

Elan-tech® AW 90 rapido

Version 2.0 SDB_GB

Revision Date 13.11.2014

Print Date 16.10.2015

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

1.1 Product identifier

Trade name : Elan-tech® AW 90 rapido

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

Use of the Sub-
stance/Mixture :

1.3 Details of the supplier of the safety data sheet

Company : ELANTAS Italia S.r.l.
Strada Antolini 1
43044 Collecchio
Italy
Telephone : +3907363081
Telefax : +390736402746
E-mail address : msds.elantas.italia@altana.com

1.4 Emergency telephone number

+39 0736 3081 (8-17 h)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4	H302: Harmful if swallowed.
Skin corrosion, Category 1A	H314: Causes severe skin burns and eye damage.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Specific target organ toxicity - repeated exposure, Category 2	H373: May cause damage to organs through prolonged or repeated exposure.

Classification (67/548/EEC, 1999/45/EC)

Corrosive	R34: Causes burns.
Harmful	R22: Harmful if swallowed.
Sensitising	R43: May cause sensitisation by skin contact.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

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Hazard pictograms :



Signal word : Danger

Hazard statements : H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements : **Prevention:**
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
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.
P310 Immediately call a POISON CENTER or doctor/ physician.

Hazardous components which must be listed on the label:

2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated

3,6-dioxaoctamethylenediamine

MODIFIED CYCLOALIPHATIC AMINE

2-piperazin-1-ylethylamine

3,6-diazaoctanethylenediamin

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

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Chemical nature :

Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration (%)
2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated	68683-29-4	Xi; R36/38 Xi; R43	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1; H317	>= 50 - <= 100
3,6-dioxaoctamethylenediamine	929-59-9 213-203-6	Xn; R22 C; R34 Xi; R43	Acute Tox. 4; H302 Skin Corr. 1B; H314 Skin Sens. 1; H317	>= 25 - < 30
MODIFIED CYCLOALIPHATIC AMINE	135108-88-2	Xn; R22 C; R34 Xi; R41 R43 N; R52/53	Acute Tox. 4; H302 Skin Corr. 1; H314 Eye Dam. 1; H318 Skin Sens. 1; H317 STOT RE 2; H373 Aquatic Chronic 3; H412	>= 10 - < 12,5
2-piperazin-1-ylethylamine	140-31-8 205-411-0 01- 2119471486-30	C; R34 Xn; R21/22 R43 R52-R53	Acute Tox. 4; H302 Skin Corr. 1B; H314 Skin Sens. 1; H317 Aquatic Chronic 3; H412 Acute Tox. 3; H311 1; H318	>= 2,5 - < 3
benzyl alcohol	100-51-6 202-859-9 01- 2119492630-38	Xn; R20/22	Acute Tox. 4; H332 Acute Tox. 4; H302	>= 1 - < 3
3,6-diazaoctanethylenediamin	112-24-3 203-950-6 01- 2119487919-13	C; R34 Xn; R21/22 R43 R52/53	Acute Tox. 4; H312 Skin Corr. 1B; H314 Skin Sens. 1; H317 Aquatic Chronic 3; H412 Acute Tox. 4; H302 Eye Dam. 1; H318	>= 0,5 - < 1

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Show this safety data sheet to the doctor in attendance.

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- Keep warm and in a quiet place.
Take off all contaminated clothing immediately.
- If inhaled : Move to fresh air.
Keep patient warm and at rest.
If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.
If breathing is irregular or stopped, administer artificial respiration.
- In case of skin contact : Wash off immediately with soap and plenty of water.
Do NOT use solvents or thinners.
If on clothes, remove clothes.
Burns must be treated by a physician.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
If eye irritation persists, consult a specialist.
If easy to do, remove contact lens, if worn.
- If swallowed : Do NOT induce vomiting.
If a person vomits when lying on his back, place him in the recovery position.
Call a physician immediately.
Give small amounts of water to drink.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : corrosive effects
Burn

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Carbon dioxide (CO2)
Foam
Dry powder
Water mist

- Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

- Specific hazards during fire-fighting : The pressure in sealed containers can increase under the influence of heat.
Cool closed containers exposed to fire with water spray.
Hazardous decomposition products formed under fire condi-

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tions.

