# **How to Read A Safety Data Sheet (SDS)**

Safety Data Sheets (SDS) are an important requirement of Health Canada's decision to align the Workplace Hazardous Materials Information System (WHMIS) with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). SDS are essential documents that are used to inform employees, students, and the general public about how materials can be safely handled, used, and stored. Since Flinn provides chemicals only to schools, we have written Flinn SDS specifically for teachers and their students. Using clear and straightforward language, each Flinn SDS provides all the relevant safety and hazard information in a consistent, useful, and easy-to-read format. Flinn SDS contain 16 sections that are divided into four major areas, each designed to answer a specific question.

Each Flinn SDS follows the same format and the information is always found in the same location, making it a valuable resource in the event of an emergency. With your first chemical order of the year, every teacher will receive a CD from Flinn Scientific containing all of our SDS. You may also request another CD at any time. Flinn SDS are updated on a regular basis, guaranteeing the most up-to-date safety information possible. For a more detailed description of the Flinn Online Chemventory program, please refer to pages 680–681. For our customers' convenience, Flinn has also placed a free complete set of SDS on our website. Simply go to www.flinnsci.ca and click on the Teacher Resources button.

# What is the material and what do I need to know immediately in an emergency? Sections 1–3.

A It is important that the chemical name on the label match the name on the SDS. Many chemicals have similar names, but very different properties. This section also includes product use and emergency phone number.

B The most important section! Provides an overview of the physical and health hazard risks associated with using the material.

C Signal words, either Danger or Warning, heighten the awareness of the relative risk when using certain chemicals. Danger is the more severe warning!

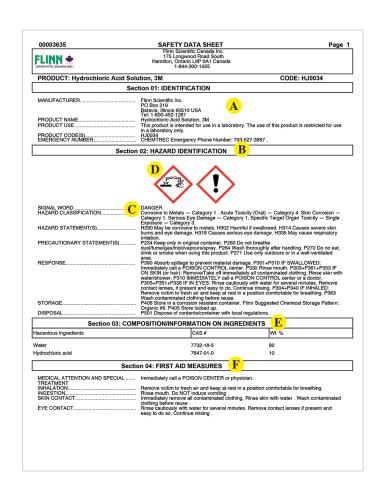
D Eight pictograms exist in the GHS classification scheme to call attention to physical and health hazards. See page 697 for more information about GHS pictograms.

This section includes the ingredients, concentration, and CAS#. The CAS# is the single identifying number for each specific substance. CAS# should match the CAS# on the bottle label.

# What should I do if a hazardous situation occurs? Sections 4–6.

Seek medical attention. These first-aid measures are only meant for immediate first aid and should always be followed up with professional medical care. The CAS# is the single identifying number for each specific substance. CAS# should match the CAS# on the bottle label.

G This section is written for the firefighter. Flash point (the lowest temperature at which enough vapour is present to form an ignitable mixture with air); upper and lower flammable limits; and the auto ignition temperature (AIT) are common properties included in this section.



The NFPA code is a numerical code established by the National Fire Protection Association. It rates the substance *under fire conditions* in four categories. Health, Flammability, Reactivity, and unusual reactivity: 4 is a severe hazard, 0 is no hazard

How to clean up a spill. Always remove unprotected personnel from area and make sure all students are safe. Contain the spill with sand or absorbent materials.

### How to Read A Safety Data Sheet (SDS), continued

How can I prevent hazardous situations from occurring?

Sections 7-11.

J Use the Flinn Suggested Chemical Storage Pattern to prevent accidents and improve safety. Special storage and usage tips are also included.

Wear personal protective equipment such as goggles, gloves, and an apron.

Clear, concise, and useful physical and chemical properties help you learn more about the chemicals you use. The first part describes the material's appearance. If it doesn't look like this, STOP. Do not use it. It may be more or less hazardous.

Describes the conditions or reactions to be avoided. Also provides some indication about anticipated shelf life.

Oral (ORL), inhalation (IHL), and skin absorption (SKN) toxicity data on test animals is included. For more information on LD50, see pages 700 - 701

More detail on how the material may injure you. Acute (short exposure) and chronic (longterm) effects are listed along with their target organs.

#### Other useful information. Sections 12-16.

Ecological impact if large amounts (e.g., tank car) of the chemical spill near a river or lake.

Suggested disposal methods for laboratory quantities of chemicals.

R Department of Transportation shipping information is included for your school district, emergency responders, and transport/shipping departments.

Regulatory information used by regulatory compliance personnel.

Flinn Scientific Canada has an ongoing program to update its SDS. As professional chemists, we try our best to provide science teachers with the most accurate and useful safety information. Call Flinn if you have any questions. We can help!

