

Safety Data Sheet per OSHA HazCom 2012

	n 06/16/2010
1 Identification Product identifier	
Product name: (1R,3S)-(-)-3-Aminocyclopentanecarboxylicacid	
Stock number: H52122 CAS Number:	
71830-08-5 <b>Relevant identified uses of the substance or mixture and uses advised against.</b> Identified use: SU24 Scientific research and development	
Details of the supplier of the safety data sheet Manufacturer/Supplier:	
Alfa Aesar Transformer Scientific Chemicals, Inc. 30 Bond Street	
Ward Hill, MA 01835-8099 Tel: 800-343-0660 Fax: 800-32 <u>2</u> -4757	
Fax. 600-522-4757 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)	
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	
GHS07	
Signal word Warning         Hazard statements         H315 Causes skin irritation.         H319 Causes serious eye irritation.         H335 May cause respiratory 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.         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	
$(\underline{\mathbf{T}})$	
Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System)	
HEALTH     I       Health (acute effects) = 1       File     I       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: 71830-08-5 (1R,3S)-(-)-3-Aminocyclopentanecarboxylicacid	
4 First-aid measures Description of first aid measures	
After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm.	
Se'e'k îmmediate 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.	ntd. on page 2)

## Product name: (1R,3S)-(-)-3-Aminocyclopentanecarboxylicacid

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## (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) Possibly Hydrogen cyanide (HCN) 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: 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 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 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 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: Solid Odor: Not determined Odor threshold: Not determined. pH-value: Not applicable. Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start: Not determined Not determined Not determined Flammability (solid, gaseous) Not determined

(Contd. on page 3)

