

**1 Identification of substance****Product details**

**Trade name** **(R)-(-)-2-Aminohexane**  
**Stock number:** L19304  
**Manufacturer/Supplier:** Alfa Aesar GmbH & Co.KG  
Benzstrasse 3  
D-76185 Karlsruhe / Germany

E-mail: gcat@matthey.com  
www.alfa-chemcat.com

**Informing department:** Product safety department.  
**Emergency information:** Giftnotruf Universität Mainz / Poison Information Center Mainz  
www.giftinfo.uni-mainz.de Telefon:+49(0)6131/19240

**2 Hazards identification****Hazard designation:**

C Corrosive  
F Highly flammable

**Information pertaining to particular dangers for man and environment**

R 11 Highly flammable.  
R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.  
R 34 Causes burns.

**GHS label elements****Danger**

H225 - Highly flammable liquid and vapour.

**Danger**

H314 - Causes severe skin burns and eye damage.

**Warning**

H302 - Harmful if swallowed.  
H312 - Harmful in contact with skin.  
H332 - Harmful if inhaled.

**Prevention:**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.

**Response:**

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
IF exposed or if you feel unwell:  
P309 Immediately call a POISON CENTER or doctor/physician.  
P310

**3 Composition/information on ingredients****Chemical characterization:**

**Designation: (CAS#)** (R)-(-)-2-Aminohexane (CAS# 70095-40-8)

**4 First aid measures****General information**

Instantly remove any clothing soiled by the product.  
**After inhalation** Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

**After skin contact**

Seek immediate medical advice.  
Instantly wash with water and soap and rinse thoroughly.

**After eye contact**

Seek immediate medical advice.  
Rinse opened eye for several minutes under running water. Then consult doctor.

**After swallowing**

Seek immediate medical advice.

**5 Fire fighting measures****Suitable extinguishing agents  
For safety reasons unsuitable extinguishing agents**CO<sub>2</sub>, sand, extinguishing powder. Do not use water.**Special hazards caused by the material, its products of combustion or flue gases:**

Water.  
Can be released in case of fire:  
Carbon monoxide and carbon dioxide  
Nitrogen oxides (NO<sub>x</sub>)  
Possibly Hydrogen cyanide (HCN)

**Protective equipment:**

Wear self-contained breathing apparatus.  
Wear full protective suit.

**6 Accidental release measures****Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.

**Measures for environmental protection:**

Ensure adequate ventilation  
Keep away from ignition sources  
Do not allow material to be released to the environment without proper governmental permits.  
**Measures for cleaning/collecting:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralizing agent.

**Additional information:**

Dispose of contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Keep away from ignition sources.  
See Section 7 for information on safe handling  
See section 8 for information on personal protection equipment.  
See Section 13 for information on disposal.

**7 Handling and storage****Handling  
Information for safe handling:**

Handle under dry protective gas.  
Keep containers tightly sealed.  
Store in cool, dry place in tightly closed containers.  
Ensure good ventilation/exhaustion at the workplace.

**Information about protection against explosions and fires:**

Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Fumes can combine with air to form an explosive mixture.

**Storage  
Requirements to be met by storerooms and containers:**

Store in cool location.

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

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**Information about storage in one common storage facility:**

Store away from air.  
Store away from oxidizing agents.  
Do not store together with acids.

**Further information about storage conditions:**

Store under dry inert gas.  
Keep container tightly sealed.  
Store in cool, dry conditions in well sealed containers.  
Store in a locked cabinet or with access restricted to technical experts or their assistants.  
This product is air sensitive.

**8 Exposure controls and 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.

**Components with critical values that require monitoring at the workplace:  
Additional information:**

Not required.  
No data

**Personal protective equipment  
General protective and hygienic measures**

The usual precautionary measures should be adhered to in handling the chemicals.  
Keep away from foodstuffs, beverages and food.  
Instantly remove any soiled and impregnated garments.  
Wash hands during breaks and at the end of the work.  
Avoid contact with the eyes and skin.

**Breathing equipment:**

Use breathing protection with high concentrations.

**Protection of hands:**

Check protective gloves prior to each use for their proper condition.

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

**Penetration time of glove material**

Impervious gloves  
Not determined

**Eye protection:**

Safety glasses  
Tightly sealed safety glasses.  
Face protection  
Full face protection

**Body protection:**

Protective work clothing.

