CRYSTIC 26026 PA

Fire resistant, low smoke polyester resin, M2 F2

Introduction

CRYSTIC 26026 PA is a filled, orthophtalic, pre accelerated, low styrene content and thixotropic unsaturated polyester resin. It has to be used when excellent low smoke and fire resistant laminates are required. This resin contains no chlorine and no nitrogen.

Application

CRYSTIC 26026 PA has been designed to be used by spray application or by hand lay up moulding. Its fire resistance properties enable the product to be used in demanding applications such as building, public transport and railways.

Features and Benefits

Features	*Benefits*
Low specific gravity	Lighter mouldings, lower consumption, cost savings
Low viscosity	Easy and rapid impregnation, lower consumption.
Low styrene content	Better comfort for the workers, lower smell for the neighbourhood.
Very stable rheology.	No filler sedimentation.

Approvals

Fully cured laminates produced with resin **CRYSTIC 26026** and gelcoat **CRYSTIC Fireguard 72PA** are classified M2 F2 according to the French Standard with q = 3.1 and F2 with IF = 25.

Resin/Glass Ratio

Due to the high specific gravity of **CRYSTIC 26026 PA** a resin to glass by weight ratio of 2.6: 1 is recommended.

Formulation

CRYSTIC 26026 PA should be allowed to attain workshop temperature and being a filled resin should be thoroughly stirred before being formulated for use. The following cold curing formulation is recommended:

CRYSTIC 26026 PA	100 parts
Catalyst M	1.5 to 2 parts

Catalyst M is a Methyl Ethyl Ketone Peroxyde at 50% such as the Butanox M50 from AKZO.

Additives

Since certain pigments, fillers or extra styrene may the affect properties of **CRYSTIC 26026 PA** their effect should be evaluated before addition to the formulation.

Gel Time

The ambient temperature and the amount, and type, of catalyst control the gel time of resin formulations. At 25°C the gel time of **CRYSTIC 26026 PA** containing 2% of catalyst M is about 9 minutes.

Parts of catalyst M for 100 parts of **CRYSTIC 26026 PA**	2
Gel time at 20°C in min	13
Gel time at 25°C in min	9

Post-Curing

Post curing is recommended in order to develop the heat deflection temperature, dimensional stability and optimum mechanical and fire retardant properties.

Typical Properties

Liquid resin:

Viscosity at 25°C (Rhéomat at 37,35 sec-1)	dPas	3 – 4
Specific gravity		1,37
Acid value	mgKOH/g	20 – 27
Styrene content	%	28 – 32
Aspect		White
Stability in dark at 20°C	Months	3
Gel time at 25°C with 100 parts of 26026 PA 2 parts Catalyst M	min.	7 – 10

Cured Resin:		
Barcol Hardness (Model GYZJ 934-1)		40
Water absorption (24 H at 23°C)	Mg	14
Heat Deflection Temperature (1.80 MPa)	°C	80
Specific gravity at 2°C		1,4
Tensile strength	MPa	55
Tensile modulus	MPa	3600
Elongation at break	%	1,6

Packaging

CRYSTIC 26026 PA is supplied in 250 kg drums.

Health and Safety

See the appropriate MSDS

Points of Caution

Above certain levels monomer and solvent vapours can be hazardous to health and safety. The safety risks are associated essentially with the fire and possible explosions. The risks to health come mainly from the build up of vapours in the workplace in excess of certain limits. The symptoms of the more common vapours are similar, i.e. dry and irritating throat, coughing, drowsiness, headaches. Both liquids and vapours may cause skin irritation and dermatitis to susceptible personnel.

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