## Product name: (1R,3S)-(-)-3-Aminocyclopentanecarboxylicacid

Aprilion temperature: Mod determined     Auto igniting: Mod determined     Dearge of explosion: Mod determined     SubJitity in Missibility with     Mod determined     Viscosity: Mod applicable     Other information forcen     SubJitity of hissibility with     Mod applicable     Other information forcen     SubJitity of hissibility of hisisibility of hissibility of hissibility of hissibility of hissibi	
Decomposition temperature:         Not determined           Auto grinne:         Product does not present an explosion hazard.           Department of the second does not be applied by the second does not beapplied by t	Contd. of page 2)
Lower:         Not determined           Vappor pressure:         Not applicable.           Value:         Not applicable.	
Lower: Mod defermined     Vapper pressure: Vap	
Vapor pressure:         Mod applicable.           Density         Mod applicable.           Vapor density         Mod applicable.           Evaporation rate.         Mod applicable.           Status         Mod applicable.           Vapor density         Mod applicable.           Status         Mod applicable.           Vapor density         Mod applicable.           Vapor density         Mod applicable.           Vater:         Mod applicable.           Vater:         Mod applicable.           Ottability and reactivity         Mod applicable.           Obstability with incomation facult.         Mod applicable.           Ottability and reactivity         Reactivity in information facult.           Reactivity in information facult.         Mod applicable.           Obstability and reactivity         Reactivity in information facult.           Possibility of hazardus reactions No dange applicable.         Mod applicable.           Obstability applicable.         Mod applicable.           Mod applicable.         Mod applicable.           Density in the information facult.         No lither relevant information available.           Mod applicable.         Mod applicable.           Mod applicable.         Mod applicable.           Divisi	
Relative density         Mod determined.           Everoperation the Everoperation the Solubity in / Miscibility with         Mod policible.           Solubity in / Miscibility with         Mod policible.           Solubity in / Miscibility with         Mod policible.           Solubity in / Miscibility with         Mod policible.           Other information         Mod policible.           Operating:         Mod policible.           <	
Vapor density         Not applicable.           Very density         Not applicable.           Other information         No turber relevant information available.           10 Stability and reactions         No turber relevant information available.           Reactivity No information known         Reactivity No information formation available.           Possibility of hurder relevant information available.         No turber relevant information available.           Arr         Oxidians agents         Reactivity No information           Cardon movide and carbon of acarbon scalable.         Reactivity No information         Reactivity No information           11 Toxicological information         Information on toxicological effects         Reactivity No information         Reactivity No information           11 Reactivity No information         No data         Reactivity No information         Reactivity No information           11 Rocicological information         No data         Reactivity No information         Reactinty No information           Reard and	
Evaporation rate must be applicable. Not applicable. We have a provide the applicable of the applicable of the applicable of the applicable of the applicable. Not applicable of the applicable. The applicable of	
Water:         Not determined partition;           Variation;         Not applicable.           With information         Not applicable.           Of the information known.         Not information shown.           Chemical stability Stable indefinitions in the evoletic Decomposition will not occur if used and stored according to specifications.           Possibility of hazardous reactions No degradue conditions.         Not information available.           Information and catch Notwith         Not applicable.           Withing agents         Not applicable.           Hazardous decomposition products:         Catching agents           Hazardous Causes service as information         Not applicable.           Information on toxicological information         Not applicable.           Minomation or corrosion:         Causes service as with information.           Stability Intriduction or corrosion:         Causes service as with information.           Stability Intriduction or corrosion:         Causes service as with information.           Stability Intriduction or corrosion:         Causes service as with information.           Stability Intriduction or corrosion:         Causes service as des information. </td <td></td>	
Partition coefficient (In-octanol/water): Not determined. Viscosity: Wiscosity: Other information Kown. Chemical stability Stabile under recommended storage conditions. Thermal decemposition / conditions to be avoided. Decomposition will not occur if used and stored according to specifications. Possibility of haardoos reactions No degree commended storage conditions. Thermal decemposition / conditions to be avoided. Decomposition will not occur if used and stored according to specifications. Possibility of haardoos reactions No degree storage conditions. Thermal decemposition / conditions to be avoided. Decomposition will not occur if used and stored according to specifications. Possibility for inter relevant information available. Not compatible materials: Arr Carbon monoxide and carbon dioxide Nitrogen oxides Possibility frogen cyanide (HCN) 11 Toxicological information Information on toxicological effects Information on toxicological effects Skin irritation or corrosion: Causes selvan trateon. Eye Irritation or corrosion: Causes selvan cause respiratory intation. Aspecific trategree organ system boxicity - selvant explice exposure: No dates known. Subacute to chronic toxicity: No affects known. Additional toxicotogical Information Toxicity Aquatic toxicity: No affects known. 21 Ecological Information Correct on decardability No. turber relevant information available. Paristence and degradability No. turber relevant information available. Paristence and degrada	
dynamic:         Not applicable. No further information           00 Stability and reactivity Reactivity No information known Thermal decomposition / conditions to be avoided. Decomposition will not occur if used and stored according to specifications. Thermal decomposition / conditions to be avoided. Decomposition will not occur if used and stored according to specifications. Thermal decomposition / conditions to be avoided. Decomposition will not occur if used and stored according to specifications. Possibility yof hazardous reactions No deargerous reactions known Conditions to avoid No further relevant information available. Information on toxicological information           11 Toxicological information Information on toxicological effects Acting ogens         Reactivity in offices known. Conditions to avoid (CNN)           11 Toxicological information Information on corrosion: Causes skin initiation. Sensitization or corrosion: Causes skin winitiation. Sensitization in corrosion: Causes skin winitiation. Sensitization in corrosion: Causes skin winitiation. Sensitization in corrosion: Causes skin winitiation. Sensitization: No sensitization of effects known. Sensitization: No sensitization of effects known. Sensitization: No sensitization toxicity - repeated exposure: No effects known. Subjective toxicity: No effects known. Subjective 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 Sensitization information: Concilient information: Subjective toxicity: No further relevant information available. Providitive potential to brane relevant information available. Mathing and Noticological information: Subjective toxicity: No further relevant information available. Mathity sol No Lurther relevant information available. Mathi	
whitematic:         Moti applicable.           Other information         Not ther relevant information available.           10 Stability and reactivity         Reactivity No. information known.           Chemical stability Stability conditions to be avoided. Decomposition will not occur if used and stored according to specifications.           Chemical stability Stability conditions to be avoided. Decomposition will not occur if used and stored according to specifications.           Conditions to avoid ho further relevant information available.           Motion appends           Motion appends           Processing appends           Hazardous decomposition products:           Carbon monolds and carbon dioxide           Norticological information           Information on toxicological effects           Accure toxicity: No effects known.           Carbon monolity and carbon application of caussification: No data           Stringer organis system toxicity - repeated exposure: No effects known.           Germ cell mutagenicity: No descis known.           Germ cell mutagenicity: No effects known.           Gerdicitation or corresion: Causas skin inflation.           Specific targe organ system toxicity - repeated exposure: No effects known.           Specific targe organ system toxicity - repeated exposure: No effects known.           Subilitional exact No effects known.           Carclongeinty: No descis k	
10 Stability and reactivity         Reactivity No information known         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.         Information convolte and carbon dioxide         Plazardous decomposition / conditions         Toxicological information         Information on toxicological effects         Acute toxicity: No effects from.         LDLC50 values that are relevant for classification: No data         Still information or corrisol: Causes skin inflation.         Semilation or correstor.         Semilation or correstor.         Germ cell mutagenicity: No effects known.         Carcinogenicity: No effects known.         Separation activation available.         Application activation available.         Application activation available.         Reproductive boxicity: No effects known.         Carcinogenicity: No effects known.         Separitin activation available.	
Reactivity No information known.         Chemical Stability Stabile 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 deprevous reactions known         Incompetible materials:         Arr         Oxiding agents         Hazardous decomposition products:         Arr         Oxiding or carbon dioxide         Mirgen oxides         Possibility Hydrogen cyanide (HCN)           11 Toxicological information         Information on toxicological effects         Acute toxicity: No effects known.         Eye irritation or corrosito: Causes sensitivation:         Sensitization: No sensitizing effects known.         Gerr cell mategenicity: No effects known.         Specific target organ system toxicity - single exposure: No effects known.         Specific target organ system toxicity - single exposure: No effects known.         Specific target organ system toxicity - single exposure: No effects known.         Specific target organ system toxicity - single exposure: No e	
Information on toxicological effects         Acute toxicity: No effects known.         Explored toxicity: No effects known.         Germ cell mutagenicity: No effects known.         Garcinogenicity: No effects known.         Garcinogenicity: No effects known.         Specific target organ system toxicity - repeated exposure: No effects known.         Specific target organ system toxicity - single exposure: No effects known.         Specific target organ system toxicity - single exposure: No effects known.         Specific target organ system toxicity - single exposure: No effects known.         Specific target organ system toxicity - single exposure: No effects known.         Subacute to chronic toxicity: No effects known.         Addition hazard: No effects known.         Subacute to chronic toxicity: 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 information available.         Persistence and degradability. No further relevant information available.         Mobility in soil No further relevant information available.         Mobility in soil No further relevant information available.         Mobility of No inther relevant information available. </th <th></th>	
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 governmental permits. Do not allow material to be released to the environment without proper governmental permits. Do not allow material to be released to the environment without proper governmental permits. Do not allow material to be released to the environment without proper governmental permits. Do not allow andiluted 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. Other adverse effects No further relevant information available. <b>13 Disposal considerations</b> Waste treatment methods Recommendation Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations. <b>14 Transport information</b> Not a hazardous material for transportation. UN-Number	
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Not a hazardous material for transportation. UN-Number	
UN proper shipping name DOT, IMDG, IATA None	
Transport hazard class(es) DOT, ADR, IMDG, IATA Class None	
Packing group DOT, IMDG, IATA None	
(Cc	Contd. on page 4) USA

