EMORY UNIVERSITY | Environmental Health and Safety Office
Research Administration

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Get the Facts:

How to Read A Safety Data Sheet (SDS)

Safety Data Sheets are an important requirement of the OSHA Hazard Communication Standard. SDS are essential documents that inform employees and students about how to safely use, store, and handle chemicals. SDS follow the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). There are 16 sections on the SDS. The sections are divided into four major areas, each designed to answer a specific question.

Company Name **Safety Data Sheet (SDS)**	**n-Butyl Alcohol**	**SDS#: 181.00**
Section 1- Chemical Product and Company Identification		
n-Butyl Alcohol Acme Scientific, Inc. P.O. Box 555 OSHA, IL 55555 (800) 555-5555 CHEMTREC Emergency Phone Number (800) 455-5555		
Section 2 – Hazard Identification		**Pictograms**
Hazard Class: Flammable Liquids (Category 3). Flammable liquid and vapor (H226). Keep away from heat, sparks, open flames, and hot surfaces. No Smoking (P210).		
Hazard Class: Acute Toxicity, oral (Category 4). Harmful if swallowed (H302). Do not eat, drink or smoke when using this product (P270).		
Hazard Class: Skin corrosion or irritation (Category 2). Causes skin irritation (H315).		
Hazard Class: Serious eye damage/eye irritation (Category 1). Causes serious eye damage (H318).		
Hazard Class: Specific target organ toxicity, single exposure; respiratory tract irritation (Category 3). May cause respiratory irritation (H335).		
Hazard Class: Specific target organ toxicity, single exposure; Narcotic effects (Category 3). May cause drowsiness or dizziness (H336). Avoid breathing mist, vapors or spray (P261).		
Section 3 – Composition, Information or Ingredients		
Component Name n-Butyl alcohol Synonym: 1-Butanol; n-Butanol		
Section 4 – First Aid Measures		
Call a POISON CENTER or physician if you feel unwell (P312).		

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If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing (P305+P351+P338).351+P338). If on skin (or hair): Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353). If swallowed: Rinse mouth. Call a Poison Center or physician if you feel unwell (P302+P301+P312).		
Section 5 – Fire Fighting Measures		
Class 1C flammable liquid. Flash point: 37◦C. Flammable limits: Lower 1.4% Upper: 11.2% Auto ignition temperature: 343◦CC When heated to decomposition, may emit CO and CO2 In case of fire: Use triclass dry chemical fire extinguisher (P370+P378)		
Section 6 –Accidental Release Measures		
Remove all ignition sources and ventilate area. Contain the spill with sand or other inert absorbent material and deposit in a scaled bag or container. See Sections 8 and 13 for further information.		
Section 7 – Handling and Storage		
Store with alcohols, glycols, amines, and amides. Store in a dedicated flammables cabinet.		
Section 8 – Exposure Control, Personal Protection		
Wear protective gloves, protective clothing and eye protection (P280). Wash thoroughly after handling (P264). Use ventilation to keep airborne concentrations below exposure limits. Exposure guidelines: PEL 100ppm (OSHA) TLV 20ppm (ACGIH)		
Section 9 – Physical and Chemical Properties		
Clear colorless liquid. Wine-like odor. Soluble: Water (20%). Miscible with alcohol and ether.		Boiling Point:117.7 Melting Point: -89.7 Refractive index: 1.3988 Specific gravity: 0.81
Section 10 – Stability and Reactivity		
Avoid contact with aluminum, chromium trioxide, and oxidizing materials. Substance may develop explosive hydro peroxides. Shelf life: Fair, substance may oxidize. See Section 7 for further information.		
Section 11 – Toxicological Information		
Acute effects: Absorbed through the skin. Eye, skin, respiratory tract irritation. Dizziness. CNS depression. Chronic effects: N.A. Target organs: Eyes, skin, respiratory system, central nervous system		ORAL-RAT LD_{50} – 790mg/kg Inhalation – RAT LC_{50} – 8000ppm/4 Hours Skin – Rabbit LD_{50} – 3400 mg/kg
Section 12 – Ecological Information		
Data not available yet.		
Section 13 – Disposal Considerations		
Please review all federal, state, and local regulations that may apply.		

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Company Name Safety Data Sheet (SDS)	**n-Butyl Alcohol**	**SDS#: 181.00**
Section 14 – Transport Information		
Shipping name: Butanols. Hazard class: 3; Flammable Liquid. UN number: UN1120		
Section 15 – Regulatory Information		
TSCA-listed; EINECS-listed (200-751-6), RCRA code U031		
Section 16 – Other Information		

Reference for the Sections of a Safety Data Sheet	
What is the material and what do I need to know immediately in an emergency?	
Product and Company Info	Location of the chemical name. User must ensure that chemical name on the label matches the chemical name on the SDS
Hazard Identification	Provides an overview of the physical and health hazard risks associated with using the chemical
Signal Words	Signal Words – either Danger or Warning. Signal words are used to heighten the awareness of the relative risk when using certain chemicals. Danger is the more severe warning
Pictograms	Nine pictograms exist in the GHS classification system. Review these symbols to identify physical and health hazards
Composition/Information on Ingredients	This section includes the chemical formula, formula weight, concentration, and CAS#. The CAS# is the single identifying number for each specific substance. CAS# on the SDS should match the CAS# on the bottle label
What should I do if a hazardous situation occurs?	
First Aid Measures	First Aid Measures are meant for immediate response to an exposure. Seek medical attention as soon as possible
Fire Fighting Measures	Fire fighters refer to this section to determine the temperature at which ignitable vapors could be present, extinguishing media, and protective equipment for fire fighting

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Accidental Release Measures	Explains what to do in the event of a spill. Always call the spill team in the event of a spill 404-727-2888
What can I do to prevent a hazardous situation from occurring?	
Handling and Storage	Includes general chemical storage requirements and/or special chemical storage requirements to prevent accidents
Exposure Controls/PPE	Provides exposure limits, recommended engineering controls, and recommended PPE
Physical/Chemical Properties	Describes material's appearance and physical state. If a material doesn't look like the description, then do not use it until the chemical's identity is confirmed
Stability and Reactivity	Describes the conditions or reactions to be avoided. May also provide indications for shelf-life
Toxicological Information	Details how chemical may affect the body following short-term exposure and long-term exposure
What are additional considerations I need to know?	
Ecological Information	Explains impact of large spill if it occurs near a rivers, lakes, streams, or creeks
Disposal	Disposal methods recommended by chemical manufacturer. All chemical disposal should be in accordance with EHSO Chemical Waste Guidelines
Transport Information	Provides Shipping Classifications for Dept of Transportation
Regulatory Information	