

INSULDERM 4001 UNSATURATED POLYESTER RESIN

INTRODUCTION

A two component high performance heat reactive unsaturated polyester resin for use in the manufacture and repair of components, such as electrical transformers, electrical field windings, stators and also on conductor coverings. INSULDERM 4001 is formulated to give a class H thermal rating, when tested in accordance with the test methods described in BS2757, for continuous use of up to 180°C, providing considerable strength and rigidity at elevated temperatures. INSULDERM 4001 cures rapidly at elevated temperatures giving a tough durable film with low shrinkage and freedom from tack.

AVAILABILITY

Supplied in 10 litre packs (each pack contains one container of Part A and one container of Part B).

APPEARANCE

Clear full gloss.

COMPOSITION

A two component unsaturated polyester resin.

SOLIDS BY WEIGHT

>90%.

SPECIFIC GRAVITY

1.1 @ 21°C.

VISCOSITY AS SUPPLIED

0.8 - 0.9 poise (Brookfield)

FLASH POINT

34°C (Abel Closed Cup).

COMPONENT PREPARATION

All components must be clean and dry free from oil, grease, rust and other surface contamination. If INSULDERM 4001 is used for repair purposes all flaking or damaged existing insulation must be removed. Application over contaminated surfaces can severely impair the performance of this product.

MIXING RATIO

The base and catalyst components must be mixed in the ratio of one part of base to one part of catalyst by volume, or by weight.

APPLICATION

Formulated for application by dip/automatic trickle plant for the flow production treatment of small armatures, feed assemblies and stators.

It is equally suitable for use as a rapid hand treatment for the impregnation of electrical components.

Method: The windings to be treated should be pre-heated to a temperature of 90°C. The mixed varnish is then trickled, poured or brushed on to the windings and allowed to percolate through. After complete penetration is achieved, the winding or component should be raised to a temperature of 120 - 140 °C after which gellation will occur in a few minutes. If possible the windings should be rotated during the application process. When automatic trickle plant is being utilised, the pre-heating temperature should be set so that gellation does not take place until full penetration of the windings has been achieved.

OVERCOATING

May be subsequently recoated if required with INSULDERM 4001.

CURING SCHEDULE

The curing schedule will vary with the shape, weight and thermal conductivity of the components and also the thermal efficiency of the oven together with oven capacity and load.

Typically curing will take place between 4 and 6 minutes at room temperature and 1.5 - 2 minutes at 100°C. The curing schedule for particular components can only be determined by practical trials with INSULDERM 4001. Cure is deemed to have taken place when a hard solidified gel is achieved.

SOLVENT FOR CLEANING EQUIPMENT

800/002 Thinners.

ELECTRICAL PROPERTIES

Di-Electrical Strength (ASTM D115): Dry 3250 Volts/Mil. Wet 3000 Volts/Mil.

CHEMICAL PROPERTIES

INSULDERM 4001 has good resistance to moisture and a wide range of chemicals including transformer oil.

APPROVALS

Conforms to the requirements of BS5629 Part 1 Category 2.1 and Category 2.4 and BS5629 Part 3 Table 3 when tested in accordance with the test methods described in BS5629 Part 2. Conforms to DEF STD 31 Type H.

PRODUCT SAFETY INFORMATION

This data sheet should be read in conjunction with Product Safety Data Sheet 192.

ADDITIONAL INFORMATION

Crosbie Coatings Limited believe that the aforementioned information is to the best of our knowledge correct but no responsibility can be held for conditions of use beyond our control. Should there be any query as to the suitability for use please do not hesitate to contact the Technical Department of Crosbie Coatings Limited.