

Product Name: C5 Fraction

Product Summary

C5 fraction is a mixture of C5 hydrocarbons (such as pentane, isoprene, and cyclopentadiene) that is produced as a by-product of naphtha cracking.

Cyclopentadiene (1,3-cyclopentadiene)

- Boiling point: 42°C Melting point: -85°C
- Cyclopentadiene is one of the cyclic diene compounds. It forms dicyclopentadiene (C₁₀H₁₂), which is a dimer.
- One of its properties is that it reacts with maleic anhydride.
- It is unusually acidic for a hydrocarbon.

Isoprene

- Boiling point: 34.07°C Melting point: -145.95°C
- Isoprene is a hydrocarbon that contains double bonds.
- Isoprene produced for industrial use is mainly used in the synthesis of natural rubber.

Pentane

- Boiling point: 36.07°C Melting point: -131°C
 - Pentane is a colorless, highly volatile liquid with an aromatic odor.
 - It has two isomers, methylbutane (isopentane) and dimethylpentane (neopentane).
 - Natural gas and gasoline contain pentane.
 - As a component of the C5 fraction, it has a flash point of -58°C.
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Application Example

Isoprene used as a raw material for synthetic rubber accounts for about 10% to 15% of the C5 fraction. After isoprene is extracted, the C5 fraction contains effective fractions such as dicyclopentadiene and piperylene, which are used as raw materials for petroleum resins, perfumes, and other products.

Properties

Colorless liquid with a ripe fruit smell

Storage Conditions, etc.

Keep away from heat and other ignition sources and store in a well-ventilated dry area.

Number Specified by the Act on the Regulation of Manufacture and Evaluation of Chemical Substances

C5: (9)-2602, Cyclopentadiene: 3-(3)-24, Isoprene: (2)-20, Pentane: (2)-5

CAS Registry Number

Cyclopentadiene: 542-92-7, Isoprene: 78-79-5, n-Pentane: 109-66-0, Isopentane: 78-78-4

Relevant Laws and Regulations

The Act on the Assessment of Releases of Specified Chemical Substances in the Environment and the Promotion of Management Improvement, the Industrial Safety and Health Act, the Act on the Regulation of Manufacture and Evaluation of Chemical Substances, the Fire Service Act, the Act on Prevention of Marine Pollution and Maritime Disaster, the Act for the Control of Export and Import of Specified Hazardous and Other Wastes, the Civil Aeronautics Act, the Ship Safety Act, the Port Regulations Act, the Foreign Exchange and Foreign Trade Act

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