PRODUCT BACKGROUNDER

Propylene

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: Propylene-Chemical Grade, C3 Product, 1-propylene, 1-propene, methylethylene, Propylene (95%) - Propane Mixture, Crude Propylene, Joffre C3 Intermediate Product

Product/Substance Use:

- This industrial product is manufactured at NOVA Chemicals' Corunna, Ontario and Joffre, Alberta facilities and is transported by pipeline and rail car.
- It is used as a raw material to make industrial chemicals and polymers, or may be burned as a component of fuel gas.

Characteristics and Safe Handling:

- This product is regulated in the workplace. It is also regulated during transportation as a flammable gas.
- Propylene is a highly volatile flammable gas, having a faint sweet gas-like odour at normal temperatures. It is shipped (as a not-odorized product) and stored as a liquid, under pressure (from 70 to 220 psi, varies with temperature).
- Any equipment used in areas of handling or storage must be approved for flammable liquefied gas systems and properly grounded for control of static electricity.
- Do NOT attempt to extinguish a propylene gas fire unless the leak source can be isolated and shut off. Any release to water, air or land will immediately disperse into a highly flammable gas cloud that is easily ignited by heat, sparks, static charge or flames. Consider use of cold water spray to disperse or divert released gas cloud.
- Areas surrounding a propylene release must be considered as immediate high risk for fire or explosion. Propylene is heavier than air and may collect to dangerous levels in low, underground or confined areas. Ignition from a distant source with flashback is possible.
- Liquefied gas may explode on contact with hot water (45°C to 75°C) (113°F to 167°F). Risk of container or pipeline explosion is extremely high when subjected to high heat or direct flames. Use large quantities of cold water to cool any pipelines or vessels exposed to fire.
- In the event of a large release or fire, evacuate personnel upwind to a safe distance of at least 0.8 to 1.6 kilometres (½ to 1 mile).
- Liquefied propylene cools its surroundings to extremely low temperatures as it vaporizes. Many materials may become brittle and fail without warning when exposed to liquefied propylene. If any safety equipment comes in contact with liquefied propylene, it must be inspected and retested for integrity or replaced.

Health and Safety Information:

- Care should be taken to avoid having liquefied propylene contact the skin or eyes as severe injury, blistering and frostbite can result. Wear thermal protective gloves and all recommended personal protective equipment if contact with this material is possible.
- If liquefied propylene contacts the eyes, immediately flush with warm water and seek medical attention. Thaw frostbitten skin gently in warm water. Do NOT rub or pull off adherent objects or clothing. Seek immediate medical attention. Contact with propylene gas may be mildly irritating to the eyes and skin; seek medical attention if irritation persists.
- Ensure adequate ventilation is available. Breathing propylene may cause nose and throat irritation, and at very high concentrations may cause headache, heartbeat irregularities, light-headedness, drowsiness, dizziness and nausea. With extended contact (usually in an enclosed space), unconsciousness or death due to low oxygen levels is possible.
- Propylene from the Corunna, Ontario and Joffre, Alberta facilities may contain very small amounts of Radon-222, a naturally occurring radioactive material (NORM). Potential for buildup of Radon-222 decay products, (Lead-210, Polonium-210) in processing equipment may accumulate to a point where gamma radiation is detected outside of this equipment during normal operations. These decay products may be a health hazard if inhaled or ingested. Wear all recommended personal protective equipment if contact with this material or its decay products during handling or routine maintenance of exposed transfer and processing equipment is likely.
- Wear fire-resistant or natural fibre clothing in areas where propylene releases can occur to reduce risk of possible buildup of static charge on synthetic fabrics.

Environmental Information:

- Propylene is highly volatile, and is not expected to remain in water or on the soil surface. Product is not considered harmful to aquatic life, and is not known to accumulate in plant or animal tissues.
- Propylene will degrade rapidly in air; with a calculated atmospheric half-life range of 4.9 to 101.2 hours. Biodegradation can potentially occur in soils or surface water.
- Associated wastes may be regulated in Canada and in the United States. Ensure all applicable regulations are met.

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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:

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