



# Aide-mémoire for First Responders

## Class 4.3 – Water-reactive substances

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 initial course of action.
- Substances **produce flammable** gases on contact with water or moist air.
- Some substances may **produce toxic** gases, requiring evacuation or shelter in place.
- If involved in a fire, use **appropriate extinguishing agents**. Water and foam are **NOT** recommended.
- The **temperature** of the dangerous goods should be monitored as a change may indicate a reaction is occurring.
- 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 139 until the dangerous good 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)
- Be aware** of **exposure** and **contamination** to personnel and victims; seek **guidance** for **decontamination**
- Monitor** temperature (e.g. infrared camera), air monitoring will offer limited assistance
- 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, vapours, leaks, spills, container damage, possible rupture and other DG (e.g. corrosive, toxic)
- 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, extinguishing agents, equipment for confinement)
- Re-evaluate** isolation zones as necessary, as conditions on site change

## Assistance for dangerous goods with an approved ERAP

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

\*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

- Water-reactive substances **produce flammable** gases on contact with water or moist air; some substances may also **produce toxic** gases
- If involved in a fire, **use** appropriate **extinguishing agents**: water and foam are **NOT** recommended
- 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 / evacuation / shelter in place
- Detection and air monitoring
- Firefighting: use appropriate strategies and extinguishing agents (water and foam are **NOT** recommended)
- Mitigation of spills / containment / confinement
- 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