**9 Physical and chemical properties:****General Information**

**Form:** Liquid  
**Colour:** Colourless  
**Smell:** Amine-like

**Change in condition**

**Melting point/Melting range:** <-20°C  
**Boiling point/Boiling range:** 116°C  
**Sublimation temperature / start:** Not determined

**Flash point:**

-3°C

**Ignition temperature:**

Not determined

**Decomposition temperature:**

Not determined

**Critical values for explosion:**

**Lower:** Not determined  
**Upper:** Not determined

**Steam pressure:**

Not determined

**Density at 20°C**

0.755 g/cm<sup>3</sup>

**Solubility in / Miscibility with**

**Water at 20°C:** 17 g/l

**pH-value (17 g/l) at 20°C:**

10.5

**10 Stability and reactivity****Thermal decomposition / conditions to be avoided:**

No decomposition if used and stored according to specifications.

**Materials to be avoided:**

Air  
Carbon dioxide  
Oxidizing agents  
Acids

**Dangerous reactions:**

No dangerous reactions known

**Dangerous products of decomposition:**

Carbon monoxide and carbon dioxide  
Nitrogen oxides (NO<sub>x</sub>)  
Possibly Hydrogen cyanide (HCN)

**11 Toxicological information****Acute toxicity:****Primary irritant effect:**

Corrosive effect on skin and mucous membranes.

**on the skin:**

Strong corrosive effect.

**on the eye:**

No sensitizing effect known.

**Sensitization:**

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

**Additional toxicological information:**

Danger by skin resorption.  
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.  
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

**12 Ecological information:****Additional ecological information:**

Water hazard class 1 (Self-assessment): slightly hazardous for water.

**General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

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Do not allow material to be released to the environment without proper governmental permits. (Contd. of page 2)

**13 Disposal considerations**

**Product:**  
**Recommendation:** Hand over to disposers of hazardous waste.  
Must be specially treated under adherence to official regulations.  
Consult state, local or national regulations for proper disposal.

**Uncleaned packagings:**  
**Recommendation:** Disposal must be made according to official regulations.

**14 Transport information****Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)**

**ADR/RID-GGVS/E Class:** 3 (FC) Flammable liquids.  
**Kemler Number:** 338  
**UN-Number:** 2733  
**Packaging group:** II  
**Label:** 3+8  
**Designation of goods:** 2733 AMINES, FLAMMABLE, CORROSIVE, N.O.S. ((R)-(-)-2-Aminohexane)  
**Limited quantities (LQ):** LQ4  
**Transport category:** 2  
**Tunnel restriction code:** D/E

**Maritime transport IMDG/GGVSea:**

**IMDG/GGVSea Class:** 3  
**UN Number:** 2733  
**Label:** 3+8  
**Packaging group:** II  
**Marine pollutant:** No  
**Segregation groups:** Alkalies  
**Correct technical name:** AMINES, FLAMMABLE, CORROSIVE, N.O.S. ((R)-(-)-2-Aminohexane)

**Air transport ICAO-TI and IATA-DGR:**

**ICAO/IATA Class:** 3  
**UN/ID Number:** 2733  
**Label:** 3+8  
**Packaging group:** II  
**Correct technical name:** AMINES, FLAMMABLE, CORROSIVE, N.O.S. ((R)-(-)-2-Aminohexane)

**UN "Model Regulation":**

UN2733, AMINES, FLAMMABLE, CORROSIVE, N.O.S., 3 (8), II

**15 Regulatory information****Designation according to EC guidelines:****Code letter and hazard designation of product:**

C Corrosive  
F Highly flammable

**Risk phrases:**

11 Highly flammable.  
20/21/22 Harmful by inhalation, in contact with skin and if swallowed.  
34 Causes burns.

**Safety phrases:**

16 Keep away from sources of ignition - No smoking.  
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
36/37/39 Wear suitable protective clothing, gloves and eye/face protection.  
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**National regulations****Information about limitation of use:**

For use only by technically qualified individuals.  
Employment restrictions concerning young persons must be observed.

**Water hazard class:**

Water hazard class 1 (Self-assessment): slightly hazardous for water.

**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 data specification sheet:** Health, Safety and Environmental Department.

**Contact:** Zachariah Holt  
**Abbreviations and acronyms:**  
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organization  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
CAS: Chemical Abstracts Service (division of the American Chemical Society)