

## EMERGENCY RESPONSE GUIDEBOOK CONTENTS

1. **Yellow-bordered pages:** Index list of **dangerous goods in numerical order of ID number**. This section quickly identifies the guide to be consulted from the ID Number of the material involved. This list displays the 4-digit ID number of the material followed by its assigned emergency response guide and the material name.

*For example:*

<u>ID No.</u>	<u>GUIDE No.</u>	<u>Name of Material</u>
1978	115	Propane

2. **Blue-bordered pages:** Index list of **dangerous goods in alphabetical order** of material name. This section quickly identifies the guide to be consulted from the name of the material involved. This list displays the name of the material followed by its assigned emergency response guide and 4-digit ID number.

*For example:*

<u>Name of Material</u>	<u>GUIDE No.</u>	<u>ID No.</u>
Anhydrous Ammonia	125	1005

3. **Orange-bordered pages:** This section is the ***most important section*** of the guidebook because **it is where all safety recommendations are provided**. It comprises a total of 62 individual guides, presented in a two-page format. Each guide provides safety recommendations and emergency response information to protect yourself and the public. The left hand page provides safety related information whereas the right hand page provides emergency response guidance and activities for fire situations, spill or leak incidents and first aid. Each guide is designed to cover a group of materials which possess similar chemical and toxicological characteristics. The guide title identifies the general hazards of the dangerous goods covered.

*For example: GUIDE 125 – Gases - Corrosive*

Each guide is divided into three main sections: the first section describes **potential hazards** that the material may display in terms of fire/explosion and health effects upon exposure. The highest potential is listed first. The emergency responder should consult this section first. This allows the responder to make decisions regarding the protection of the emergency response team as well as the surrounding population.

The second section outlines suggested **public safety** measures based on the situation at hand. It provides general information regarding immediate isolation of the incident site, recommended type of protective clothing and respiratory protection. Suggested evacuation distances are listed for small and large spills and for fire situations (fragmentation hazard). It also directs the reader to consult the tables listing Toxic Inhalation Hazard (TIH) materials, chemical warfare agents and water-reactive materials (green-bordered pages) when the material is highlighted in the yellow-bordered and blue-bordered pages.

The third section covers **emergency response** actions, including first aid. It outlines special precautions for incidents which involve fire, spill or chemical exposure. Several

recommendations are listed under each part which will further assist in the decision making process. The information on first aid is general guidance prior to seeking medical care.

4. **Green-bordered pages:** This section contains two tables. **Table 1 lists, by ID number order, TIH materials, including certain chemical warfare agents, and water-reactive materials which produce toxic gases upon contact with water.** This table provides two different types of recommended safe distances which are “Initial isolation distances” and “Protective action distances.” The materials are highlighted in green for easy identification in both numeric (yellow-bordered pages) and alphabetic (blue-bordered pages) lists of the guidebook. This table provides distances for both small (approximately 200 liters or less for liquids and 300 kilograms or less for solids when spilled in water) and large spills (more than 200 liters for liquids and more than 300 kilograms for solids when spilled in water) for all highlighted materials. The list is further subdivided into daytime and nighttime situations. This is necessary due to varying atmospheric conditions which greatly affect the size of the hazardous area. The distances change from daytime to nighttime due to different mixing and dispersion conditions in the air. During the night, the air is generally calmer and this causes the material to disperse less and therefore create a toxic zone which is greater than would usually occur during the day. During the day, a more active atmosphere will cause a greater dispersion of the material resulting in a lower concentration of the material in the surrounding air. The actual area where toxic levels are reached will be smaller (due to increased dispersion). In fact, it is the quantity or concentration of the material vapor that poses problems not its mere presence. **Table 2 lists, by ID number order, materials which produce large amounts of Toxic Inhalation Hazard (TIH) gases when spilled in water and identifies the TIH gases produced.** These water reactive materials are easily identified in Table 1 as their name is immediately followed by (when spilled in water). *Note, however, if this material is NOT spilled in water, Table 1 and Table 2 do not apply and safety distances will be found within the appropriate orange guide.*

The **“Initial Isolation Distance”** is a distance within which all persons should be considered for evacuation in all directions from the actual spill/leak source. It is a distance (radius) which defines a circle (Initial Isolation Zone) within which persons may be exposed to dangerous concentrations upwind of the source and may be exposed to life threatening concentrations downwind of the source. For example, in the case of Compressed Gas, toxic, n.o.s., ID No. 1955, Inhalation Hazard Zone A, the isolation distance for small spills is 100 meters, therefore, representing an evacuation circle of 200 meters in diameter.

For the same material, the **“Protective Action Distance”** for a small spill is 0.5 kilometers for a daytime incident and 2.1 kilometers for a nighttime incident, these distances represent a downwind distance from the spill/leak source within which Protective Actions could be implemented. Protective Actions are those steps taken to preserve the health and safety of emergency responders and the public. People in this area could be evacuated and/or sheltered in-place.