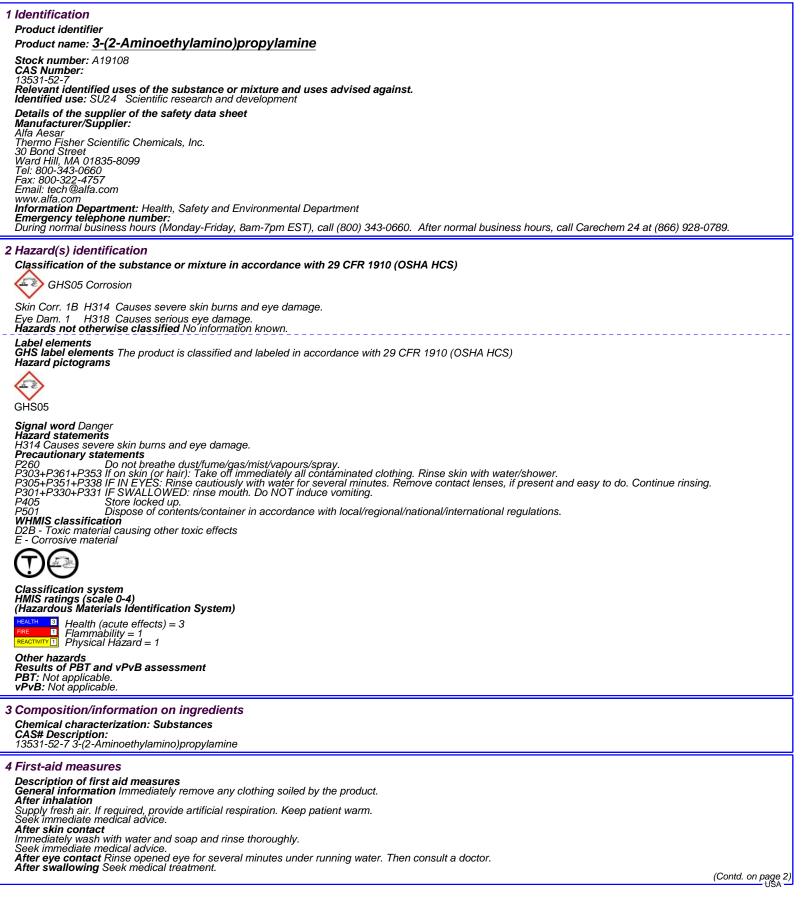


Safety Data Sheet per OSHA HazCom 2012



(Contd. of page 1)

(Contd. on page 3)

# Product name: 3-(2-Aminoethylamino)propylamine

Information for doctor Most important symptoms and effects, both acute and delayed Causes severe skin burns.

Causes serious eve damage 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 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). Use neutralizing agent. Dispose of contaminated material as waste according to section 13. Ensure adequate ventilation. Prevention of secondary hazards: Keep away from ignition sources. 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

Handle under dry protective gas. Keep container tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation at the workplace. 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. Store away from air. Further information about storage conditions: Store under dry inert gas. This product is air sensitive. 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: Not required. Additional information: No data

### 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.

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: Tightly sealed goggles Full face protection

Body protection: Protective work clothing

# 9 Physical and chemical properties

### Information on basic physical and chemical properties General Information Appearance: Form: Color: Liquid Colorless Odor: Amine-like

