



ELRASA – PITA™ (Purified Isophthalic Acid)

Technical Datasheet

1. Technical Datasheet

Property	Specification
Physical Properties	
Appearance	White or off-white powder; fine crystals
Physical Form	Powder
Molecular Weight (g/mol)	166.13
Density or Specific Gravity	1.54g/cm ³ at 77 °F
pH (if aqueous solution)	3.33(1 mM solution);2.76(10 mM solution);2.24(100 mM solution)
Odor	Odorless
Density	1.54g/cm ³ at 77 °F
Refractive Index	1.5100 (estimate)
Chemical Properties	
pKa	3.54(at 25°C)
Water Solubility	120 mg/L at 25 °C
Incompatibilities	Incompatible with strong oxidizing agents, strong bases
Thermal Properties	
Melting Point	347 °C
Autoignition Temperature	700 °C
Boiling Point	378.3 °C at 760 mmHg
Flash Point	196.7 °C

2. Processing Methods



Polyethylene terephthalate (PET) bottle

Add purified isophthalic acid (PIA) during polycondensation to modify PET's crystallinity and improve clarity and impact resistance. Monitor reaction time and catalyst levels to ensure high-quality, durable PET with improved mechanical properties.

Key Ingredients	Indicative Dosage (% w/w)
Terephthalic Acid (TPA)	70-85%
Ethylene Glycol (EG)	10-35%
Purified Isophthalic Acid (PIA)	<5% (typical 0-2%)

Paints

Use purified isophthalic acid (PIA) as a monomer in polyester resin synthesis to enhance durability, chemical resistance, and gloss in paints. Ensure complete esterification during resin production and maintain controlled reaction temperatures to avoid gelation or discoloration.

Key Ingredients	Indicative Dosage (% w/w)
Resin (polyester/alkyd, with PIA)	20-40%
Pigments/Fillers	10-30%
Water/ Solvent	20-50%
Additives	1-5%

Polyster resin

When adding purified isophthalic acid (PIA) to polyester resin, ensure it is well-dried to prevent moisture-related issues during polymerization. Introduce PIA gradually with good agitation to promote uniform dispersion.

Key Ingredients	Indicative Dosage (% w/w)
Purified isophthalic acid (PIA)	18%
Terephthalic Acid (TPA)	9%
Adipic Acid	11%
Neopentyl Glycol (NPG)	24%
Trimethylolpropane (TMP)	5%
Solvent (e.g., Xylene)	30%

3. Dosing by Application

Products	Authorized dosage %
Polyethylene terephthalate (PET) bottle	<5%
Paints	5-20%



The information and data contained herein are believed to be accurate but may not be all inclusive and should only be used as a guide. The information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the product for his particular use and on condition that they assume the risk of the use thereof.

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