Polymer Add (Thailand) Co.,Ltd.

Office - 106, Chalaremprakiat, Lor 9, Soi 22, Yak 5, Nongbon, Prawet, Bangkok, Thailand 10250

Factory - 188/3, Moo 8, Tambon Bangpu Mai, Amphoe Muang Samut Prakan, Samutprakan, Thailand 10280

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TECHNICAL DATA SHEET (TDS)

TRIMETHYLOLPROPANE TRIBENZOATE – MICRONIZED

1. Product Identification

Item	Details
Chemical Name	Trimethylolpropane Tribenzoate
Synonyms	TMP Tribenzoate, TMP-TB
CAS No.	6144-14-5
Molecular Formula	$C_{30}H_{24}O_6$
Product Form	Micronized solid powder

2. Product Description

Trimethylolpropane Tribenzoate is a high-melting, solid aromatic ester plasticizer supplied in micronized powder form for formulation-grade applications.

It is used as a permanent, low-migration solid plasticizer / internal modifier in PVC compounds, styrenic polymers, ABS blends, and engineering polymer systems where thermal stability, dimensional retention, and long-term performance are required.

3. Typical Physical Properties

Property	**Typical Value**
Appearance	White to off-white powder
Odour	Mild
Melting / Softening Range	110 – 125 °C
Bulk Density	0.40 – 0.60 g/cm^3
Solubility in Water	Practically insoluble
Thermal Behaviour	Softens and becomes active at elevated processing temperatures

Values are typical and not intended as specifications.

4. Particle Size Characteristics (Micronized Grade)

Parameter	**Typical Range**
D50	6 – 12 µm
D90	< 25 µm
D100	< 40 µm

Micronization ensures uniform dispersion, controlled activation, and consistent functional performance in polymer and resin formulations.

Primary Applications

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Application Category	Typical Use / Description
Flexible & Semi-Rigid PVC Compounds	Solid, high-temperature plasticizer providing permanent flexibility and low migration
Styrenic Polymers & ABS Blends	Functional modifier improving toughness, flow, and thermal stability
Engineering Thermoplastic Compounds	Internal plasticizer enhancing processability and long-term mechanical performance
Industrial Adhesive & Coating Systems	Plasticizer/modifier improving flexibility, adhesion, and thermal resistance

Functional benefits:

Benefit Category	Description
Plasticization Performance	Permanent plasticization
Volatility & Migration	Low volatility and migration
Mechanical Properties	Improved toughness and flexibility
Thermal Performance	Thermal stability during processing

6. Secondary / Niche Applications

- PVC flooring and profiles
- Sealants and construction compounds
- Specialty polymer blends requiring controlled flexibility

7. Processing & Handling

- Supplied as a free-flowing micronized powder
- Suitable for dry blending and compounding
- Compatible with standard polymer processing equipment

8. Storage & Shelf Life

- Store in a cool, dry, well-ventilated area
- Keep container tightly closed
- **Shelf life:** 24 months under recommended storage conditions

9. Packaging

- 20–25 kg bags

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- Other packaging available on request

10. Regulatory & Compliance (Indicative)

- Intended for industrial use only
- Not classified as SVHC under REACH (indicative)
- Detailed regulatory status available upon request

11. Disclaimer

The information provided is based on typical data and experience and is intended for guidance in formulation development. Users should conduct their own evaluations to determine suitability for their specific applications.