

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

Tetraethylammonium nitrate, 35% w/w Aqueous Solution

Stock number:

41791

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
Oxidising


Information pertaining to particular dangers for man and environment

R 8 Contact with combustible material may cause fire.
R 36/37/38 Irritating to eyes, respiratory system and skin.

GHS label elements


Danger

H272 - May intensify fire; oxidiser.


Warning

H315 - Causes skin irritation.
 H319 - Causes serious eye irritation.
 H335 - May cause respiratory irritation.
 P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P221 Take any precaution to avoid mixing with combustibles.
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Prevention:

P405 Store locked up.

Response:

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

Storage:
Disposal:

3 Composition/information on ingredients

Chemical characterization:

Designation: (CAS#)

Tetraethylammonium nitrate (CAS# 1941-26-0): 35%
Water (CAS# 7732-18-5): 65%

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.

After swallowing

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

5 Fire fighting measures

Suitable extinguishing agents

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

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
 Nitrogen oxides (NOx)
 This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.
 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:

Do not allow material to be released to the environment without proper governmental permits.

Measures for cleaning/collecting:

Ensure adequate ventilation.
Absorb with liquid-binding material.

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:

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:

Substance/product can reduce the ignition temperature of flammable substances.
 This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

Storage
 Requirements to be met by storerooms and containers:
 Information about storage in one common storage facility:

No special requirements.

Store away from flammable substances.
 Aqueous solutions are incompatible with alkali and alkaline earth metals and many reactive organic and inorganic chemicals.
 Store away from reducing agents.

Further information about storage conditions:

Keep container tightly sealed.
 Store in cool, dry conditions in well sealed containers.

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.

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Components with critical values that require monitoring at the workplace:

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.

Eye protection:

Safety glasses

Body protection:

Face protection
Protective work clothing.

9 Physical and chemical properties:

General Information

Form: Liquid
Smell: Not determined

Change in condition

Melting point/Melting range: Not determined
Boiling point/Boiling range: >100°C
Sublimation temperature / start: Not determined

Flash point: Not determined

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 1.029 g/cm³

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:

Aqueous solutions are incompatible with alkali and alkaline earth metals and many reactive organic and inorganic chemicals.

Dangerous reactions:

Reducing agents
Reacts with alkaline metals
Reacts with reducing agents
Reacts with flammable substances
Reacts with alkaline earth metals
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)

Dangerous products of decomposition:

11 Toxicological information

Acute toxicity:

Primary irritant effect:

Irritant for skin and mucous membranes.

on the skin:

Irritant effect.

on the eye:

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

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.

14 Transport information

Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)



ADR/RID-GGVS/E Class:

5.1 (O1) Oxidising substances.

UN-Number:

3139

Packaging group:

III

Label

5.1

Designation of goods:

3139 OXIDIZING LIQUID, N.O.S.

Limited quantities (LQ)

LQ13

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Transport category 3
Tunnel restriction code E

Maritime transport IMDG/GGVSea:



IMDG/GGVSea Class: 5.1
UN Number: 3139
Label: 5.1
Packaging group: III
Marine pollutant: No
Correct technical name: OXIDIZING LIQUID, N.O.S.

Air transport ICAO-TI and IATA-DGR:



ICAO/IATA Class: 5.1
UN/ID Number: 3139
Label: 5.1
Packaging group: III
Correct technical name: OXIDIZING LIQUID, N.O.S.

UN "Model Regulation":
UN3139, OXIDIZING LIQUID, N.O.S., 5.1, III

15 Regulatory information

Designation according to EC guidelines:

Code letter and hazard designation of product:



Xi Irritant
O Oxidising

Risk phrases: 8 Contact with combustible material may cause fire.
36/37/38 Irritating to eyes, respiratory system and skin.

Safety phrases: 17 Keep away from combustible material.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
37 Wear suitable gloves.
60 This material and its container must be disposed of as hazardous waste.

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

CAS: Chemical Abstracts Service (division of the American Chemical Society)