

**A: Product identification and description**

Tixotropic dispersion of stabilised and microencapsulated red-phosphorus (50%) and poly-(bisphenol A epichlorohydrin) (epoxy resin)

Red-phosphorus CAS : 7723-14-0; EINECS: 2317687

Epoxy resin CAS: 25068-38-6

Masteret 70450 is a halogen free flame retardant based on stabilised and microencapsulated red-phosphorus particularly suitable for fire proofing epoxy resins.

Masteret 70450 is in tixotropic pasty form which makes it safe to handle and easy to process.

**B: Physical properties**

Appearance: pasty

Colour: Dark red

Odor: Light

Density (23°C): 1,4-1,6 (g/ cc)

Solubility: Red phosphorus is practically insoluble in water and in common organic solvents

Epoxy group content: 0,5 (approx) (mol/200g of Masteret 70450)

Solid content: 52-56 (%)

Active matter (red phosphorus): 49- 51 (%)

**C: Toxicology**

Oral toxicity LD<sub>50</sub> ( rat):> 2000 mg/kg (referred to both components)

**D: Transport**

ADR/RID: Environmentally hazardous substance, liquid, N.O.S. (Epoxy resin and red phosphorus preparation), 9, UN 3082, III

**E: Applications**

Masteret 70450 has been developed for flame proofing epoxies articles with halogen free flame retardant additives.

It is generally applied in the concentration range from 5% to 10% w based on the weight of epoxy resins used for impregnating glass clothes intended for laminates (electric and electronic applications).

Masteret 70450, used at a concentration level from 4% to 8%, in combination with aluminium hydroxide (70% -100% w on weight of the epoxy resin) is suitable for achieving high demanding applications of epoxy casting resins (UL 94 V0 classification, LOI higher than 27% and afterburning time lower than 2 sec).

**F: Packaging**

The preparation is available in 25 kg new steel drums. Different packages are available on customer request.

**G: Storage and handling**

The preparation is stable (with regard to the separation of red phosphorus) at least 5 months if maintained in the original containers stored under ordinary conditions.

Extended unproperly storage of containers could initiate premature separation of red phosphorus making it difficult to redisperse.

Normal precautions to a good industrial hygiene and safe working place are, generally, sufficient in handling the preparation, however all operators are kindly requested to handle, use and dispose all wastes of the preparation in accordance with the information reported on MSDS.

*The information provided is based on our present knowledge and given as guidance for product use. The loading reported should be only regarded as guidance, however experimental check is needed on the polymer used and the flame retardancy class desired. The data reported do not constitute a guarantee. Quality of product is guaranteed under Italmatch Chemicals General Conditions of Sale. Existing property rights, if any, must be observed.*

## MASTERET — Red Phosphorus based Flame Retardants