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Product name: 3-(2-Aminoethylami	no)propylamine	
		(Contd. of page 2)
Odor threshold:	Not determined.	
pH-value:	Not determined.	
Change in condition	Not determine at	
Melting point/Melting range: Boiling point/Boiling range:	Not determined Not determined	
Sublimation temperature / start:	Not determined	
Flash point:	96 °C (205 °F)	
Flammability (solid, gaseous)	Not determined.	
Ignition temperature: Decomposition temperature:	Not determined Not determined	
Auto igniting:	Not determined.	
Danger of explosion:	Product does not present an explosion hazard.	
Explosion limits:		
Lower: Upper:	Not determined Not determined	
Vapor pressure:	Not determined	
Density at 20 °C (68 °F): Relative density	0.93 g/cm³ (7.761 lbs/gal) Not determined.	
Vapor density	Not determined.	
Evaporation rate	Not determined.	
Solubility in / Miscibility with Water:	Fully miscible	
Partition coefficient (n-octanol/water)	): Not determined.	
Viscosity:		
dynamic: kinematic:	Not determined. Not determined.	
Other information	No further relevant information available.	
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.		
<b>Inermal decomposition / conditions to be avoided:</b> Decomposition will not occur if used and stored according to specifications. <b>Possibility of hazardous reactions</b> No dangerous reactions known		
Conditions to avoid No further relevant information available.		
Incompatible materials:		
Oxidizing agents Air		
Carbon dioxide		
Hazardous decomposition products:		
Carbon monoxide and carbon dioxide Nitrogen oxides		
-		
11 Toxicological information		
Information on toxicological effects		
Acute toxicity: Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach. LD/LC50 values that are relevant for classification: No data		
Skin irritation or corrosion: Causes severe skin burns.		
Eye irritation or corrosion: Causes serious eye damage. Sensitization: No sensitizing effects known.		
Germ cell mutagenicity: No effects known.		
<b>Carcinogenicity:</b> No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.		
Reproductive foxicity: 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 and chronic toxicity of this substance is not fully known.		
12 Ecological information		
Toxicity		
Aquatic toxicity: No further relevant in	formation available.	
Persistence and degradability No furt Bioaccumulative potential No further	ther relevant information available.	
Mobility in soil No further relevant info	refevant information available. rmation available.	
Additional ecological information:		
General notes: Do not allow material to be released to	the environment without proper governmental permits.	
Do not allow undiluted product or large	quantities to reach ground water, water course or sewage system.	
Avoid transfer into the environment. Results of PBT and vPvB assessment		
PBT: Not applicable.	ік 	
vPvB: Not applicable.		
Other adverse effects No further relev	ant information available.	
13 Disposal considerations		
Waste treatment methods		
Recommendation Consult state, local or national regulations to ensure proper disposal.		
Uncleaned packagings: Becommondation: Disposal must be made according to official regulations		
Recommendation: Disposal must be n Recommended cleansing agent: Wat	er, if necessary with cleansing agents.	
14 Transport information		
UN-Number DOT, IMDG, IATA	UN2735	
	011/2/00	(Contd on page 4)
		(Contd. on page 4)

(Contd. on page 4) USA

# Product name: 3-(2-Aminoethylamino)propylamine (Contd. of page 3) UN proper shipping name DOT Polyamines, liquid, corrosive, n.o.s. (3-(2-Aminoethylamino)propylamine) POLYAMINES, LIQUID, CORROSIVE, N.O.S. (3-(2-Aminoethylamino) IMDG, IATA propylamine) Transport hazard class(es) DOT Class Corrosive substances. Label 8 (C7) Corrosive substances Class 8 \_abel IMDG, IATA 8 Corrosive substances. Class Label Packing group DOT, IMDG, IATA 11 Environmental hazards: Not applicable. Special precautions for user EMS Number: Warning: Corrosive substances F-A.S-B Segregation groups Alkalis Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable. Transport/Additional information: DOT Marine Pollutant (DOT): No UN "Model Regulation": UN2735, Polyamines, liquid, corrosive, n.o.s. (3-(2-Aminoethylamino)propylamine), 8, II 15 Regulatory information Safety, health and environmental regulations/legislation specific for the substance or mixture GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) Hazard pictograms E.F. GHS05 Signal word Danger Hazard statements H314 Causes severe skin burns and eye damage. Precautionary statements P260 Do not breathe dust/fume/gas/mist/vapours/spray. P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P405 Store locked up. P50 Dispose of contents/container in accordance with local/regional/national/international regulations. National regulations All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory. All components of this product are listed on the Canadian Non-Domestic Substances List (NDSL). All components of this product are listed on the Canadian Non-Domestic Substances List (NDSL). SARA Section 313 (specific toxic chemical listings) Substance is not listed. California Proposition 65 Prop 65 - Chemicals known to cause cancer Substance is not listed. Prop 65 - Developmental toxicity Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Information about limitation of use: For use only by technically qualified individuals. Other regulations, limitations and prohibitive regulations Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed. The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed. Substance is not listed. Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed. Chemical safety assessment: A Chemical Safety Assessment has not been carried out. 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. Conformatice with this waterial safety Data Sneet, or in combination with any other product or process, is the responsibility of the user. Department issuing SDS: Global Marketing Department Date of preparation / last revision 11/24/2015 / Abbreviations and acconyms: RID: Reglement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA) ICAO: International Civil Aviation Organization ICAO: Thermational Covid support des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA) ICAO: Thermational Civil Aviation Organization ICAO: Thermational Instructions by the "International Civil Aviation Organization" (ICAO) ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transport Association IATA: International Air Transport Association IATA: International (Contd. on page 5)

# Product name: 3-(2-Aminoethylamino)propylamine

LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent vPvB: very Persistent and very Bioaccumulative ACGIH: American Conference of Governmental Industrial Hygienists (USA) OSHA: Occupational Safety and Health Administration (USA) NTP: National Toxicology Program (USA) IARC: International Agency for Research on Cancer EPA: Environmental Protection Agency (USA)

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USA