

PRODUCT BACKGROUNDER

Benzene

Important! For detailed information on this product and emergency measures, obtain the Material Safety Data Sheet (MSDS). In the case of an emergency, please call our 24-hour hotline at 1-800-561-6682 or 1-403- 314-8767.

May also be called: Benzol

Product/Substance Use:

- This material is a co-product of the ethylene manufacturing process at NOVA Chemicals' Corunna, Ontario facility and is shipped by pipeline.
- Benzene is also a component of some mixed hydrocarbon co-products (Aromatic Concentrates) shipped by rail from Joffre, Alberta.
- It is used to make a wide range of industrial chemicals including styrene. It is also a volatile component of gasoline.

Characteristics and Safe Handling:

- This material is regulated as both flammable and toxic in the workplace and as flammable in transportation.
- Benzene is a volatile, highly flammable, toxic, clear liquid with a sweet solvent-like odour.
- Any equipment used in areas of handling or storage must be approved for flammable liquids and properly grounded for control of static electricity.
- If released from containment, benzene evaporates readily and may be easily ignited by heat, sparks or flames. Containers exposed to fire conditions may explode.
- Any liquid or vapour release must be monitored due to risk of fire or explosion, and possible toxic effects. Ignition from a distant source with flashback is possible. Vapours are heavier than air and may collect to dangerous levels in low, underground or confined areas.
- Material will float on water and evaporate rapidly. Any liquid release on water or land must be isolated, contained and recovered or cleaned up by properly trained and equipped personnel.

Health and Safety Information:

- Ensure adequate ventilation is available. This material is harmful if inhaled. Breathing benzene vapours can irritate the respiratory tract. Excessive inhalation of benzene vapours may cause heartbeat irregularities as well as headaches, sleepiness, dizziness, nausea, and loss of coordination. Additional adverse inhalation effects may also include long-term damage to the blood-forming system, kidney and liver damage, and/or cancer (leukemia). With extended contact (usually in an enclosed space), unconsciousness or death is possible. Studies with pregnant animals have shown that breathing benzene has harmful effects on the developing foetus.
- Wear all recommended personal protective equipment if any contact with this material is likely.
 - This material may be rapidly absorbed through the skin. Prolonged and/or repeated skin contact may cause mild to severe irritation / dermatitis, chemical blistering, skin sensitization and secondary skin infections. Flush immediately off of skin.
 - Contact with liquid material and high concentrations of the material's vapours are irritating to the eyes and may cause injury to the cornea. Flush immediately out of eyes.
 - Immediately remove and clean any contaminated clothing prior to reuse or discard.
- If accidentally swallowed, DO NOT INDUCE VOMITING. Seek immediate medical attention if ingested or aspirated. Aspiration of liquid into lungs may cause chemical pneumonia. Ingestion of this material may cause headache, sleepiness, dizziness, nausea, loss of coordination, long-term damage to the blood forming system, kidney and liver damage, cancer (leukemia) and in extreme situations, unconsciousness or death.
- Benzene is a confirmed human carcinogen (leukemia).

Environmental Information:

- This material is largely insoluble in water, volatile, with moderate absorption into soil and sediment. Benzene is considered toxic to aquatic life, and its metabolites may be detected in fatty fish tissues.
- Benzene in air will photo-degrade with a calculated half-life of 13.4 days. Benzene will biodegrade in soils and ground waters (half-life of 16-28 days) under aerobic (with oxygen) conditions. Limited degradation occurs under anaerobic (no oxygen) conditions. Soil remediation may be required after large spills.
- Associated wastes may be regulated in Canada and in the United States. Ensure all applicable regulations are met.

Last update: January 5, 2012

For more information on this, or any other NOVA Chemicals' product, please contact us at the nearest location below during business hours or visit our website at www.novachemicals.com :

NOVA Chemicals Corporation
PO Box 2518, Station M
Calgary, Alberta
Canada T2P 5C6
Tel: 403-750-3600

NOVA Chemicals Inc.
1555 Coraopolis Heights Road
Moon Township, PA.
USA 15108
Tel: 412-490-4000
Toll Free: 1-866-ASK-NOVA

NOVA Chemicals (International) S.A.
Avenue de la Gare 14
CH-1700 Fribourg
Switzerland
Tel: 41-26-426-57-57

THIS INFORMATION IS FURNISHED IN GOOD FAITH, WITHOUT WARRANTY, REPRESENTATION, INDUCEMENT OR LICENSE OF ANY KIND. ALL IMPLIED WARRANTIES AND CONDITIONS, INCLUDING WARRANTIES AND CONDITIONS OF QUALITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE SPECIFICALLY EXCLUDED. NO FREEDOM FROM INFRINGEMENT OF ANY PATENT OWNED BY NOVA CHEMICALS OR OTHERS IS TO BE INFERRED.