



Reviewed on 04/0	J4/2013
1 Identification	
Product identifier Product name: 1-(Benzyloxycarbonyl)piperazine	
Stock number: H56008	
CAS Number: 31166-44-6	
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.	
30 Bond Street Ward Hill, MA 01835-8099 Tel: 800-343-0660	
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)	
CI GHS07	
Skin Irrit. 2 H315 Causes skin irritation.	
Eye Irrit. 2A H319 Causes serious eye irritation.	
STOT SE 3 H335 May cause respiratory irritation.  Hazards not otherwise classified No information known.	
Label elements GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) Hazard pictograms	
$\wedge$	
GHS07	
Signal word Warning Hazard statements	
H315 Causes skin irritation. H319 Causes serious eye irritation.	
H335 May cause respiratory irritation. Precautionary statements	
P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.	
P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional/national/international regulations.	
WHMIS classification D2B - Toxic material causing other toxic effects	
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Classification system	
HMIS ratings (scale 0-4) (Hazardous Materials Identification System)	
HEALTH I Health (acute effects) = 1 FIRE I Flammability = 1	
REACTIVITY 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: 31166-44-6 1-(Benzyloxycarbonyl)piperazine	
4 First-aid measures	
Description of first aid measures After inhalation Supply free or it required provide artificial requiration. Keen nations were	
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 tréatment. (Contd. or	n page 2
	— USA –

## Product name: 1-(Benzyloxycarbonyl)piperazine (Contd. of page 1) 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 dioxide Nitrogen oxides (NOx) 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 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). Ensure adequate ventilation. Prevention of secondary hazards: No special measures required. Reference to other sections See Section 7 for information on safe handling See Section 8 for information on personal protection equipment. See Section 13 for disposal information. 7 Handling and storage Handling Precautions for safe handling Keep container tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation at the workplace. Prevent formation of aerosols. Information about protection against explosions and fires: No information known. Conditions for safe storage, including any incompatibilities Storage Requirements to be met by storerooms and receptacles: No special requirements. Information about storage in one common storage facility: Store away from oxidizing agents. Further information about storage conditions: Keep container tightly sealed. Store in cool, dry conditions in well sealed containers. **Specific end use(s)** No further relevant information available. 8 Exposure controls/personal protection Additional information about design of technical systems: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute. Control parameters Components with limit values that require monitoring at the workplace: The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace. Additional information: No data Exposure controls Personal protective equipment The usual protective and hygienic measures The usual 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. Avoid contact with the eyes and skin. 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 of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer. Penetration time of glove material (in minutes) Not determined Eye protection: Safety glasses Body protection: Protective work clothing. 9 Physical and chemical properties Information on basic physical and chemical properties General Information Appearance: Form: Liauid Color: Colorless to yellow Odor: Not determined Odor threshold: Not determined Not determined. pH-value: Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation\_temperature / start: Not determined 158-161 °C (316-322 °F) (1.4mm) Not determined Flammability (solid, gaseous) Not determined (Contd. on page 3)

## Product name: 1-(Benzyloxycarbonyl)piperazine

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Implicion temperature:         Not determined           Auto spinna;         Not determined           Upper:         Not determined           Upper:         Not determined           Upper:         Not determined           Density of solo (6 F);         1.14 g com (6 S3 bis/ga))           Persity of solo (6 F);         1.14 g com (6 S3 bis/ga))           Viscosity:         Not determined		(Contd. of page
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Specific target organ system toxicity - repeated 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 and chronic toxicity of this substance is not fully known. 2 Ecological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. 2 Ecological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. 2 Ecological information: 7 Additional toxicological information available. Persistence and degradability No further relevant information available. Mobility in soll No further relevant information available. 3 Do not allow material to be released to the environment without proper governmental permits. Avoid transfer into the environment. Results of P1 and VPA assessment VPA: Not applicable. 3 Disposal considerations 3 Disposal considerations 4 Transport information UN-Number DOT, ADN, MDOC, IATA Not applicable 10 M proper shipping name DOT, ADN, MDOC, IATA DOT, ADN, IMDOC, IATA DOT, ADN, IMDOC, IATA D		
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Class     Not applicable       Packing group DOT, IMDG, IATA     Not applicable       Environmental hazards:     Not applicable.       Special precautions for user     Not applicable.       Transport in bulk according to Annex II of MARPOLT3/78 and the IBC Code Not applicable.		
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Special precautions for user         Not applicable.           Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.		
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.	Environmental hazards:	Not applicable.
		Not applicable
	Special precautions for user	

Safety Data Sheet per OSHA HazCom 2012

Page 4/4 Printing date 11/24/2015 Reviewed on 04/2013

roduct name: 1-(Benzyloxycarbonyl)p	iperazine
	(Contd. of page
Transport/Additional information: DOT	
DOT Marine Pollutant (DOT):	No
UN "Model Regulation":	<u> </u>
15 Pagulatory information	
IS Regulatory information Safety, health and environmental regulatic GHS label elements The product is classifie Hazard pictograms	ons/legislation specific for the substance or mixture ad and labeled in accordance with 29 CFR 1910 (OSHA HCS)
GHS07	
P305+P351+P338 IF IN EYES: Rinse cautio. P304+P340 IF INHALED: Remove per P405 Store locked up. P501 Dispose of contents/conte National regulations This product is not listed in the U.S. Environr to research and development only. This prod product must not be used for commercial pur This product is not listed on the Canadian Do SARA Section 313 (specific toxic chemical California Proposition 65 Prop 65 - Chemicals known to cause cance Prop 65 - Developmental toxicity, substance Prop 65 - Developmental toxicity, male Su Information about limitation of use: For us Other regulations, limitations and prohibit Substance of Very High Concern (SVHC) a The conditions of restrictions according t market and use must be observed.	rofective clothing/eye protection/face protection. usly with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. rson to fresh air and keep comfortable for breathing. ainer in accordance with local/regional/national/international regulations. mental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restrict luct must be used by or directly under the supervision of a technically qualified individual as defined by TSCA. This proses or in formulations for commercial purposes. omestic Substances List (DSL) or the Canadian Non-Domestic Substances List (NDSL). al listings) Substance is not listed. Substance is not li
Substance is not listed. Annex XIV of the REACH Regulations (reg	quiring Authorisation for use) Substance is not listed.
	Safety Assessment has not béen carried out.
6 Other information Employers should use this information only a information to ensure proper use and protect conformance with this Material Safety Data S	as a supplement to other information gathered by them, and should make independent judgement of suitability of this the health and safety of employees. This information is furnished without warranty, and any use of the product not in Sheet, or in combination with any other product or process, is the responsibility of the user.
Department issuing SDS: Global Marketing Date of preparation / last revision 11/24/20 Abbreviations and acronyms: ADB: Acord europen sur le transfort des marchandises of	
DOT: US Department of Transportation CAS: Chemical Abstracts Service (division of the American HMIS: Hazardous Materials Identification System (USA) WHMIS: Workplace Hazardous Materials Information Syste LC50: Lethal concentration. 50 percent	dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) Chemical Society) am (Canada) tygienists (USA) A)
LD50: Lethal dose, 50 percent ' vPvB: very Persistent and very Bioaccumulative ACGIH: American Conference of Governmental Industrial H OSHA: Occupational Safety and Health Administration (US) NTP: National Toxicology Program (USA)	lygienists (USA) A)
IARC: International Agency for Research on Cancer	