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

Further information : In the event of fire and/or explosion do not breathe fumes. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Immediately evacuate personnel to safe areas. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Refer to protective measures listed in sections 7 and 8. Evacuate personnel to safe areas. Use personal protective equipment. Ensure adequate ventilation. Inform the responsible authorities in case of gas leakage, or of entry into waterways, soil or drains.

6.2 Environmental precautions

Environmental precautions : Do not allow uncontrolled discharge of product into the environment. Try to prevent the material from entering drains or water courses. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Pick up and transfer to properly labelled containers.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Provide sufficient air exchange and/or exhaust in work rooms. Do not breathe vapours or spray mist. Avoid inhalation, ingestion and contact with skin and eyes.

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Wear personal protective equipment.
Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Advice on protection against fire and explosion : Keep away from open flames, hot surfaces and sources of ignition.

Hygiene measures : Provide adequate ventilation. Wash hands and face before breaks and immediately after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labelled containers. To maintain product quality, do not store in heat or direct sunlight.

Further information on storage conditions : Protect from moisture.

Advice on common storage : Keep away from isocyanates.
Do not store near acids.
Keep away from oxidizing agents.

Other data : Stable at normal ambient temperature and pressure.

7.3 Specific end use(s)

Specific use(s) : Consult the technical guidelines for the use of this substance/mixture.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Silica, amorphous, fumed, cryst.-free	112945-52-5	TWA (inhalable dust)	6 mg/m ³	GB EH40
Further information	For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust, The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m ⁻³ 8-hour TWA of inhalable dust or 4 mg.m ⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle.			

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	<p>HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3. Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used</p>			
	<table border="1"> <tr> <td data-bbox="635 633 869 689">TWA (Respirable dust)</td> <td data-bbox="876 633 1198 689">2,4 mg/m³</td> <td data-bbox="1204 633 1375 689">GB EH40</td> </tr> </table>	TWA (Respirable dust)	2,4 mg/m ³	GB EH40
TWA (Respirable dust)	2,4 mg/m ³	GB EH40		
Further information	<p>For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust, The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m⁻³ 8-hour TWA of inhalable dust or 4 mg.m⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit. Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3. Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used</p>			

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

- Silica, amorphous, fumed, cryst.-free : End Use: Workers
 Exposure routes: Inhalation
 Potential health effects: Long-term local effects
 Value: 4 mg/m³
- 2-piperazin-1-ylethylamine : End Use: Workers
 Exposure routes: Skin contact
 Potential health effects: Short-term exposure, Systemic effects
 Value: 20 mg/kg
 End Use: Workers
 Exposure routes: Skin contact
 Potential health effects: Short-term exposure, Local effects
 Value: 0,04 mg/cm²
 End Use: Workers
 Exposure routes: Skin contact
 Potential health effects: Long-term systemic effects
 Value: 3,3 mg/kg
 End Use: Workers
 Exposure routes: Inhalation
 Potential health effects: Long-term systemic effects
 Value: 3,6 mg/m³
 End Use: Workers

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Exposure routes: Skin contact
Potential health effects: Long-term local effects
Value: 0,006 mg/cm²
End Use: Consumers

Exposure routes: Skin contact
Potential health effects: Short-term exposure, Systemic effects
Value: 10 mg/kg
End Use: Consumers

Exposure routes: Inhalation
Potential health effects: Short-term exposure, Systemic effects
Value: 5,3 mg/m³
End Use: Consumers

Exposure routes: Ingestion
Potential health effects: Short-term exposure, Systemic effects
Value: 1,5 mg/kg
End Use: Workers

Exposure routes: Inhalation
Potential health effects: Short-term exposure, Systemic effects
Value: 21,4 mg/m³
End Use: Consumers

Exposure routes: Skin contact
Potential health effects: Short-term exposure, Local effects
Value: 0,02 mg/cm²
End Use: Consumers

