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

1.1 Product identifier
Trade name Tetraethylsilane
Stock number: L03328
CAS Number: 631-36-7
EC number: 211-155-0

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 (o) 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.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC
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
Signal word Warning
Hazard statements
H226 Flammable liquid and vapour.
Precautionary statements
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

2.3 Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.1 Substances
CAS# Designation: 631-36-7 Tetraethylsilane
Identification number(s):
EC number: 211-155-0

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, sand, extinguishing powder. Do not use water.

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
Silicon oxide

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.

(Contd. on page 2)
Safety data sheet
according to 1907/2006/EC, Article 31

Trade name Tetraethylsilane

Ensure adequate ventilation
Keep away from ignition sources

6.2 Environmental precautions: 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).
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: Not required.
Additional information: No data

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.
Immediately remove any soaked 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: Recognizable
Odour threshold: Not determined.

pH-value: Not determined.

Change in condition
Melting point/Melting range: -82 °C
Boiling point/Boiling range: 153-155 °C
Sublimation temperature / start: Not determined

Flash point: 26 °C
Inflammability (solid, gaseous) Not determined.
Ignition temperature: Not determined
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: Not determined
Upper: Not determined
Steam pressure: Not determined
Density at 20 °C 0.767 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.
**SECTION 11: Toxicological information**

11.1 Information on toxicological effects

Acute toxicity: No effects known.
LD/LC50 values that are relevant for classification: No data
Skin irritation or corrosion: May cause irritation
Eye irritation or corrosion: May cause irritation
Sensitization: No sensitizing effect known.
Germ cell mutagenicity: No effects known.
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: No effects known.
Aspiration hazard: No effects known.
Subacute to chronic toxicity: No effects known.
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 material to be released to the environment without proper governmental permits.
Generally not hazardous for water.
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: UN1993

14.2 UN proper shipping name
ADR: 1993 FLAMMABLE LIQUID, N.O.S. (Tetraethylsilane)
IMDG, IATA: FLAMMABLE LIQUID, N.O.S. (Tetraethylsilane)

14.3 Transport hazard class(es)

ADR

Class
Label 3 (F1) Flammable liquids.

IMDG, IATA

Class
Label 3 Flammable liquids.

Packaging group
ADR, IMDG, IATA: III

14.5 Environmental hazards:
Not applicable.

14.6 Special precautions for user
Kemler Number: Warning: Flammable liquids.
30
EMS Number: F-E-S-E

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
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": UN1993, FLAMMABLE LIQUID, N.O.S. (Tetraethylsilane), 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 not listed.
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:
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
ADR: Accord européen sur le transport des marchandises dangereuses par route (European Agreement concernig the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
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)