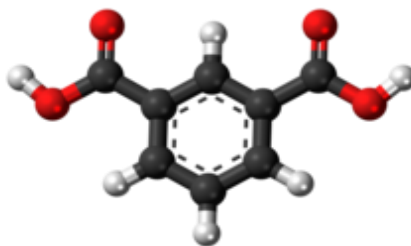
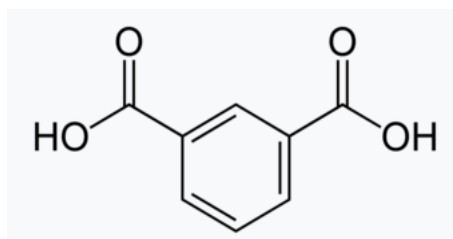


Purified Isophthalic Acid (PIA)

1. General Information:

Synonym: 1,3-Benzenedicarboxylic acid, m-Phthalic acid



- CAS Number: 121-91-5
- Linear Formula: $C_8H_6O_4$
- Molecular Weight: **166.13 g/mol**
- EC Number: 204-506-4
- HS Code: 29173960

2. Composition

Constituent	Concentration Range	Typical Concentration
Isophthalic Acid	99.90 % - 99.95 %	99.90 %
Water	0.10 % Max	< 0.10 %

3. PIA Manufacturing Process

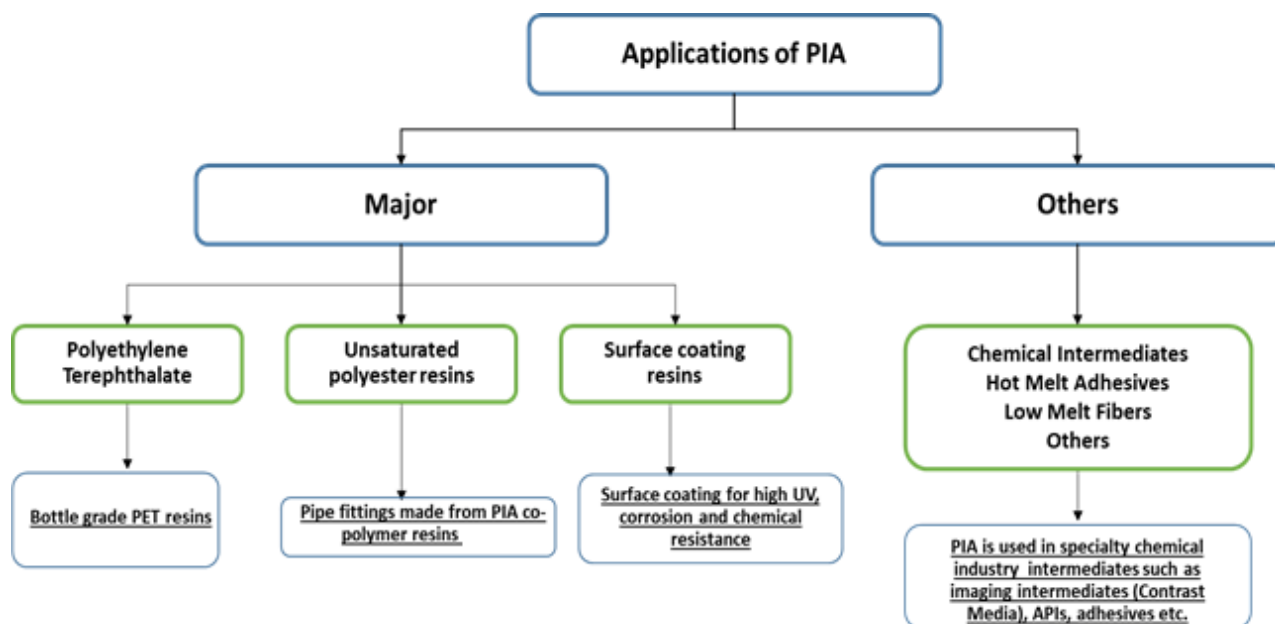
PIA is produced by the liquid-phase air oxidation of Meta-Xylene in Acetic Acid Solvent. The reaction is catalyzed by soluble Cobalt, Manganese and Bromine compounds. The reaction is highly exothermic.



4. Physical & Chemical Properties

Parameter	Value
Appearance	White Crystalline Powder
Molecular Weight	166 g/mol
Odor	Odorless
Physical State	Solid
Vapor Pressure	0.009 Pa at 100 deg C
Solubility	0.12 g/lit in Water (at 25 deg C)
Relative Density (H ₂ O=1) @ 20°C	1.54
Melting Point	345 (Sublimes at 348 deg C)
Octanol/water partition coefficient log K _{ow}	1.66
Auto Ignition Temperature	>650 deg C

5. Applications of PIA



6. Use Not Supported by RIL

- Pharmaceutical applications, where PIA molecule may remain as an un-reacted component in the formulation meant for consumption by human or animals.
- As a component in Animal food / Poultry feed.

7. PIA Specifications

Sl. No.	Quality Parameter	Units	Specification
1	Appearance **	-	White Crystalline free flowing powder
2	Millipore	-	0.95 Min
3	3 - Carboxy Benzaldehyde(3-CBA)**	ppm w/w	25 Max
4	Benzoic Acid	ppm w/w	30 Max
5	Acid Number **	mg KOH/gm	675 ± 2
6	Moisture **	% w/w	0.10 Max
7	b* colour **	-	1.0 Max
8	Median Particle Size	µm	75 - 95
9	Colour in 2M KOH solution	Pt-Co	10 Max
10	Ash **	ppm w/w	15 Max
11	Individual metals (Co, Mn, Fe)** , +	ppm w/w	1 Max Each
12	Total Heavy Metals (Co, Mn, Fe, Cr, Na, Ti, Mg, K, Ca, Ni) ** , +	ppm w/w	10 Max
13	Purity **	% w/w	99.90 Min

** : Part of Guaranteed Marketing Specifications. Rest are RIL Internal Control Specifications.

+ : Individual metal content in Sr. No. 12 is maximum 1 ppm w/w.

8. Packaging & General

- PIA is packed in PP Woven Jumbo Bags having LDPE liner with Inlet and Outlet Spouts. PIA can be supplied in bags of 25 kg, 500 kg & 1 MT.
- PIA will soon be available in Sea Bulk Containers with LDPE liners (Capacity 25 MT).
- Inert gas is mandatory for unloading, conveying of PIA from Tankers or Containers.
- Personal protective equipment should be used while handling PIA powder.
- Please refer to product safety data sheet (MSDS) for details regarding safe use conditions.

This Technical Data Sheet and the information contained herein is intended to provide summary of our knowledge and guidance regarding use of PIA Product. Its contents are offered in good faith, as accurate to the best of our knowledge. The data herein applies only to the Product sold by entities of the Reliance group and not to products sold by others. It relates only to the Product and does not relate to its use in combination with any other product or material or in any process.