

Material Safety Data Sheet
acc. to OSHA and ANSI

Printing date 10/04/2000

Reviewed on 04/15/1999

1 Identification of substance:**Product details:**Trade name: t-Butyl alcohol

Stock number: 33278

Manufacturer/Supplier:

Alfa Aesar, A Johnson Matthey Company
Johnson Matthey Catalog Company, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Emergency Phone: (978) 521-6300
CHEMTREC: (800) 424-9300
Web Site: www.alfa.com

Information department: Health, Safety and Environmental Department

Emergency information:

During normal hours the Health, Safety and Environmental Department.
After normal hours call Chemtrec at (800) 424-9300.

2 Composition/Data on components:**Chemical characterization:**Description: (CAS#)

t-Butyl alcohol (CAS# 75-65-0), 100%

Identification number(s):

EINECS Number: 200-889-7

EU Number: 603-005-00-1

3 Hazards identification**Hazard description:**

Xn Harmful

F Highly flammable

Information pertaining to particular dangers for man and environment

R 11 Highly flammable.

R 20 Harmful by inhalation.

4 First aid measures**After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

After skin contact

Immediately wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

After eye contact

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing Seek immediate medical advice.

5 Fire fighting measures**Suitable extinguishing agents**

Use carbon dioxide, extinguishing powder or foam. Water may be ineffective but may be used for cooling exposed containers.

(Contd. on page 2)

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(Contd. of page 3)

specifications.

Materials to be avoided:

Oxidizing agents

Acids

Alkali metals

Dangerous reactions

Reacts with alkali metals

Reacts with oxidizing agents

Dangerous products of decomposition: Carbon monoxide and carbon dioxide

11 Toxicological information

Acute toxicity:

LD/Lc50 values that are relevant for classification:

Oral: LD50: 3500 mg/kg (rat)

LD50: 3559 mg/kg (rbt)

Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritating effect.

Sensitization: No sensitizing effects known.

Other information (about experimental toxicology):

Reproductive effects have been observed on tests with laboratory animals.

Mutagenic effects have been observed on tests with bacteria.

Subacute to chronic toxicity:

t-Butyl alcohol may cause abdominal pain, vomiting, headache, muscle weakness, giddiness, ataxia, confusion, delirium, diarrhea, coma and death from respiratory failure. May damage lungs, liver, kidneys and heart.

Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

ACGIH A4: Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of it's carcinogenicity in humans and/or animals.

12 Ecological information:

General notes:

Do not allow material to be released to the environment without proper governmental permits.

13 Disposal considerations

Product:

Recommendation

Consult state, local or national regulations for proper disposal.

Uncleaned packagings:

Recommendation:

Disposal must be made according to official regulations.

Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

DOT regulations:

Hazard class: 3

Identification number: UN1120

Packing group: II

Proper shipping name (technical name):

Butanols

Land transport ADR/RID (cross-border)

(Contd. on page 5)

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(Contd. of page 4)

ADR/RID class: 3 Flammable liquids
Item: 3b
Danger code (Kemler): 33
UN-Number: 1120
Description of goods: Butanols

Maritime transport IMDG:
IMDG Class: 3
UN Number: 1120
Packaging group: II
Proper shipping name: Butanols

Air transport ICAO-TI and IATA-DGR:
ICAO/IATA Class: 3
UN/ID Number: 1120
Packaging group: II
Proper shipping name: Butanols

15 Regulations**Product related hazard informations:**

Hazard symbols:
Xn Harmful
F Highly flammable

Risk phrases:
11 Highly flammable.
20 Harmful by inhalation.

Safety phrases:
9 Keep container in a well-ventilated place.
16 Keep away from sources of ignition - No smoking.

National regulations
All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory.

Information about limitation of use:
For use only by technically qualified individuals.
This product is subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and 40CFR372.

16 Other information:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing MSDS: Health, Safety and Environmental Department.
Contact: Darrell R. Sanders

Univ of Minnesota
EE/CS Bldg Rm 1 165
200 Union St SE
Minneapolis, MN 55455

10/04/2000

USA

Material Safety Data Sheets

Attached are Material Safety Data Sheets (MSDS's) for the products in your order 5261979.

The following MSDS's are included with this shipment:

33278 tert-Butyl alcohol, ACS, 99+% (Assay)

Alfa Aesar now offers MSDS documentation in various languages. Also, our MSDS documentation will soon be available on our web site at www.alfa.com and on CDROM.

Please contact us for further information.