1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product information

Trade name : TRIACETONEAMINE (TAA)

Company : Degussa AG, Building Blocks
Chemicals Safety Management (266-001)
Postfach 1345
D-63403 Hanau, Germany

Telephone : +49 (0)6181 59-2342

Telefax : +49 (0)6181 59-4136

Emergency telephone number : +49 (0)2365 49-2232
Emergency telephone number(Telefax) : +49 (0)2365 49-4423

Plant fire brigade, Infracor GmbH

Use of the Substance / Preparation :

Preliminary / intermediate product for organic syntheses
Reduction Agent
Antioxidant

function : Organic intermediate/s

2. COMPOSITION/INFORMATION ON INGREDIENTS

Information on ingredients / Hazardous components

- 2,2,6,6-tetramethyl-4-piperidone
  CAS-No. 826-36-8
  EC-No. 212-554-2
  C: R34
  Xn: R22
  Xi: R43
  R52/53

See chapter 16 for text of risk phrases

3. HAZARDS IDENTIFICATION

Harmful if swallowed.
Causes burns.
May cause sensitization by skin contact.
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Risk advice to man and the environment
Do not pour into drainage channels because of detrimental effect on water organisms.
Do not allow material to contaminate ground water system.
4. FIRST AID MEASURES

General advice
Take off all contaminated clothing immediately.

Inhalation
In case product dust is released:
Possible discomfort: severe irritation of mucous lining (nose, throat, eyes), cough, sneezing, flow of tears
Take affected persons out into the fresh air.
If breathing difficulties occur:
Keep patient half sitting with upper body raised.
Call a physician immediately.

Skin contact
Wash off immediately with plenty of water.
Consult a physician.

Eye contact
With eye held open, thoroughly rinse immediately with plenty of water for at least 10 minutes.
Continue rinsing process with eye rinsing solution.
Protect unharmed eye.
Call ambulance. (Cue: caustic burn of the eyes)
Immediate further treatment in ophthalmic hospital/ ophthalmologist.
Continue rinsing eye until arrival at ophthalmic hospital.

Ingestion
Do not induce vomiting.
Only when patient fully conscious:
Have the mouth rinsed with water.
Have patient drink plenty of water in small sips.
Notify ambulance immediately (keyword: chemical burn).

Notes to physician
Therapy as for chemical burn.
If substance has been swallowed:
Early endoscopy in order to assess mucosa lesions in the oesophagus and stomach which may appear.
If necessary, suck away leftover substance.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
water spray, foam, dry powder

Extinguishing media which must not be used for safety reasons
high volume water jet

Specific hazards during fire fighting
In case of fire cool endangered containers with water.
In the case of fire, the following hazardous smoke fumes may be produced:
Carbon oxides
nitrogen oxides (NOx)
Special protective equipment for fire-fighters
Wear suitable protective clothing.
Have ready/wear respiratory protection equipment.

Further information
Water used to extinguish fire should not enter drainage systems, soil, or stretches of water. Ensure there are sufficient retaining facilities for water used to extinguish fire. Contaminated fire-extinguishing water must be disposed of in accordance with the regulations issued by the appropriate local authorities.
Fire residues should be disposed of in accordance with the regulations.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Wear personal protective equipment; see section 8.

Environmental precautions
Prevent product from entering drains.
Do not allow entrance in sewage water, soil or stretches of water.

Methods for cleaning up
Use mechanical handling equipment.
Fill into marked, sealable containers.
To be disposed of in compliance with existing regulations.

7. HANDLING AND STORAGE

Handling
Safe handling advice
Avoid dust formation.
Avoid contact with skin and eyes.
Wear personal protective equipment; see section 8.

Advice on protection against fire and explosion
Keep away from sources of ignition - No smoking.

Storage
Requirements for storage areas and containers
Keep container tightly closed.
Recommended storage temperature: < 60°C.
With exclusion of air/oxygen
Under inert gas (nitrogen).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

Engineering measures
Provide good ventilation or extraction.
Personal protective equipment

Respiratory protection
Do not breathe dust or spray mist.
use respiratory equipment with suitable filter (particle filter) or wear a self contained respiratory apparatus

Hand protection
Recommendation:
suitable protective gloves
Brief contact only:
Glove material nitrile rubber
Material thickness 0,85 mm
Break through time > 10 min
Method DIN EN 374

Eye protection
close-fitting protective goggles (e.g. closed goggles)

Skin and body protection
suitable protective clothing
Use disposable clothing if appropriate.

Hygiene measures
Do not breathe dust.
Avoid contact with skin and eyes.
Remove immediately all contaminated clothing.
Smoking, eating and drinking should be prohibited in the application area.

