Appendix H. Safety Data Sheets

Safety data sheets (SDSs) were formerly known as material safety data sheets (MSDSs). SDSs provide valuable information about a chemistry, which can be used to assess risk and establish controls to protect human health and the environment. In addition, SDSs contain valuable regulatory and ingredient-level information to help suppliers avoid restricted substances issues.

Safety Data Sheets Based On Global Harmonized System Standards

SDSs can vary widely in format. AFIRM advises suppliers to require high-quality SDSs from their chemical suppliers that use the Global Harmonized System (GHS). GHS is a widely accepted global standard managed by the United Nations that, when combined with local country regulations, offers the most comprehensive information.

For additional information, including examples of SDS files and in-depth documentation of each SDS section, please visit the Outdoor Association's Chemicals Management Guide & Training for Manufacturers. Pages 40-44 of this document contain detailed information about Safety Data Sheets. The Guide can be found here: https://cdn.manula.com/user/10559/11844_12661_en_1497037271.pdf?v=20181002032847

Limitations of Safety Data Sheets

SDSs represent only the specific chemistry they were designed to describe. Therefore, an SDS that represents a chemical used in the manufacture of a product will not necessarily apply to the final product itself.

For example, an ink may be applied to change the color of a shirt, but much of the chemicals (by volume) of the ink may be washed away or evaporated before the product is ready for market. An additional caveat of an SDS for chemical mixtures is that, in many circumstances, only chemicals present above 1% (or 0.1% if the chemical is a carcinogen) are required to be disclosed. This can, in effect, lead to an incomplete comprehension of the risk associated with the use of a particular chemical product. So, while an SDS documents a chemistry chosen to create a product, additional expertise is needed to understand manufacturing processes to accurately document chemicals that may be present in a final product.

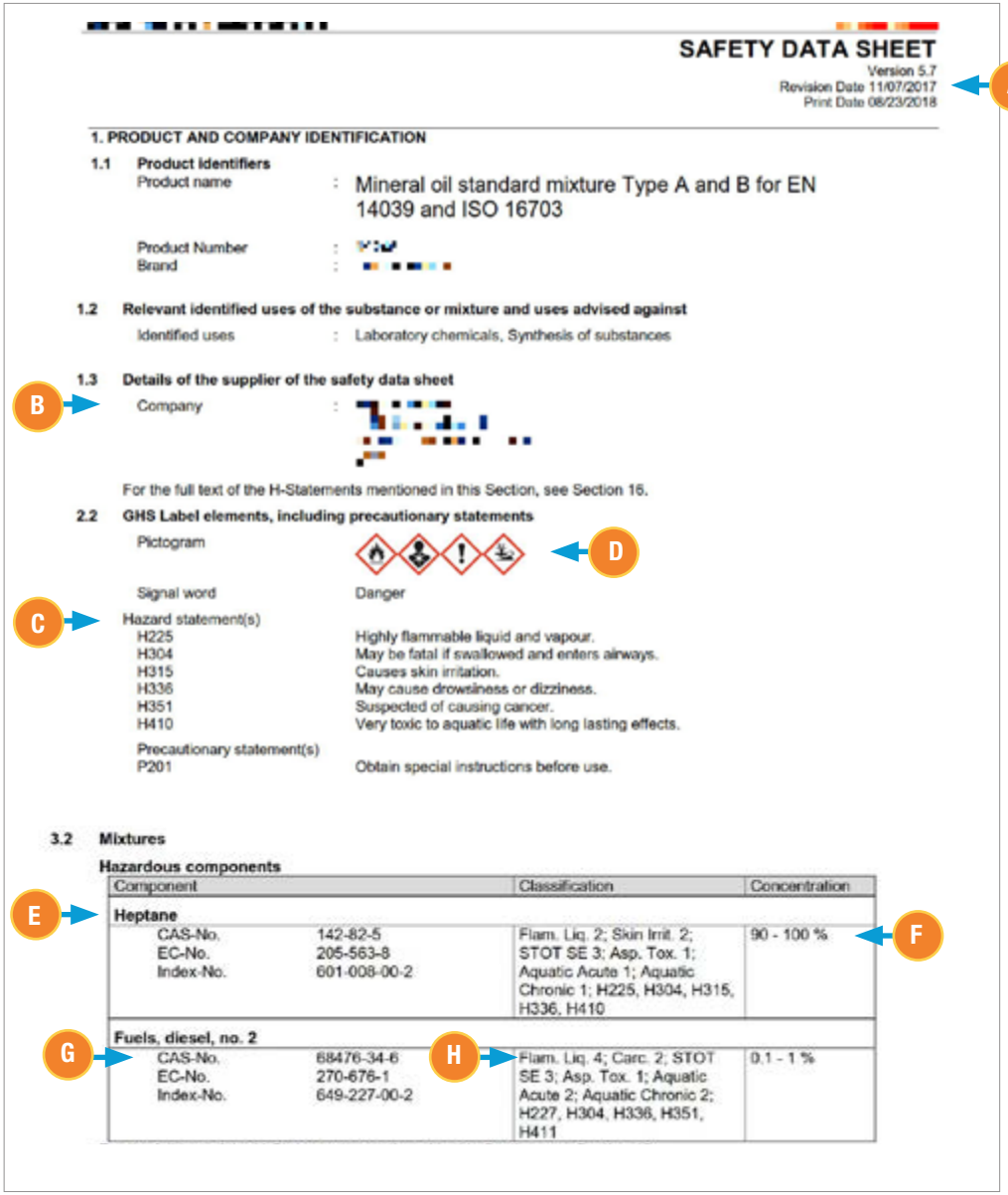
Important Sections

An SDS is often a dense document with a wealth of information. However, there are certain sections that need particular attention. These are highlighted in Figure 9.

- **A** A **version date** within the last three years.
- **B** **Contact information** for the supplier in case the reader has further questions regarding the product.
- **C** **Hazard statements** to enable a rapid assessment of the risks.
- **D** **Pictograms**, which can be used in in-house labelling to clearly communicate risks to workers.
- **E** **Component common name** so that the chemical can be further researched.
- **F** **Concentration of each component**, which allows suppliers to determine relative risk.
- **G** **CAS numbers** of the chemical components—useful for keeping up to date with legislation related to the product.
- **H** **Hazards at a component level**; used with concentration to determine relative risk.

Although SDSs can vary in format, AFIRM suppliers should require their chemical suppliers to provide SDSs like the preferred example here.

Figure 9. Key Elements of a Safety Data Sheet



SAFETY DATA SHEET

Version 5.7
Revision Date 11/07/2017
Print Date 08/23/2018

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : Mineral oil standard mixture Type A and B for EN 14039 and ISO 16703

Product Number :
Brand :

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company :

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word: Danger

Hazard statement(s)

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P201	Obtain special instructions before use.

3.2 Mixtures

Hazardous components

Component		Classification	Concentration
Heptane			
CAS-No.	142-82-5	Flam. Liq. 2; Skin Irrit. 2; STOT SE 3; Asp. Tox. 1; Aquatic Acute 1; Aquatic Chronic 1; H225, H304, H315, H336, H410	90 - 100 %
EC-No.	205-563-8		
Index-No.	601-008-00-2		
Fuels, diesel, no. 2			
CAS-No.	68476-34-6	Flam. Liq. 4; Carc. 2; STOT SE 3; Asp. Tox. 1; Aquatic Acute 2; Aquatic Chronic 2; H227, H304, H336, H351, H411	0.1 - 1 %
EC-No.	270-676-1		
Index-No.	649-227-00-2		