



1 Identification

Product identifier Product name: 4-Phenyl-2-butanol

Stock number: B25368 CAS Number: 344-70-9 EC number: 219-055-9 Relevant identified uses of the substance or mixture and uses advised against. Identified use: SU24 Scientific research and development Details of the supplier of the safety data sheet Manufacturer/Supplier: Alfa Aesar Thermo Fisher Scientific Chemicals, Inc. Inerrito Fisher Scheman C. 30 Bond Street Ward Hill, MA 01835-8099 Tel: 800-343-0660 Fax: 800-322-4757 Email: tech @alfa.com www.alfa.com Information Department: Health, Safety and Environmental Department Emergency telephone number: During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.

2 Hazard(s) identification

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS) The substance is not classified according to the Globally Harmonized System (GHS). Hazards not otherwise classified No information known.

I abel elements GHS label elements Not applicable Hazard pictograms Not applicable Signal word Not applicable Hazard statements Not applicable WHMIS classification Not controlled Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System)



Health (acute effects) = 1 Flammability = 1 Flammability = 1 Physical Hazard = 1 Other hazards

Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances CAS# Description: 2344-70-9 4-Phenyl-2-butanol Identification number(s): EC number: 219-055-9

4 First-aid measures

Description of 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 medical treatment. Information for doctor Most important symptoms and effects, both acute and delayed No further relevant information available. Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Special hazards arising from the substance or mixture If this product is involved in a fire, the following can be released:

Carbon monoxide and carbon dióxide Advice for firefighters Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation

Environmental precautions: Do not allow material to be released to the environment without proper governmental permits. Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Prevention of secondary hazards: No special measures required.

Product name: 4-Phenyl-2-butanol

Page 2/4 Printing date 11/23/2015 Reviewed on 09/05/2003

| Product name: 4-Prienyi-2-Dutanoi | | | |
|--|---|--------------------|--|
| Reference to other sections See Section 7 for information on safe h See Section 8 for information on person See Section 13 for disposal information | nal protection equipment. | (Contd. of page 1) | |
| Conditions for safe storage, includin Storage Requirements to be met by storeroo | explosions and fires: No information known. g any incompatibilities ms and receptacles: No special requirements. nmon storage facility: Store away from oxidizing agents. onditions: led containers. | | |
| Control parameters | | | |
| Exposure controls Personal protective equipment General protective and hygienic measures The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before breaks and at the end of work. Maintain an ergonomically appropriate working environment. Breathing equipment: Use suitable respirator when high concentrations are present. Protection of hands: Impervious gloves Check protective gloves prior to each use for their proper condition. The selection: Safety glasses Body protection: Protective work clothing. | | | |
| 0 Physical and shaminal means the | - | | |
| 9 Physical and chemical properties Information on basic physical and ch General Information Appearance: Form: Odor: | nemical properties Liquid Not determined | | |
| Odor threshold: | Not determined. | | |
| pH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: | Not determined. 126-128 °C (259-262 °F) (10mm Hg) Not determined Not determined | | |
| Flash point: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting: | Not determined Not determined Not determined Not determined Not determined | | |
| Danger of explosion: Explosion limits: Lower: Upper: Vapor pressure: Density at 20 °C (68 °F): Relative density Vapor density Evaporation rate Solubility in / Miscibility with | Product does not present an explosion hazard. Not determined Not determined 0.98 g/cm ³ (8.178 lbs/gal) Not determined. Not determined. Not determined. | | |
| Water: Partition coefficient (n-octanol/water Viscosity: dynamic: kinematic: | Not determined. Not determined. | | |
| Other information | No further relevant information available. | | |
| 10 Stability and reactivity | | | |

10 Stability and reactivity

Reactivity No information known. Chemical stability Stable under recommended storage conditions. Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications. Possibility of hazardous reactions No dangerous reactions known Conditions to avoid No further relevant information available. Incompatible materials: Oxidizing agents Hazardous decomposition products: Carbon monoxide and carbon dioxide

USA (Contd. on page 3)