Protective measures
The personal protective equipment used must meet the requirements of directive 89/686/EEC and amendments (CE certification).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Form solid

Safety data
Melting point/range 35,0 - 36,0 °C
Boiling point/range ca. 131 °C (100 hPa)
Flash point 83 °C
Method DIN 51758
Ignition temperature 360 °C
Method DIN 51 794
Vapour pressure ca. 0,3 hPa (20 °C)
Density 0,918 g/cm³ (50 °C)
Water solubility partly miscible
Partition coefficient (n-octanol/water) log Pow: 1,3
SAFETY DATA SHEET (91/155/EWG)
TRIACETONEAMINE (TAA)

Material no. Specification VA-Nr
115711

Version 9.2 / REG_EU
Revision date 27.12.2004
Print Date 20.01.2005
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(calculated)
related to substance: 2,2,6,6-tetramethyl-4-piperidone

Viscosity, dynamic 3,66 mPas (50 °C)

10. STABILITY AND REACTIVITY

Materials to avoid atmospheric oxygen
Thermal decomposition ca. 60 °C
Little decomposition

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity LD50 rat: 1330 mg/kg
Method OECD Test Guideline 401

Skin irritation Rabbit / 4 h
Causes burns.
Method OECD Test Guideline 404
(Necroses after an exposure time of up to 4 hours / OECD test 404)

Eye irritation Rabbit / 72 h
Risk of serious damage to eyes.
Method OECD Test Guideline 405

Sensitization Maximization test guinea pig: sensitizing
Method OECD Test Guideline 406

Gentoxicity in vitro Ames test Salmonella typhimurium
negative
Method EEC B 14

Further information Own study

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

Biodegradability aerobic
inoculum: Activated sludge
Result: 11 % Not readily biodegradable.
Method: (DOC; modif. OECD screening test / OECD 301 E)

Behaviour in environmental compartments

Ecotoxicity effects

Toxicity to fish LC50 static test Leuciscus idus melanotus: 40 mg/l / 48 h
Method: (DIN 38412, part 15)

Toxicity to daphnia EC50 static test Daphnia magna: 281 mg/l / 48 h
Method: (Directive 84/449/EEC part C.2.)

Toxicity to algae
EC50 scenedesmus subspicatus: 566 mg/l / 72 h
End point: Biomass
Analytical monitoring: no
Method: (Directive 88/302/EEC part C.3.)

NOEC scenedesmus subspicatus: 200 mg/l / 72 h
End point: Biomass
Analytical monitoring: no
Method: (Directive 88/302/EEC part C.3.)

Toxicity to bacteria
EC 10 Pseudomonas putida: 320 mg/l / 16 h
Method: (Bringmann-Kühn test)

13. DISPOSAL CONSIDERATIONS

Product
With respect to local regulations, e.g. dispose of to suitable waste incineration plant.
No waste key number as per the European Waste Types List can be assigned to this product, since such classification is based on the (as yet undetermined) use to which the product is put by the consumer.
The waste key number must be determined as per the European Waste Types List (decision on EU Waste Types List 2000/532/EC) in cooperation with the disposal firm / producing firm / official authority.

14. TRANSPORT INFORMATION

Land transport ADR/RID/GGVSE (Germany)
Class 8
ADR/RID-Labels 8
UN-No 3259
Packaging group III
orange warning plate 80 / 3259
Description of the goods (Technical name)
AMINES, SOLID, CORROSIVE, N.O.S., MOLTEN (triacetonamine, )

Sea transport IMDG-Code/GGVSee
Class 8
UN-No 3259
Packaging group III
EmS F-A, S-B
Proper technical name (Proper shipping name)
AMINES, SOLID, CORROSIVE, N.O.S., MOLTEN (triacetonamine, )

Air transport ICAO-TI/IATA-DGR
Class 8
UN-No 3259
Packaging group III
Proper technical name (Proper shipping name)
Amines, solid, corrosive, n.o.s., molten
(triacetonamine, )

Inland waterway transport ADN/ADNR/GGVBinSch (Germany)

Class 8
ADR/RID-Labels 8
UN-No/ Substance number 3259
Packaging group III

Description of the goods (Technical name)
AMINES, SOLID, CORROSIVE, N.O.S., MOLTEN

Loading instructions/Remarks
IATA_C ERG-Code 8L
IATA_P ERG-Code 8L

15. REGULATORY INFORMATION

Labelling according to EC Directives

Statutory basis/list According to Directive 67/548/EEC:
Symbol(s) C Corrosive
R-phrase(s) R22 Harmful if swallowed.
R34 Causes burns.
R43 May cause sensitization by skin contact.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s) S24 Avoid contact with skin.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S61 Avoid release to the environment. Refer to special instructions/safety data sheets.

National legislation
Major Accident Hazard Legislation 82/501/EWG
Not referred to in Appendix I (StörfallV 2000).
employment restriction The employment limitations under the protection of young persons act, the laws on pregnant women and young mothers and work at home is/are to be observed.
Prohibited Chemicals Ordinance

Prohibitions and limitations in accordance with the chemicals prohibition regulation:
The information and recording obligations as well as the self service prohibition must be observed (§3, §4 chemicals prohibition regulation).

16. OTHER INFORMATION

Risk phrase (R phrase) texts

- 2,2,6,6-tetramethyl-4-piperidone
  - R34 Causes burns.
  - R22 Harmful if swallowed.
  - R43 May cause sensitization by skin contact.
  - R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Further information

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.