

1 Identification of substance**Product details**

Trade name

Aluminum carbide

Stock number:

14038

Manufacturer/Supplier:

Alfa Aesar GmbH & Co.KG
Benzstrasse 3
D-76185 Karlsruhe / GermanyE-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:

Xi Irritant
F Highly flammable

Information pertaining to particular dangers for man and environment

R 11 Highly flammable.
R 15 Contact with water liberates extremely flammable gases.
R 36/37/38 Irritating to eyes, respiratory system and skin.

GHS label elements

**Danger**H228 - Flammable solid.
H261 - In contact with water releases flammable gases.**Warning**H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.

Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Response:

P231+P232 Handle under inert gas. Protect from moisture.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

3 Composition/information on ingredients

Chemical characterization:

Aluminum carbide (CAS# 1299-86-1)

Designation: (CAS#)

Identification number(s):

215-076-2

EINECS Number:

4 First aid measures

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

In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.

For safety reasons unsuitable extinguishing agents

Water.

Special hazards caused by the material, its products of combustion or flue gases:

Can be released in case of fire:
Carbon monoxide and carbon dioxide
Metal oxide

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:

Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
Keep away from ignition sources.

Additional information:

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.

Storage

Requirements to be met by storerooms and containers:

Store in cool location.

Information about storage in one common storage facility:

Store away from water.
Store away from oxidizing agents.

Further information about storage conditions:

Store under dry inert gas.
This product is moisture sensitive.

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

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Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Protect from humidity and keep away from water.

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:	Not required.
Additional information:	No data
Personal protective equipment	The usual precautionary measures should be adhered to in handling the chemicals.
General protective and hygienic measures	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
Eye protection:	Not determined Safety glasses Face protection
Body protection:	Full face protection Protective work clothing.

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

Form:	Powder
Colour:	Dark grey
Smell:	Not determined
Change in condition	
Melting point/Melting range:	2100°C
Boiling point/Boiling range:	Not determined
Sublimation temperature / start:	Not determined
Inflammability (solid, gaseous)	Highly flammable. Contact with water liberates extremely flammable gases.
Ignition temperature:	Not determined
Decomposition temperature:	>2200°C
Critical values for explosion:	
Lower:	Not determined
Upper:	Not determined
Steam pressure:	Not determined
Density at 20°C	2.36 g/cm ³
Solubility in / Miscibility with Water:	Contact with water releases flammable gases

10 Stability and reactivity

Thermal decomposition / conditions to be avoided:	No decomposition if used and stored according to specifications.
Materials to be avoided:	Water/moisture Oxidizing agents
Dangerous reactions:	Contact with water releases flammable gases
Dangerous products of decomposition:	Carbon monoxide and carbon dioxide Metal oxide

11 Toxicological information

Acute toxicity:	
Primary irritant effect:	
on the skin:	Irritant for skin and mucous membranes.
on the eye:	Irritant effect.
Sensitization:	No sensitizing effect known.
Additional toxicological information:	To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. 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:	
General notes:	Water hazard class 1 (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system. Do not allow material to be released to the environment without proper governmental permits.

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.

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

ADR/RID-GGVS/E Class: 4.3 (W2) Substances which, in contact with water, emit flammable gases.
 Kemler Number: 423
 UN-Number: 1394
 Packaging group: II
 Label: 4.3
 Designation of goods: 1394 ALUMINIUM CARBIDE
 Limited quantities (LQ): LQ11
 Transport category: 2
 Tunnel restriction code: D/E

Maritime transport IMDG/GGVSea:

IMDG/GGVSea Class: 4.3
 UN Number: 1394
 Label: 4.3
 Packaging group: II
 Marine pollutant: No
 Correct technical name: ALUMINIUM CARBIDE

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: 4.3
 UN/ID Number: 1394
 Label: 4.3
 Packaging group: II
 Correct technical name: ALUMINIUM CARBIDE

UN "Model Regulation": UN1394, ALUMINIUM CARBIDE, 4.3, II

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

Risk phrases: 11 Highly flammable.
 15 Contact with water liberates extremely flammable gases.
 36/37/38 Irritating to eyes, respiratory system and skin.

Safety phrases: 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 37 Wear suitable gloves.
 43 In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.

National regulations

Information about limitation of use: Employment restrictions concerning young persons must be observed.
 For use only by technically qualified individuals.

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
 EINECS: European Inventory of Existing Commercial Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)