	cps	550 – 650
Rhéomat at 37,35 sec		
Specific gravity 406 COS PA at 25°C		1.10
Acid index 406 COS PA	mg KOH/g	19 to 23
Volatil content 406 COS PA	%	36 to 40
Aspect 406 COS PA		Clear
Stability in the 406 COS PA dark at 20°C	month	3
Gel time at 25°C for 100 g of resin 406 COS PA + 1.5g cata. M	min	10 - 20

On fully cured resin

Barcol hardness (GYZJ 934-1)		46
Water absorption (24h à 23°C)	mg	15
Heat Deflection Temperature under load (1,8 MPa)	°C	65
Specific gravity at 20°C		1,2
Elongation at break	%	2
Tensile strength	MPa	60
Tensile modulus	MPa	3800

Test according to BS 2782 :1980

$$1\text{MPa} = 1\text{MN/m}^2 = 1\text{N/mm}^2 = 10,2 \text{ kgf/cm}^2$$

* cured 24 h at 20°C then 3 h at 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[®] 406 COS PAFC is supplied in 225 kg or 1100 kg containers. Bulk supplies can be delivered by road tanker.

Storage

CRYSTIC 406 COS PAFC should be stored under cover in the dark in the container in which it is supplied. Storage temperatures should not exceed 20°C.



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