

# IonPhase® IPE® U1

IonPhase® IPE® U1 is a static dissipative, polymeric polymer additive. It is designed to be used in compounding, injection molding and extrusion applications with PC blends.

### Examples of applications:

- ESD protection for covers and housings in electronics
- Dust protection for automotive interior parts
- Dust protection for appliance exterior parts

### Property

### IonPhase® IPE® U1

### Standard

Melting range starts at °C

145

ISO 11357

Melting range ends at °C

167

Density

1.11

ISO 1183

MFI (230°C/5 kg)

70 g/10 min

ISO 1133

Volume resistivity

1 x 10<sup>5</sup> Ωm

IonPhase method

### Processing

IonPhase® IPE® U1 is normally processed at 230°- 280°C. Actual processing temperatures will usually be determined by specific equipment or host polymer. We suggest to add material as an additive in extrusion process. Compounding into the host polymer is highly suggested before injection molding. Barrier type screw with good mixing properties is recommended for good homogeneity of the polymer blend. Stainless steel with nitration, duplex chrome or nickel plating is recommended for screws, barrels, dies and adapters. Low MFI polyethylene is recommended for purging after using IPE® U1. The required loading of IPE® U1 depends on the used host polymer, processing method and the targeted level of static dissipation.

### Drying

IonPhase® IPE® U1 is delivered pre-dried in Al moisture barrier bags. Due to hydrophilic nature of the material, do not expose dried material to high humidity conditions in open container or bag. If the material is exposed to moist air, it should be dried before use. Our recommendation is to use desiccant dryer (dew point < - 40°C) for 2-4 hours at 80°C before processing. Moisture level should be below 0.06% after drying. If the materials are not dried, surface defects and process related problems may occur in processing. We suggest to feed material directly from drier to hopper for best result.

### Safety

Polymer additives supplied by IonPhase Oy are not considered hazardous materials. As with any hot material, care should be taken to protect the hands and other exposed parts of the body when handling molten polymer. At recommended processing temperature, small amount of fumes may evolve. If additives are overheated, more extensive decomposition may occur. Adequate ventilation should be provided to remove the fumes from the work area. Scrap can be disposed as energy waste. Disposal should comply with local, state and federal regulations. Resin pellets can be a slipping hazard. Loose pellets should be swept up promptly to prevent falls.

### Disclaimer

The information contained herein is to IonPhase's knowledge accurate and reliable as of the date of publication. It is the customer's responsibility to inspect and test the product and its suitability for customer's particular purpose. The customer is also responsible for the appropriate, safe and legal use, processing and handling of the products. Customer acknowledges that IonPhase has no control over and is not responsible for the manner in which the products are used or otherwise dealt with by customer or any subsequent purchaser or user.