

# Technical Data Sheet

## Eastman™ Isophthalic Acid

### Applications

- Aerospace coatings
- Apparel
- Architectural coatings
- Auto oem
- Auto plastics
- Auto refinish
- Automotive
- Building materials
- Coil coatings
- Construction chemicals
- Electronic connectors
- Equipment & machinery
- Film modification
- Graphic arts
- Intermediates
- Kitchen & bath
- Lubricants
- Metal coatings
- Packaging components non food contact
- Paints & coatings
- Polyester (pet)
- Process additives
- Protective coatings
- Refrigerator & coolant systems
- Small appliances non-food contact
- Soft drink packaging
- Sport drinks packaging
- Truck/bus/rv
- Upholstery
- Water packaging
- Wind energy

### Key Attributes

- Excellent thermal stability for low resin color
- Excellent weathering
- High heat distortion temperature
- Outstanding boiling water and stain resistance
- Outstanding hardness
- Superior corrosion and stain resistance

### Product Description



IUPAC: 1,3-Benzenedicarboxylic Acid

Eastman™ Isophthalic Acid (PIA) is the industry standard diacid component in high-quality alkyds and polyester resins for industrial coatings and unsaturated polyesters for fiberglass-reinforced plastics applications.

Polyester resins containing PIA exhibit excellent outdoor weathering relative to those containing phthalic anhydride and terephthalic acid. The excellent hardness and high glass transition temperature imparted by PIA leads to improved chemical, stain, humidity, and corrosion resistance required in coatings for industrial maintenance, automotive, aerospace, general metal and coil coating applications. Powder coatings formulated with PIA are used in exterior applications such as patio furniture, lawn mowers, vending machines, and automotive parts.

One of the largest applications for Eastman™ PIA is in unsaturated polyester resins for high-quality gel coats. The hardness, stain and detergent resistance characteristics of PIA are ideal for polyester solid-surface countertops that are an inexpensive alternative to acrylics.

Eastman™ PIA is supplied as a high-melting, white powder available in a variety of package sizes.

# Typical Properties

| Property                                 | Typical Value, Units                         |
|--|--|
| <b>General</b>                           |  |
| Molecular Weight                         | 166.14                                       |
| Empirical Formula                        | C <sub>8</sub> H <sub>6</sub> O <sub>4</sub> |
| Appearance                               | White powder                                 |
| Color                                    |  |
| CIE b*                                   | 1.4 max.                                     |
| Assay                                    | >99.8 wt % min.                              |
| Acid Number (mg KOH/g)                   | 675  |
| Water                                    | <0.1 wt %                                    |
| 3-Carboxybenzaldehyde                    | 25 ppm, max                                  |
| Meta-Toluic Acid                         | 150 ppm, max                                 |
| Total Metals <sup>a</sup>                | 5 ppm, max                                   |
| Bulk Density                             | 0.8 g/mL (49.9 lb/ft <sup>3</sup> )          |
| Melting Point                            | 345-348 °C (653-658 °F)                      |
| Specific Gravity                         |  |
| @ 20°C/20°C                              | 1.507  |
| Partical Size                            |  |
| @ 10%                                    | 25.8 Microns                                 |
| @ 90%                                    | 342.0 Microns                                |
| Mean Particle Size                       | 155.9 Microns                                |
| Chemical Inventory Listings <sup>b</sup> | TSCA (USA), EINECS (Japan)                   |

<sup>a</sup>Consist of iron, cobalt, molybdenum, chromium, nickel, titanium, aluminum, calcium, manganese, sodium, and potassium

<sup>b</sup>MITI (Japan), AICS (Australia)

## Comments

Properties reported here are typical of average lots. Eastman makes no representation that the material in any particular shipment will conform exactly to the values given.

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