



Aide-mémoire for First Responders

Class 3 – Flammable liquids

This checklist outlines safety measures, grouped in five key steps, to consider during emergency planning and response to a transport incident.

Initial considerations

- **Safety** of responders and the public is a priority.
- **Non-intervention** may be the preferred course of action when large volumes of flammable liquids are involved.
- **Rail** incidents involving flammable liquids **on fire** require a **specialized response**, a solid knowledge of the products involved and the high risk hazards such as **Heat Induced Tears (HIT)**, as well as the firefighting techniques specific to such fires.
- Response actions must be carefully **planned** with personnel present on scene, at risk of making a situation worse.

CANUTEC can provide information and assistance during any step of an incident and can be reached at
613-996-6666, 1-888-CAN-UTEC (226-8832) or *666 from a cell phone (in Canada)

Step 1: Do not rush

Protect first responders and the public

- Keep** personnel and vehicles at a safe distance from the scene: **use** the Emergency Response Guidebook (ERG) – GUIDE 127 until the flammable liquid has been identified
- When heading to the scene of an incident, **approach** from uphill and upwind (be aware of the field topography)
- Stay clear** of vapours, fumes, smoke, spills and safety related hazards
- Wear** appropriate personal protective equipment (PPE)
- Monitor** air quality, oxygen level and flammability (e.g. 4-gas detector)
- Eliminate** all ignition sources

Step 2: Secure the scene

Isolate the area and secure the perimeter

- Contact** local authorities to secure the scene
- In the case of rail incidents, **contact** the rail traffic control centre to ensure the rail line is shut down

Step 3: Identify the hazards and assess the situation

From a safe distance, identify the hazards and the dangerous goods (DG)

- Assess** for fire, smoke, fumes, vapours, leaks, spills, container damage, and other DG (e.g. corrosive, toxic)
- Assess** for potential risks of ruptures, called Heat Induced Tears (HIT)
- Assess** for site safety hazards (e.g. electrical lines, pipelines, bent rails)
- Determine** all of the DGs involved and their UN numbers, by:
 - Identifying** the types of means of containment and the safety marks (**refer** to ERG), or
 - Asking** for the shipping document from the carrier (for rail, train consist can be obtained through rail crew, CANUTEC or AskRail app)
- Monitor** any changes in the situation

Confirm the isolation zones

- Once all the UN numbers are identified, **check** the specific **orange** ERG Guide for each UN number and the tables in the **green** pages, if applicable, to **confirm** isolation and evacuation zones

If the orange ERG Guide has this image, the product may require an ERAP (see next page for details on ERAP assistance)



In Canada, an Emergency Response Assistance Plan (ERAP) may be required for this product. Please consult the shipping document and/or the ERAP Program Section (page 391).

Step 4: Get help

Communicate and inform

- Call an emergency number located on the shipping document:
 - 24 hour number, or
 - Emergency Response Assistance Plan (ERAP) telephone number located near the X-YYYY-(ZZZ) number, or
 - CANUTEC
- If needed, ask for mutual aid assistance from nearby communities or contact other organizations as planned in your local emergency preparedness plan

Prepare to coordinate all resources under a command structure

- Be prepared to work with outside organizations (e.g. industry specialists, emergency response contractors, government representatives, other responders)
- Organize the site and resources according to what may be required (e.g. physical zones, water supply, fire fighting foam, specialized equipment)
- Re-evaluate isolation zones as necessary, as conditions on site change

Assistance for dangerous goods with an approved ERAP

Over the phone	<ul style="list-style-type: none">• Technical or emergency response advice• Assistance is provided within 10 minutes of the initial request
On site*	<ul style="list-style-type: none">• Response personnel with appropriate equipment• Assistance provided may vary based on the nature, the severity of the incident or the assistance required

*When an ERAP is implemented, persons having the ERAP are required to exercise due diligence and respond within a reasonable time frame, given the site location, weather conditions, accessibility or other circumstances.

Step 5: Respond

Establish an incident action plan with personnel on site under a command structure

Critical considerations

- Vapours are heavier than air, they may accumulate in low lying areas or travel to a source of ignition and flash back
- For rail incidents involving fire, evaluate potential risks for Heat Induced Tear (HIT), boilover, frothover, slopover
- Be aware of any release from the pressure relief device (PRD), which indicate a pressure increase
- Ensure the response is Timely, Appropriate, Safe and Coordinated (TASC)
- Integrate site safety plan and site safety briefing

Personnel that may be present on site

- Carrier
- Industry specialists (e.g. person with the ERAP)
- Emergency response contractors
- Other organizations: municipal, provincial, territorial, federal (e.g. Transport Canada Remedial Measures Specialist [RMS] or Inspector, other ministry representatives)

Potential response strategies and actions

- Rescue / protection / evacuation
- Detection and air monitoring
- Firefighting: strategies and tactics specific to flammable liquid fires (non-intervention, defensive, offensive)
- Mitigation of spills / containment / confinement
- Vapour suppression with compatible fire-fighting foam with confinement of run-off
- DG transfer / recovery

Reassess / modify the incident action plan

- Establish follow-up response steps based on current progress, environmental concerns and existing mitigation measures

End the incident response

- Transfer operational management for site recovery, restoration and rehabilitation