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Environmental hazards:	Not applicable.
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73	
Transport/Additional information:	Not dangerous according to the above specifications.
DOT Marine Pollutant (DOT):	No
Regulatory information Safety, health and environmental regulations/legislation GHS label elements The product is classified and labeled Hazard pictograms GHS07 Signal word Warning	on specific for the substance or mixture d in accordance with 29 CFR 1910 (OSHA HCS)
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/va, P280 Wear protective gloves/protective cloth P305+P351+P338 IF IN EYES: Rinse cautiously with water P304+P340 IF INHALED: Remove person to fresh P405 Store locked up. P501 Dispose of contents/container in accord National regulations This product most be used for commercial purposes or in for SARA Section 313 (specific toxic chemical listings) Su California Proposition 65 Prop 65 - Chemicals known to cause cancer Substance Prop 65 - Developmental toxicity, female Substance is not Prop 65 - Developmental toxicity, male Subs	thing/eye protection/face protection. ter for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. a ar and keep comfortable for breathing. rdance with local/regional/national/international regulations. rction Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restrict used by or directly under the supervision of a technically qualified individual as defined by TSCA. This formulations for commercial purposes. Substance is not listed. red. r not listed. ot listed
Other information Employers should use this information only as a supplement information to ensure proper use and protect the health ar conformance with this Material Safety Data Sheet, or in co	nent to other information gathered by them, and should make independent judgement of suitability of this and safety of employees. This information is furnished without warranty, and any use of the product not 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 acronyms: RID: Règlement international concernant le transport des marchandises dang IATA-DGR: Dangerous Goods Regulations by the "International Air Transpor ICAO: International Civil Aviation Organization ICAO: Thermational Airtransport organization ICAO: Thermational Airtime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association 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 dose, 50 percent	ngereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) ort Association" (IATA) tion" (ICAO) ty)
LDSU: Lettina Dose, 30 percent VP/B: 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)	