

## Purified Terephthalic Acid (PTA)

### General

Purified terephthalic acid (PTA) is an organic compound that is the main raw material for polyethylene terephthalate (PET) and polyester fibers.

### Product Description

In the Oxidation unit, terephthalic acid (TA) is manufactured by ALPEK POLYESTER using an in-house process of catalytic oxidation of paraxylene with air. There are three important sections of the process: (1) Feed Preparation and Reaction, (2) Product Recovery, and (3) Solvent Recovery. The dry crude terephthalic acid is stored in storage silos to be transferred to the purification unit.

In the Purification unit, impurities are removed from TA, using (1) Hydrogenation, (2) Crystallization, (3) Centrifugation and (4) Drying processes, to produce the purified terephthalic acid (PTA) and store it in silos for distribution.

Purified Terephthalic Acid (PTA) is a white, crystalline powder of molecular weight 166.13 and chemical formula  $C_8H_6O_4$ .

Purified Terephthalic Acid is shipped in the following types of packaging: Truck Hoppers, Polypropylene Bags, Bulk Containers and Railcar.

### Sales Specification

Characteristics	Units	Requirements & Tolerances
Acidity	mg KOH/g	675 ± 2
Moisture	% Weight	0.2 Max.
4-CBA	ppm	25 Max.
Ash	ppm	6 Max.
P-toluic acid	ppm	170 Max.
Pass through mesh 325	% Weight	23 Max.
Color B	CIE	1 Max.
Color APHA	Units	10 Max.
Heavy metals Ti, Cr, Fe, Co, Ni, Mo, Mg	ppm	5 Max.

SGL-E-024 Purified Terephthalic Acid (PTA)

### Typical Properties

Property	Units	Value
Melting point	°C	427
Boling point	°C	402
Steam pressure	mmHg at 20° C	<0.01

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