

CRYSTIC PD10098T

Ortho - NPG Polyester Resin for Pipe Relining

Introduction

CRYSTIC PD10098T is a thixotropic, non accelerated, and high reactive orthohtalic neopentylglycol unsaturated polyester resin.

Application

CRYSTIC PD10098T has been specially developed for the production of liners to be used in the pipe relining industry. Fully cured laminates offer high chemical resistance and mechanical properties, together with excellent long term property retention.

Features and Benefits

Features

High HDT
High molecular weight
High elongation

Benefits

Excellent mechanical properties
Excellent resistance to water ingress
Excellent impact resistance

Formulation

The following formulations are recommended for hot curing (80 – 85°C)

CRYSTIC PD10098T :	100 parts	100parts
Perkadox 16 :	0.5 - 1 %	0,5 – 1%
Trigonox C :	1 – 1.5 %	-
Trigonox 42S :	-	1 – 1,5%
Accelerator NL49P :	0,3 – 0,5%	0,3 – 0,5%

Perkadox 16, Trigonox C and Trigonox 42S are products from AKZO. Accelerator NL49P is a Cobalt accelerator (1% active Cobalt) from AKZO

Approval

CRYSTIC PD10098T is type 1140 according to the German standard DIN 16946 Teil 2 and group 3 according to DIN 18820 Teil 1.

Reactivity

The ambient temperature, the quantity and the type of catalyst will control the reactivity of the resin. The time to peak of **CRYSTIC PD10098T** with 0.8% Perkadox 16 and 1% Trigonox C at 80°C is 7 to 8 minutes.

Additives

Since certain pigments, fillers or extra styrene may the affect properties of **CRYSTIC PD10098T** their effect should be evaluated before addition to the formulation.

Typical properties

On liquid resin

Viscosity at 25°C Brookfield RVT Sp4/5 rpm	dPas	40 – 50
Thixotropic index 5rpm / 50rpm		3,0 – 4,0

Specific gravity at 25°C		1.10
Acid Index	Mg KOH/g	12 – 16
Volatile content	%	40 -44
Aspect		Thixo
Stability from date of manufacture when stored in accordance with storage recommendations.	Month	9
Gel Time at 82°C - (1,0 % perkadox 16)	min	3 – 5
Peak Temperature	°C	200 - 250
Stability at 20 °C- (1% Perkadox 16)	Hours	> 20

On fully cured resin (*)

Barcol hardness (GYZJ 934 – 1)		45
Heat Deflection temperature - (1.8 MPa)	°C	98
Specific Gravity at 20°C		1.16
Elongation at break	%	2.6
Tensile strength	MPa	69
Tensile modulus	MPa	3550
Flexural strength	MPa	130
Flexural modulus	MPa	3600

Test according to Iso 75A, ISO EN 178 & EN 527

1MPa = 1MN/m² = 1N/mm² = 10,2 kgf/cm²

(*): 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 100°C.

Packaging

CRYSTIC PD10098T is supplied in 225 kg or 1100 kg containers. Bulk supplies can be delivered by road tanker.

Storage

CRYSTIC PD10098T should be stored between 5°C and 25°C in the original, unopened container in a dry, well ventilated place. Protect from freezing and direct sunlight. Avoid contact with oxidising agents. If stored outside of these recommendations, shelf life will be significantly reduced. **CRYSTIC PD10098T** should be periodically stirred to avoid sedimentation during the storage period.

Health and safety

Please see Safety material data sheet

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Crystic PD10098T_resin_EN_Sep 18

Group tech class

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