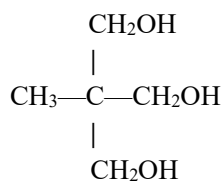




## **Trimethylolethane(TME) Technical Data Sheet**

**Jiangxi Keding Chemical Materials Co.,Ltd.**

TRIMETHYLOLETHANE (TME) C<sub>5</sub>H<sub>12</sub>O<sub>3</sub>

Product name: Trimethylolethane

English abbreviation: TME

Chemical formula: C<sub>5</sub>H<sub>12</sub>O<sub>3</sub>

Appearance: White Crystal

Molecular weight: 120.15

Flash point: 160(°C)

Solubility (g/100g,25°C): water/140; methyl/75.2; ethyl alcohol/27.9

CAS No.: 77-85-0

EINECS No.: 2010639

The REACH registration number for TME is 01-2120757439-41-0002.

#### ◆ Product Description

Trimethylolethane (TME) is a unique multifunctional neo-pentane structure polyalcohol with three highly reactive hydroxyls. The neo-pentane structure can provide the excellent stability, and improve the property of heat, light, hydrolysis and oxidation resistance. Also, it possesses the distinguished weather ability, glossiness and chemical resistance.

#### ◆ Product Quality Standard

Property	Index
Product Appearance	White Crystal
TME Content (wt%)	≥98.0
Hydroxyl Value (wt%)	≥41.5
Ash Content (wt%)	≤0.01

Moisture (wt%)	≤0.3
Melting Point (°C)	190~203
Water Insoluble (ppm)	≤50
Hazen(Pt-Co)	≤20

#### ◆ The Field of Application

TME application: It is mainly applied to the production of polyester, polyurethane, alkyd resin, epoxy resin, high solid resin, reducible resin, powder coating resin, and organic silicone modified resin, and also is applied to the production of high-grade lubricant, printing ink, plasticizer, and special explosive, as well as the coating agent of titanium dioxide etc.

TME is widely used as a raw material for the synthesis of **alkyd and polyester resins**. The stable neo-pentyl structure, combined with the three primary hydroxyl groups, make TME the ideal choice for preparing resins with very good resistance to heat, moisture and UV light. In **waterborne resins**, TME helps improve the hydrolytic stability of the resin.

**Oil-free polyester** baking enamels based on TME are noted for their excellent colour retention properties and over-bake resistance. TME is commonly used in the preparation of **silicone modified polyesters and alkyds** designed for high temperature applications such as bakeware, grill and muffler coatings.

TME esters may be used as the **lubricant base stocks**. Depending on the acid chain length, structure and composition, TME esters can be used in lubricants for textile processing or jet engines for example. A list of TME esters along with properties is available upon request.

TME is used for **pigment surface treatment** to improve wetting and dispersing of pigments in extruded plastics, paints and coatings. TME is easily dissolved into water for easy application.

TME is also used in **investment casting wax** as a filler to reduce thermal expansion and mold cracking. The combination of high melt point, specific gravity, low coefficient of thermal expansion and non-hazardous classification make it an ideal substitute for Bisphenol A. TME can be used in both water-soluble and paraffinic blends.

Application	Advantages
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Resin	<ul style="list-style-type: none"> <li>➤ Excellent light and heat stability, and property of hydrolysis and oxidation resistance.</li> <li>➤ Excellent weather ability, glossiness, chemical resistance, and overbaking resistance property.</li> <li>➤ Excellent film formation hardness, low viscosity, quick dry, and improving the flexibility.</li> <li>➤ Excellent property of water proof, acid and alkali resistance, and detergent resistance.</li> <li>➤ High reaction temperature, huge elasticity of response, and increasing the solid content.</li> <li>➤ Low combining weight, reducing the polyalcohol loss while esterifying, and reducing VOC.</li> </ul>
Coating agent of titanium dioxide	<ul style="list-style-type: none"> <li>➤ Compact molecular structure, high water solubility, and non-alkalinity.</li> <li>➤ Improving the dispersing performance of TiO<sub>2</sub>, easy to use.</li> <li>➤ Preferable property of high temperature resistance.</li> <li>➤ Good pigment wettability and adhesiveness.</li> <li>➤ No influence of the cross-linking of coating, and extensive adaptability.</li> <li>➤ Low consumption of physical quantity.</li> <li>➤ Low toxicity, and meeting the requirements of environmental protection.</li> </ul>
Lubricant/Plasticizer	<ul style="list-style-type: none"> <li>➤ High heat stability.</li> <li>➤ TME is essentially non-toxic.(resin proved by FDA available for contacting with the food).</li> </ul>

◆ **Packaging & Storage**

25kg, PE bag

Cool, dry and ventilated

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