

## Product Name: Crude C4

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### Product Summary

Crude C4 is a mixture of C4 hydrocarbons such as butane, butylene, and butadiene, and is produced as a by-product of naphtha cracking. It is used to extract butadiene, a raw material for synthetic rubber.

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### Characteristics

#### Butadiene

- Boiling point:  $-4.4^{\circ}\text{C}$  Melting point:  $-108.9^{\circ}\text{C}$
- Butadiene is one of the unsaturated hydrocarbons containing double bonds.
- It is thought to have two different isomers (1,2-butadiene and 1,3-butadiene), with 1,3-butadiene, a conjugated diene, being more stable than 1,2-butadiene.

#### Butene (butylene, 1-butene)

- Boiling point:  $-6.3^{\circ}\text{C}$  Melting point:  $-185.3^{\circ}\text{C}$  Ignition point:  $384^{\circ}\text{C}$
- Butene is an unsaturated hydrocarbon with a single double bond.
- It has three types of structural isomers, of which 2-butene has two geometric isomers: cis and trans.
- As with other alkenes, butene is more likely to undergo an addition reaction due to its double bond.

#### Butane

- Boiling point:  $0.5^{\circ}\text{C}$  Melting point:  $-138.5^{\circ}\text{C}$
  - Butane is the smallest alkane that has isomers, one of them being methylpropane (isobutane).
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### Properties

Clear and colorless gas with an unpleasant odor

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### Storage Conditions, etc.

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

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

Butadiene: (2)-17, Butene (butylene): (2)-16, Butane: (2)-4,

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## CAS Registry Number

1,3-Butadiene: 106-99-0, Isobutene: 115-11-7, 1-Butene: 106-98-9, n-Butene: 106-97-8

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## Relevant Laws and Regulations

The Act on the Assessment of Releases of Specified Chemical Substances in the Environment and the Promotion of Management Improvement (1,3-butadiene), the Industrial Safety and Health Act, the Fire Service Act, the Act on the Regulation of Manufacture and Evaluation of Chemical Substances, the High Pressure Gas Safety Act, the Civil Aeronautics Act, the Ship Safety Act, the Port Regulations Act, the Road Act

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## Inquiries

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