AEPCO
Auto Electric Products Co.
Coating Division

PRODUCT DATA SHEET

THERMOPLAST (P.B)

High Temperature, Electrical Insulation Coating

Product: Thermoplast (P.B) is a high temperature electrical insulation, non-hygroscopic coating formulated from high density petroleum crude oil, solvents and minerals to develop desired electrical properties to stand at elevated temperatures (1000^0 C + 10%).

Features and Benefits:

- High temperature resistant; Insulation properties developed are quite stable at elevated temperatures.
- Highly electrically insulating at elevated temperatures; IR value (electrical insulation resistance value) doesn't deteriorate even at high temperatures.
- It requires air drying and is thermo setting in nature.
- It doesn't absorb moisture after complete cure.
- It is neutral in nature against acidic/alkaline atmosphere which contains acidic gases/vapors, condensate and mild acids, alkalis, mineral oils, water condensates etc.
- It is anti-oxidant and anti-corrosive.
- It is highly thermal conducting and bonding of the coating with the principle surface increases with rise in temperature.
- It prevents sparking and doesn't carbonize.
- It has high dielectric strength.
- It has high thermal shock resistance.
- It has longer life compared to other insulating material available.

Technical data:

- Density: At 25^0 C, 1.10 to 1.15 Kg/Liter
- Color: Brown
- Solid contents: 48% $\pm$ 2%
- Service temperature: 1000^0 C + 10%
- Electrical properties: Fully cured 1.25mm thick coating at 140^0 C for 8-9 hours:
  - Di-electric strength at 30^0 C: 110 KV
  - Di-electric strength at 200^0 C: 115 KV
  - 24 hours water immersion at 30^0 C: 102 KV
  - 24 hours acid vapors at 100^0 C: 90 KV
  - Insulation resistance of 1.25mm thick coating after boiling in 33% acidic water = 55 Mega Ohms. (Megger used of 5000 Volts to measure IR value of coating).
  - Insulation resistance of 1.25mm thick coating after immersion in cold water for 2 hours = infinity. (Megger used of 1000 Volts to measure IR value of coating).
- Moisture /water absorption of fully cured coating: Doesn't absorb moisture/water.
- Adhesion to metallic surface: Excellent (After surface preparation).
- Shelf life and storage: 6 months, store in a cool place (Immediately re-seal properly after taking out required quantity).

- Toxicity: Non-toxic after curing.

Areas of application:

- Electrical arc / ladle refining / submerged arc furnaces:
  - Cooling panels.
  - Roof cooling tubes.
  - Electrode arm and holders.
  - Bus bars and supports.
- Induction furnace
  - Copper coil.
  - Yokes.
  - Coil retainers.
  - Bus bar and bus bar separators.
  - Spacers and mica sheets.

Precautions:

- Use hand gloves and mask at the time of application of coating for a long time. Health safety is to be taken care as with other products.

Designed and developed by:
A.P Patki
Innovator of New Generation High Temperature Coatings

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