

What is the material? 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

D The section provides an overview of the physical and health hazard risks associated with using the material

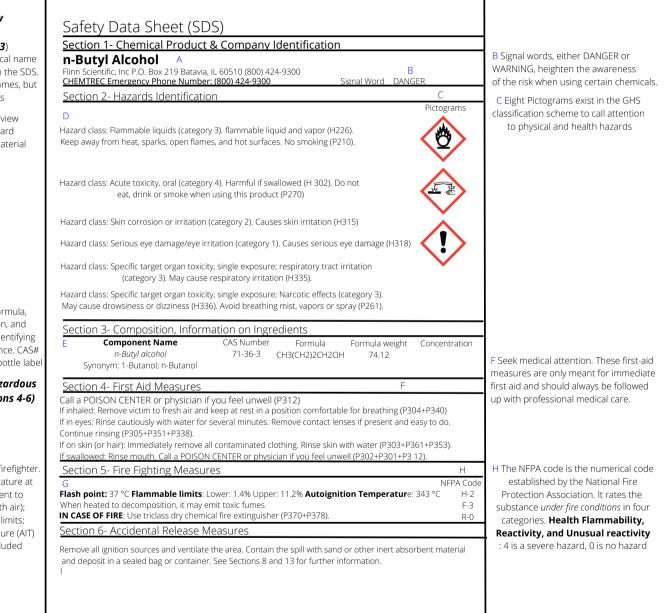
E This section includes the formula, formula weight, concentration, and CAS#. The CAS# is the single identifying number of each specific substance. CAS# should match the CAS# on the bottle label

## What should I do If a hazardous situation occurs? (Sections 4-6)

G This section is written for the firefighter. Flash point (the lowest temperature at which enough vapor 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

## HOW TO READ A SAFETY DATA SHEET (SDS)

Safety Data Sheets (SDS) are an essential requirement of the OSHA Hazard Communication Standard. SDS are documents that are used to inform students, employees, and the general public about how materials can be safely handled, used, and stored. Using clear and straightforward language, each SDS provides all the relevant safety and hazard information in a consistent, useful, and easy-to-read two-page format. This SDS follow the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). The 15 sections are divided into four major areas, each designed to answer a specific question.



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



How can I prevent hazardous situationsfrom occurring? (Sections 7-11)

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

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

N More detail on how the material may injure user. Acute and chronic effects are listed along with their target organs

## Additional Information (Sections 12-15)

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

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

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

Safety Data Sheet (SDS)				
Section 7- Handling & Storage			-	
Store with alcohols, glycols, amines, and amides. store in dedicated flammables cabinet. If a flammables cabinet is not available. Keep in a chemical safe store can. Keep container tightly closed, keep cool, and use only in a well-ventilated area or in a hood			J Use the suggested Chemical Storage Pattern to prevent accidents and improve safety. Special storage	
Section 8- Exposure Controls & Pers Wear protective gloves, protective clothing and to keep airborne concentrations below exposu TLV 20 ppm (ACGIH) K	l eye protection. Wash thoroughly af		and usage tips are also included	
Section 9- Physical & Chemical Properties			L Clear, concise, and useful physical	
Clear colorless liquid Boiling po		с	and chemical properties help you	
Wine-like odor	Melting point:-89°C		learn more about the chemicals you use. The first part describes the material's appearance. If the description does not match, STOP. It may be more or less hazardous. DO NOT USE	
Soluble: Water (20%)	Refractive index:1.39	988		
Miscible with alcohol and ether	Specific gravity:0.81			
Shelf life: Fair, substance may oxidize. Refer to Section 7 for more information         Section 11- Toxicological Information       0			• O Oral (ORL), Inhalation (IHL), and	
			O Oral (ORL), Inhalation (IHL), and	
Acute effects: Absorbed through Eye, skin, resp. N	biratory tract. C	DRL-RAT LD:50 790 mg/kg	on test animals is included.	
Irritation	IH	IL-RAT LC50: 8000 ppm/4H		
Dizziness	S	KN-RBT LD50: 3400 mg/kg		
CNS Depression				
Chronic Effects: N/A				
Target Organs: Eyes, skin, respiratory system, C system	Central Nervous			
Section 12- Ecological Information				
Data is not available at this moment ${}^{P}$				
Section 13- Disposal Considerations Q			Q Suggests disposal methods for laboratory quantities of chemicals	
Please review all federal, state, and local regulations that may apply before proceeding				
Section 14- Transport Information			4	
Shipping name: Butanol. R Hazard class: 3, Flammable liquid. UN number:	UN1120			
Section 15- Regulatory Information S			1	
TSCA-listed, EINECS-listed (200-751-6), RCRA code U031			<ul> <li>S Regulatory information used by regulatory compliance personnel</li> </ul>	

The SDS is a guidance and is based upon information and tests believed to be reliable. We make no guarantee of the accuracy or completeness of the data and shall not be liable for any damages. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and construct no warranty. Any use of this data and information must be determined by the social control. For this and other reasons we not accurate with appliciticable local, state, or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond our control. For this and other reasons we do not assume reportability and expressed side in a disposal of the product(s).