

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 13.07.2010

Revision: 13.07.2010

1 Identification of substance

Product details

Trade name

Copper(II) isopropoxide

Stock number:

35821

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:

Xn Harmful
F Highly flammable

Information pertaining to particular dangers for man and environment

R 11 Highly flammable.
R 22 Harmful if swallowed.
R 36/37/38 Irritating to eyes, respiratory system and skin.

GHS label elements

**Warning**

H228 - Flammable solid.

**Warning**H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.
P280 Wear protective gloves/clothing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.

Prevention:

Response:

3 Composition/information on ingredients

Chemical characterization:

Designation: (CAS#)

Copper(II) isopropoxide (CAS# 23578-23-6)

4 First aid measures

General information

Instantly remove any clothing soiled by the product.
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
Seek immediate medical advice.

After inhalation

After skin contact

Instantly 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 doctor.

After swallowing

Seek immediate medical advice.

5 Fire fighting measures

Suitable extinguishing agents

CO₂, sand, extinguishing powder. Do not 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
Toxic metal oxide smoke
Wear self-contained breathing apparatus.
Wear full protective suit.

Protective equipment:

6 Accidental release measures

Person-related safety precautions:

Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation

Measures for environmental protection:

Keep away from ignition sources
Do not allow material to be released to the environment without proper governmental permits.

Measures for cleaning/collecting:

Use neutralizing agent.
Dispose of contaminated material as waste according to item 13.
Ensure adequate ventilation.

Additional information:

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:

Protect from humidity and keep away from water.
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 oxidizing agents.
Store away from water.
Do not store together with acids.

Further information about storage conditions:

Store under dry inert gas.
This product is moisture sensitive.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.(Contd. on page 2)
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Protect from humidity and keep away from water.

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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:

Copper fume, dusts and mists (as Cu)
mg/m³

ACGIH TLV	1 (dust, mist); 0.2 (fume)
Austria MAK	1; 0.1 (fume)
Belgium TWA	0.2 (fume); 1 (dust)
Denmark TWA	0.1
Finland TWA	0.2 (fume); 1 (dust)
France VME	0.2 (fume); 1 (dust); 1; 2-STEL (dust)
Germany MAK	0.1 (fume); 1 (dust)
Hungary TWA	0.2; 0.4-STEL (dust)
Korea TLV	1 (dust, mist); 0.2 (fume)
Netherlands MAC-TGG	1 (dust)
Norway TWA	0.05; 0.1 (fume)
Poland TWA	0.1 (fume); 0.3-STEL (fume)
Russia	1-STEL (dust)
Sweden NGV	0.2 (resp. dust); 1 (total dust)
Switzerland MAK-W	0.1; 0.2-KZG-W (fume)
	1; 1-KZG-W
United Kingdom TWA	0.2 (fume)
	1; 3-STEL (dusts and mist)
USA PEL TWA	0.1 (fume); 1 (dusts and mists)
No data	

Additional information:

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.
Use breathing protection with high concentrations.
Safety glasses
Tightly sealed safety glasses.
Full face protection
Face protection
Protective work clothing.

Breathing equipment:

Eye protection:

Body protection:

9 Physical and chemical properties:

General Information

Form:	Powder
Colour:	Blue
Smell:	Not determined

Change in condition	
Melting point/Melting range:	Not determined
Boiling point/Boiling range:	Not determined
Sublimation temperature / start:	Not determined

Flash point:	Not applicable
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Inflammability (solid, gaseous)	Highly flammable.
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Ignition temperature:	Not determined
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Decomposition temperature:	Not determined
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Critical values for explosion:	
Lower:	Not determined
Upper:	Not determined

Steam pressure:	Not determined
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Density	Not determined
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Solubility in / Miscibility with Water:	Hydrolyzes
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10 Stability and reactivity

Thermal decomposition / conditions to be avoided:

Materials to be avoided:

No decomposition if used and stored according to specifications.

Water/moisture
Oxidizing agents
Acids

Dangerous reactions:

Contact with water releases flammable gases

Contact with water releases irritant gases

Carbon monoxide and carbon dioxide

Inflammable gases/vapours

Corrosive gases/vapours

Metal oxide

Toxic metal oxide smoke

11 Toxicological information

Acute toxicity:

Primary irritant effect:

on the skin:

on the eye:

Sensitization:

Additional toxicological information:

Irritant for skin and mucous membranes.

Irritant effect.

No sensitizing effect known.

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

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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

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

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: 4.1 (F3) Flammable solids, self-reactive substances and solid desensitised explosives.
Kemler Number: 40
UN-Number: 3181
Packaging group: III
Label: 4.1
Designation of goods: 3181 METAL SALTS OF ORGANIC COMPOUNDS, FLAMMABLE, N.O.S. (Copper(II) isopropoxide)
Limited quantities (LQ): LQ9
Transport category: 3
Tunnel restriction code: E

Maritime transport IMDG/GGVSea:



IMDG/GGVSea Class: 4.1
UN Number: 3181
Label: 4.1
Packaging group: III
EMS Number: F-A,S-I
Marine pollutant: No
Segregation groups: Heavy metals and their salts (including their organometallic compounds)
Correct technical name: METAL SALTS OF ORGANIC COMPOUNDS, FLAMMABLE, N.O.S. (Copper(II) isopropoxide)

Air transport ICAO-TI and IATA-DGR:



ICAO/IATA Class: 4.1
UN/ID Number: 3181
Label: 4.1
Packaging group: III
Correct technical name: METAL SALTS OF ORGANIC COMPOUNDS, FLAMMABLE, N.O.S. (Copper(II) isopropoxide)

UN "Model Regulation":

UN3181, METAL SALTS OF ORGANIC COMPOUNDS, FLAMMABLE, N.O.S., 4.1, III

15 Regulatory information

Designation according to EC guidelines:

Code letter and hazard designation of product:



Xn Harmful
 F Highly flammable

Risk phrases:

11 Highly flammable.
 22 Harmful if swallowed.
 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.
 36/37 Wear suitable protective clothing and gloves.

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

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)