

Safety Data Sheet

according to 1907/2006/EC, Article 31

Revision: 20.08.2010

Printing date 20.08.2010

1 Identification of substance

Product details

Trade name

N,N,N',N'-Tetramethylmethylenediamine

Stock number:

L04037

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:

C Corrosive
F Highly flammable

Information pertaining to particular dangers for man and environment

R 11 Highly flammable.
R 34 Causes burns.

GHS label elements

**Danger**

H225 - Highly flammable liquid and vapour.

**Danger**

Prevention:

H314 - Causes severe skin burns and eye damage.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.

Response:

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

N,N,N',N'-Tetramethylmethylenediamine (CAS# 51-80-9): 100%

Designation: (CAS#)

Identification number(s):

200-124-7

EINECS Number:

4 First aid measures

General information
After inhalationInstantly remove any clothing soiled by the product.
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
Special hazards caused by the material, its products of combustion or flue gases:CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

Protective equipment:

Can be released in case of fire:
Carbon monoxide and carbon dioxide
Nitrogen oxides (NO_x)
Wear self-contained breathing apparatus.
Wear full protective suit.

6 Accidental release measures

Person-related safety precautions:

Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources

Measures for environmental protection:

Do not allow material to be released to the environment without proper governmental permits.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Measures for cleaning/collecting:

Use neutralizing agent.
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.

Additional information:

7 Handling and storage

Handling
Information 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:

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:
Information about storage in one common storage facility:

Store in cool location.

Further information about storage conditions:

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

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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:	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 Tightly sealed safety glasses.
Body protection:	Full face protection Face protection Protective work clothing.

9 Physical and chemical properties:

General Information	
Form:	Liquid
Colour:	Colourless
Smell:	Not determined
Change in condition	
Melting point/Melting range:	-55°C
Boiling point/Boiling range:	83-85°C
Sublimation temperature / start:	Not determined
Flash point:	-12°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	0.749 g/cm ³
Solubility in / Miscibility with Water:	Fully miscible

10 Stability and reactivity

Thermal decomposition / conditions to be avoided:	No decomposition if used and stored according to specifications.
Materials to be avoided:	Oxidizing agents Acids
Dangerous reactions:	No dangerous reactions known
Dangerous products of decomposition:	Carbon monoxide and carbon dioxide Nitrogen oxides (NOx)

11 Toxicological information

Acute toxicity:	
Primary irritant effect: on the skin:	Corrosive effect on skin and mucous membranes. Irritant for skin and mucous membranes.
on the eye:	Strong corrosive effect. 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. 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:	
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.
Recommended cleaning agent:	Water, if necessary with cleaning agent.

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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. (N,N,N',N'-Tetramethylmethylenediamine)
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. (N,N,N',N'-Tetramethylmethylenediamine)

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. (N,N,N',N'-Tetramethylmethylenediamine)

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.
 34 Causes burns.

Safety phrases:

20 When using do not eat or drink.
 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:**

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)