

# TPC

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## 1. Characteristics of Product

TPC stands for terephthaloyl chloride and is refined to be highly pure. It is a crystal white solid in room temperature. It is clean and transparent like water when in liquid state. In particular, it is used as a main material for para-aramid, which shows strong physical characteristics such as high strength and abrasion-resistance.

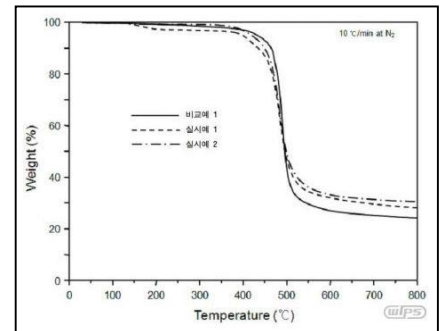
## 2. Product Application



**para-Aramid fiber**



**Water Capture**

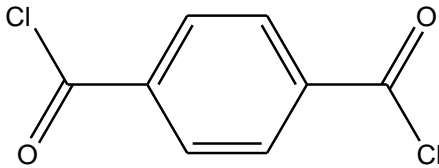


**Reaction retardant**

TPC is mainly used as a material for meta-aramid, which is a special material, and also for some stabilizers and reaction retardants. In particular, the para-aramid resin made by using TPC is light and shows very high tensile strength, providing about 5 times higher strength than steel. As it is also excellent in elasticity and vibration-absorption, it is used as a reinforcement as well as a bullet-proof material. It is also chemical-resistant and its heat-induced shrinkage is low.

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## 3. Product standards & general properties

| Item   | Evaluation Method | Unit  | Result      |
|--|-------------------|-------|-------------|
| <b>Product Standards</b>   |                   |       |             |
| Purity   |                   | wt%   | Min. 99.85  |
| TPC  |                   | wt%   | Max. 0.05   |
| Other Impurities   |                   | wt%   | Max. 0.1    |
| <b>General Properties</b>  |                   |       |             |
| Product Exterior   |                   |       | White Solid |
| Boiling Point  |                   | °C    | 265         |
| Freezing Point   |                   | °C    | 81.5~83     |
| Evaporation Pressure (25°C)  |                   | mmHg  | 0.02        |
| Flash Point  |                   | °C    | 180         |
| Molecular Weight   |                   | g/mol | 203         |
| <b>Chemical structure</b>  |                   |       |             |
|  |                   |       |             |

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## 4. Product Packaging

TPC supplies Bulk

## 5. Safety and Health

Contact with this substance will lead to burn. If it comes in contact with the eyes, it may cause severe pain or damage, leading to injury and burn. In addition, inhaling its powder would be very harmful to the lamina muscularis mucosae, and also to the tissue on the upper part of airway. Digesting it will lead to burn. If it comes in contact with the skin, contaminated clothing and shoes should be removed. Wash sufficiently with soap and water first before seeing a doctor. When washing, wash for 15 minutes at least before seeing a doctor. If a person inhaled the powder of it, the person should be moved to an area with fresh air, stabilized and kept warm. If necessary, artificial respiration should be applied. If a person digested it, do not induce vomiting and do not let the person eat any type of food in any case while the person is unconscious. Wash the mouth with water before seeing a doctor. Take precaution against the heat of fire. When required to put out a fire, it is required to wear a self-contained respiration system. Water, alcohol-resistant foam, dry chemical, or carbon dioxide fire extinguishers should be used.

## 6. Storage and Handling

In case of IPC, take extra precautions to prevent moisture from being mixed into the storage container. Seal the container with dry hydrogen gas, if possible. When working with IPC, it is required to wear proper safety gear and have an exhaust system in place. Any contact with eyes or skin should be avoided during the work. Also, take precaution to prevent dusts and aerosol from being generated. After work, washing using soap must be carried out and contaminated working garment must be washed before being used again.