

Last Revised: July 21, 2022

**Diamond Petrochemicals Canada
Corporation (DPCC)**

***Environmental Emergency
Fact Sheet***

**Explosive Category
Chemicals (E2 Regulations)**

What are explosive category materials and how are they used at DPCC?

- Hydrocarbons are used for a variety of purposes by industry. Hydrocarbons are used as raw materials, solvents and refrigeration agents in the process.
- DPCC uses the following chemicals on site with fire/explosion risk: acetonitrile, butadiene, butanes, butylenes, and methane.

Overview

- Explosive category liquids at DPCC are stored in low pressure tanks. Explosive category gases are liquefied and stored in pressure vessels such as spheres or horizontal "bullet-shaped" vessels or they may be stored in underground caverns. Some materials such as methane (natural gas) and hydrogen are simply brought in by pipeline.
- An evaluation of several possible scenarios for potential releases to the environment was conducted. The worst case and reasonable worst-case involve loss of primary containment at the storage vessel or piping systems. It is expected that these scenarios can be reasonably mitigated through the actions and measures described below.

What does DPCC do to keep me safe?

DPCC uses a variety of procedures and equipment to prevent accidental releases, fires, and explosion including the following:

- Designs meet or exceed industry standards.
- All projects and process changes are tightly controlled and receive hazard assessments at the design and installation phases to minimize the potential for leaks, fires and explosions.
- Modifications to the facility undergo a Management of Change (MOC) to

assess and mitigate potential emergencies.

- Pressure relief valves handle unexpected rises in pressure safely.
- Liquid chemical storage vessels are surrounded by walls (called a dike) to contain a spill if one occurs.
- Safety controls including warning alarms, interlocks and leak detectors provide multiple lines of defense.
- Ignition sources in hydrocarbon areas are controlled by installing equipment that meets specific electrical classification requirements, grounding / bonding systems and strict controls on "hot work" (construction and maintenance work that may generate sparks or flames).
- Underground storage caverns have isolation valves that close automatically upon detection of an operating problem, hydrocarbon leak or a fire.
- Regular equipment inspection, testing and maintenance ensure proper and safe operation.
- Safe work permits are utilized to ensure communication and controls are in place for work activities.
- Inspections and audits are performed to ensure correct procedures are followed and the facilities are properly maintained.
- The site is protected by an underground firewater distribution system with hydrants and monitors located throughout the site. Water spray systems are used to provide water over vessels and equipment.
- DPCC is supported by an in-plant fire department, municipal responders and mutual aid support from surrounding production facilities.

What will these chemicals do to me?

- Explosive category chemicals have the potential to ignite and explode if released in a confined cloud. The primary concerns with these types of accidents are burns, flying debris, damaged eardrums or being knocked down and hurt by the force of an explosion.
- In most cases, these concerns primarily affect personnel working on site.

How will I be warned in the event of an emergency?

- DPCC maintains an audible alarm system that can be heard from anywhere within the plant site and there is a site wide alarm that can be activated if required.

On-site:

- Alarms will be sounded and announcements will occur about the nature of the emergency and what to do. Stay calm and follow instructions.

Off-site:

- If an incident may affect the community, you may be notified through:
 - Community sirens
 - News flashes on local radio stations
 - Internet-based and telephone incident-alerting systems (My CNN)
 - Loudspeaker announcements or other direct warning by authorities – police or fire fighters

What should I do?

If there has been a release of explosive category chemicals:

- Follow any special instructions given over the radio, or by someone in authority.

- Go indoors to the nearest or safest location (**onsite: Muster Point**) unless given other instructions by someone of authority,
- Shut doors and windows and then stay away from all windows. Shattering glass may present a cutting hazard.
- Turn on your radio to a local news station (You must be prepared to wait a few minutes for news).
- Monitor MyCNN (see last page)
- Turn off furnace or air conditioner/air intakes, hit the emergency shutoffs for HVAC if equipped (**Onsite specifically**)
- When you have been advised of an all clear, follow any instructions.
- Stay away from the site, if not already onsite. Follow the standard marked emergency route or directions from police officers to travel to your destination.
- Place wet towels at the base of doors.
- Bring in pets if they are nearby and easily found.

Unless you are told to do so by authorities:

- DO NOT attempt to evacuate or travel anywhere.
- DO NOT attempt to bring home children from school, or other family members from work.
- DO NOT use the telephone to call 911 or any other authority for information.

During an emergency, information may be very limited. As much as possible, plan and prepare in advance.

What will other people be doing?

- Area petrochemical plants and refineries have trained personnel and equipment to respond immediately to an incident. Detailed emergency response plans are in place and practiced regularly.

- CAER brings together the resources of municipal and industrial responders together on an incident.
- CAER's plans are tested annually in a Sarnia area disaster simulation (SADS) exercise.
- **To register for updates during emergencies, follow the process noted on the page below:**

Community Awareness Notification Registration Process



ACCESS MyCNN

Powered by BASES, My Community Notification Network (MyCNN) is an advanced regional emergency notification tool that provides notifications for emergency and non-emergency updates from local industrial sites, warnings for extreme weather, unexpected road closures, missing persons, and evacuations. These notifications are free of charge and available on lambtonbases.ca.

