

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name **Cumene**

Stock number: A11864, L03500

CAS Number:

98-82-8

EC number:

202-704-5

Index number:

601-024-00-X

1.2 Relevant identified uses of the substance or mixture and uses advised against.

Identified use: SU24 Scientific research and development

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Thermo Fisher (Kandel) GmbH

Zeppelinstr. 7b

76185 Karlsruhe / Germany

Tel: +49 (0) 721 84007 280

Fax: +49 (0) 721 84007 300

Email: tech@alfa.com

www.alfa.com

Informing department: Product safety Tel + +049 (0) 7275 988687-0

1.4 Emergency telephone number:

Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number)

Poison Information Center Mainz

www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240


SECTION 2: Hazards identification

2.1 Classification of the substance or mixture


Classification according to Regulation (EC) No 1272/2008

 GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.

 GHS08 health hazard

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.

 GHS09 environment


Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

 GHS07


Acute Tox. 4 H302 Harmful if swallowed.

STOT SE 3 H335 May cause respiratory irritation.


Classification according to Directive 67/548/EEC or Directive 1999/45/EC

 Xn; Harmful

R65: Harmful; may cause lung damage if swallowed.

 Xi; Irritant

R37: Irritating to respiratory system.

 N; Dangerous for the environment

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R10: Flammable.

Information concerning particular hazards for human and environment: Not applicable

Other hazards that do not result in classification: No information known.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 The substance is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS02 GHS07 GHS08 GHS09

Signal word Danger

Hazard statements

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H335 May cause respiratory irritation.

H304 May be fatal if swallowed and enters airways.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor/...

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P405 Store locked up.

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

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

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SECTION 3: Composition/information on ingredients

3.1 Substances

CAS# Designation:

98-82-8 Cumene

Identification number(s):

EC number: 202-704-5

Index number: 601-024-00-X

SECTION 4: First aid measures

4.1 Description of first aid measures

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

Seek immediate medical advice.

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 medical treatment.

4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

5.2 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

5.3 Advice for firefighters

Protective equipment:

Wear self-contained breathing apparatus.

Wear full protective suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources

6.2 Environmental precautions: Do not allow product to reach sewage system or water bodies.

6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose of contaminated material as waste according to section 13.

Ensure adequate ventilation.

Prevention of secondary hazards: Keep away from ignition sources.

6.4 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 information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

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 against electrostatic charges.

Fumes can combine with air to form an explosive mixture.

Keep ignition sources away - Do not smoke.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by storerooms and containers: No special requirements.

Information about storage in one common storage facility: Store away from oxidising agents.

Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

7.3 Specific end use(s) No further relevant information available.

SECTION 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.

8.1 Control parameters

Components with critical values that require monitoring at the workplace:

98-82-8 Cumene (100,0%)

AGW (Germany) Long-term value: 100 mg/m³, 20 ppm
2,5(l);EU, H, Y

PEL (USA) Long-term value: 245 mg/m³, 50 ppm
Skin

REL (USA) Long-term value: 245 mg/m³, 50 ppm
Skin

TLV (USA) Long-term value: 246 mg/m³, 50 ppm

Ingredients with biological limit values:

98-82-8 Cumene (100,0%)

BGW (Germany) 50 mg/g Kreatinin
Untersuchungsmaterial: Urin
Probennahmezeitpunkt: Expositionsende bzw. Schichtende
Parameter: 2-Phenyl-2-propanol

2 mg/l
Untersuchungsmaterial: Vollblut
Probennahmezeitpunkt: Expositionsende bzw. Schichtende
Parameter: iso-Propylbenzol

Additional information: No data

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8.2 Exposure controls

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.

Maintain an ergonomically appropriate working environment.

Breathing equipment: Use breathing protection with high concentrations.

Protection of hands:

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

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.

Material of gloves Impervious gloves

Penetration time of glove material (in minutes) Not determined

Eye protection:

Safety glasses

Face protection

Body protection: Protective work clothing.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form: Liquid

Colour: Colourless

Smell: Not determined

Odour threshold: Not determined.

pH-value: Not determined.

Change in condition

Melting point/Melting range: -96 °C

Boiling point/Boiling range: 152-154 °C

Sublimation temperature / start: Not determined

Flash point: 46 °C

Inflammability (solid, gaseous) Not determined.

Ignition temperature: 425 °C

Decomposition temperature: Not determined

Self-inflammability: Not determined.

Danger of explosion: Product is not explosive. However, formation of explosive air/steam mixtures is possible.

Critical values for explosion:

Lower: 0,9 Vol %

Upper: 6,5 Vol %

Steam pressure at 37 °C: 13 hPa

Density at 20 °C 0,864 g/cm³

Relative density Not determined.

Vapour density Not determined.

Evaporation rate Not determined.

Solubility in / Miscibility with

Water: Not miscible or difficult to mix

Partition coefficient (n-octanol/water): Not determined.

Viscosity:

dynamic: Not determined.

kinematic: Not determined.

9.2 Other information No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity No information known.

10.2 Chemical stability Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided: No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions Reacts with strong oxidising agents

10.4 Conditions to avoid No further relevant information available.

10.5 Incompatible materials: Oxidising agents

10.6 Hazardous decomposition products: Carbon monoxide and carbon dioxide

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.

LD/LC50 values that are relevant for classification:

Oral LD50 1400 mg/kg (rat)

Skin irritation or corrosion: May cause irritation

Eye irritation or corrosion: May cause irritation

Sensitization: No sensitizing effect known.

Germ cell mutagenicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.

Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

Reproductive toxicity: No effects known.

Specific target organ system toxicity - repeated exposure: No effects known.

Specific target organ system toxicity - single exposure: May cause respiratory irritation.

Aspiration hazard: May be fatal if swallowed and enters airways.

Subacute to chronic toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.

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

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability No further relevant information available.

12.3 Bioaccumulative potential No further relevant information available.

12.4 Mobility in soil No further relevant information available.

Additional ecological information:

General notes:

Do not allow product to reach ground water, water bodies or sewage system.

Water hazard class 2 (Self-assessment): hazardous for water.

Danger to drinking water if even small quantities leak into soil.

Also poisonous for fish and plankton in water bodies.

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Toxic to aquatic life.
May cause long lasting harmful effects to aquatic life.
Avoid transfer into the environment.
12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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.

SECTION 14: Transport information

UN-Number

ADR, IMDG, IATA

UN1918

14.2 UN proper shipping name

ADR 1918 ISOPROPYL BENZENE
IMDG, IATA ISOPROPYL BENZENE

14.3 Transport hazard class(es)

ADR



Class 3 (F1) Flammable liquids.
Label 3
IMDG, IATA



Class 3 Flammable liquids.
Label 3

Packing group
ADR, IMDG, IATA

III

14.5 Environmental hazards:

Environmentally hazardous substance, liquid

14.6 Special precautions for user

Kemler Number: Warning: Flammable liquids.
EMS Number: 30

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code F-E,S-E
Not applicable.

Transport/Additional information:

ADR

Excepted quantities (EQ): E1
Limited quantities (LQ) 5L
Transport category 3
Tunnel restriction code D/E

UN "Model Regulation": UN1918, ISOPROPYL BENZENE, 3, III

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Australian Inventory of Chemical Substances Substance is listed.
Standard for the Uniform Scheduling of Drugs and Poisons Substance is not listed.

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 2 (Self-assessment): hazardous for water.

Other regulations, limitations and prohibitive regulations

ELINCS (European List of Notified Chemical Substances) Substance is not listed.

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.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 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 SDS: Global Marketing Department

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)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
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)
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)