

CRYSTIC PD9548

Isophthalic resin for pipe relining

Introduction

Crystic PD9548 is a filled, thixotropic isophthalic unsaturated polyester resin.

Applications

Crystic PD9548 has been especially designed for the drain relining applications. Fully cured linings offer high chemical resistance and mechanical properties, together with excellent long term property retention.

Features and Benefits

Fully cured laminates made with Crystic PD9548 exhibit high mechanical strength and excellent strength retention properties.

Formulation

Crystic PD9548 is designed for use in hot cure conditions, and the following system can be used.

| Temperature | Catalyst | Setting Time |
|-------------|-----------------|--------------|
| 82 °C | 1 % Perkadox 16 | 4 minutes |

Other cure systems can be used, and can be optimised for each particular application.

Additives

The addition of certain pigments, fillers, or extra styrene may adversely affect the performance of Crystic PD9548. Therefore, customers should satisfy themselves that any additions made will give the performance required.

Typical Properties

The following tables give typical properties of Crystic PD9548 when tested in accordance with BS 2782.

| Property | Units | Liquid Resin |
|---|---------|--------------|
| Viscosity at 25 °C (37.35 s ⁻¹) | Poise | 12 |
| Specific Gravity | - | 1.23 |
| Volatile Content | % | 34 |
| Acid Value | mgKOH/g | 18 |
| Geltime (1 % Perkadox 16 at 82 °C) | Minutes | 4 |
| Stability in the dark at 20 °C | Months | 6 |

| Property | Units | Fully Cured Casting Unfilled Base Resin* |
|---|-------|--|
| Barcol Hardness (GYZJ 934-1) | - | 44 |
| Heat deflection temperature [†] under load (1.8 MPa) | °C | 76 |
| Water Absorption (24 hours at 23 °C) | mg | 18 |
| Tensile Strength | MPa | 76.0 |
| Tensile Modulus | MPa | 3500 |
| Elongation at Break | % | 3.8 |
| Specific Gravity at 20 °C | - | 1.2 |

*Curing schedule – 24 hours at 20 °C, 3 hours at 80 °C

†Curing schedule - 24 hours at 20 °C, 5 hours at 80 °C, 3 hours at 120 °C

| Property | Units | Impregnated Felt (Thickness 3 mm) |
|-------------------|--------------|--|
| Tensile Strength | MPa | 30 |
| Tensile Modulus | MPa | 4450 |
| Flexural Strength | MPa | 57 |
| Flexural Modulus | MPa | 3500 |

Storage

Crystic PD9548 should be stored in the dark in the container in which it is supplied. It is recommended that the storage temperature should be less than 20 °C where practical but should not exceed 30 °C. Ideally, the containers should be opened only immediately prior to use.

Packaging

Crystic PD9548 is supplied in 25 kg, 225 kg and 1100 kg containers.

Health and Safety

Please see separate Material Safety Data Sheet.

November 2011