Product name: 4-Phenyl-2-butanol

Page 3/4 Printing date 11/23/2015 Reviewed on 09/05/2003

| Product name: 4-Phenyl-2-butanol | | |
|--|--|--------------------|
| | | (Contd. of page 2) |
| 11 Toxicological information Information on toxicological effects Acute toxicity: No effects known. LD/LC50 values that are relevant for classification: No data Skin irritation or corrosion: May cause irritation Eye irritation or corrosion: May cause irritation Sensitization: No sensitizing effects known. Germ cell mutagenicity: No effects known. Carcinogenicity: No effects known. Carcinogenicity: No effects known. Specific target organ system toxicity - repeated exposure: No effects known. Specific target organ system toxicity - single exposure: No effects known. Aspiration hazard: No effects known. Subacute to chronic toxicity: No effects known. Additional toxicological information: To the best of our knowledge the acute | ın. | |
| 12 Ecological information Toxicity Aquatic toxicity: No further relevant information available. Persistence and degradability No further relevant information available. Bioaccumulative potential No further relevant information available. Mobility in soil No further relevant information available. | | |
| Additional ecological information: General notes: Do not allow material to be released to the environment without proper governm Do not allow undiluted product or large quantities to reach ground water, water Avoid transfer into the environment. Results of PBT and vPvB assessment PBT: Not applicable. VPvB: Not applicable. Other adverse effects No further relevant information available. | nental permits. course or sewage system. | |
| 13 Disposal considerations Waste treatment methods | | |
| Recommendation Consult state, local or national regulations to ensure proper Uncleaned packagings: Recommendation: Disposal must be made according to official regulations. | disposal. | |
| 14 Transport information Not a hazardous material for transportation. | | |
| UN-Number DOT, IMDG, IATA | None | |
| UN proper shipping name DOT, IMDG, IATA Transport (second close (co.) | None | |
| Transport hazard class(es) DOT, ADR, IMDG, IATA Class | None | |
| Packing group DOT, IMDG, IATA | None | |
| Environmental hazards: | Not applicable. | |
| Special precautions for user | Not applicable. | |
| Transport in bulk according to Annex II of MARPOL73/78 and the IBC Cod | le Not applicable. | |
| Transport/Additional information: | Not dangerous according to the above specifications. | |
| DOT Marine Pollutant (DOT): | No | |
| 15 Regulatory information | | |
| Safety, health and environmental regulations/legislation specific for the set GHS label elements Not applicable Hazard pictograms Not applicable Hazard statements Not applicable Hazard statements Not applicable National regulations This product is not listed in the U.S. Environmental Protection Agency Toxic SL to research and development only. This product must be used by or directly un product must not be used for commercial purposes or in formulations for commers. SARA Section 313 (specific toxic chemical listings) Substance is not listed. Prop 65 - Chemicals known to cause cancer Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, and prohibitive regulations Substance of Very High Concern (SVHC) according to the REACH Regular The conditions of restrictions according to Article 67 and Annex XVII of the market and use must be observed. Substance is not listed. Annex XIV of the REACH Regulations (requiring Authorisation for use) Suchemical Safety assessment: A Chemical Safety Assessment has not been of the set of | ubstances Control Act Chemical Substance Inventory. Use of this pr der the supervision of a technically qualified individual as defined by ercial purposes. viduals. tions (EC) No. 1907/2006. Substance is not listed. ne Regulation (EC) No 1907/2006 (REACH) for the manufacturing | r ISCA. This |
| | | (Contd. on page 4) |

(Contd. on page 4)

Product name: 4-Phenyl-2-butanol

Page 4/4 Printing date 11/23/2015 Reviewed on 09/05/2003

(Contd. of page 3)

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. conformance with this Material Safety Data Sheet, or in con Department issuing SDS: Global Marketing Department Date of preparation / last revision 1/23/2015 / -Abbreviations and acronyms: IMD6: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Maritime Code for Dangerous Goods DOT: US Department of Transport Association EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) HMIS: Hazardous Materials Identification System (USA) WHMIS: Workplace Hazardous Materials Information System (Canada) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 60 percent VPWs very Persistent and very Bioaccumulative ACGIH: American Conference of Governmental Industrial Hygienists (USA) OSHA: Occupational Safety and Health Administration (USA) MTP: National Toxicology Program (USA) IARC: International Agency for Research on Cancer EPA: Environmental Protection Agency (USA) USA