Exposure routes: Skin contact
Potential health effects: Long-term systemic effects
Value: 1,7 mg/kg
End Use: Consumers

Exposure routes: Inhalation
Potential health effects: Long-term systemic effects
Value: 0,9 mg/m³
End Use: Consumers

Exposure routes: Ingestion
Potential health effects: Long-term systemic effects
Value: 0,3 mg/kg
End Use: Consumers

Exposure routes: Skin contact
Potential health effects: Long-term local effects
Value: 0,003 mg/cm²
End Use: Workers

benzyl alcohol : Exposure routes: Inhalation
Potential health effects: Short-term exposure, Systemic effects
Value: 450 mg/m³
End Use: Workers

Exposure routes: Inhalation
Potential health effects: Long-term exposure, Systemic effects
Value: 90 mg/m³
End Use: Workers

Exposure routes: Skin contact
Potential health effects: Short-term exposure, Systemic effects
Value: 47 mg/kg
End Use: Workers

Exposure routes: Skin contact
Potential health effects: Long-term exposure, Systemic effects
Value: 9,5 mg/kg
End Use: Consumers

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Exposure routes: Ingestion
Potential health effects: Short-term exposure, Systemic effects
Value: 25 mg/kg
End Use: Consumers

Exposure routes: Ingestion
Potential health effects: Long-term exposure, Systemic effects
Value: 5 mg/kg
End Use: Consumers

Exposure routes: Inhalation
Potential health effects: Short-term exposure, Systemic effects
Value: 40,55 mg/m³
End Use: Consumers

Exposure routes: Inhalation
Potential health effects: Long-term exposure, Systemic effects
Value: 8,11 mg/m³
End Use: Consumers

Exposure routes: Skin contact
Potential health effects: Short-term exposure, Systemic effects
Value: 28,5 mg/kg
End Use: Consumers

Exposure routes: Skin contact
Potential health effects: Long-term exposure, Systemic effects
Value: 5,7 mg/kg
End Use: Workers

3,6-diazaoctanethylenediamin : Exposure routes: Inhalation
Potential health effects: Short-term exposure, Systemic effects
Value: 5380 mg/m³
End Use: Workers

Exposure routes: Skin contact
Potential health effects: Long-term systemic effects
Value: 0,57 mg/kg
End Use: Workers

Exposure routes: Inhalation
Potential health effects: Long-term systemic effects
Value: 1 mg/m³
End Use: Workers

Exposure routes: Skin contact
Potential health effects: Long-term local effects
Value: 0,028 mg/cm²
End Use: Consumers

Exposure routes: Skin contact
Potential health effects: Short-term exposure, Systemic effects
Value: 8 mg/kg
End Use: Consumers

Exposure routes: Inhalation
Potential health effects: Short-term exposure, Systemic effects
Value: 1600 mg/m³
End Use: Consumers

Exposure routes: Ingestion
Potential health effects: Short-term exposure, Systemic effects
Value: 20 mg/kg
End Use: Consumers

Exposure routes: Skin contact
Potential health effects: Local effects, Short-term exposure
Value: 1 mg/cm²
End Use: Consumers

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Exposure routes: Skin contact
Potential health effects: Long-term systemic effects
Value: 0,25 mg/kg
End Use: Consumers
Exposure routes: Inhalation
Potential health effects: Long-term systemic effects
Value: 0,29 mg/m³
End Use: Consumers
Exposure routes: Ingestion
Potential health effects: Long-term systemic effects
Value: 0,41 mg/kg
End Use: Consumers
Exposure routes: Skin contact
Potential health effects: Long-term local effects
Value: 0,43 mg/cm²

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

2-piperazin-1-ylethylamine	: Fresh water Value: 0,058 mg/l Marine water Value: 0,0058 mg/l Intermittent releases Value: 0,58 mg/l Fresh water sediment Value: 215 mg/kg Marine sediment Value: 21,5 mg/kg Soil Value: 42,9 mg/kg Sewage treatment plant Value: 250 mg/l
benzyl alcohol	: Fresh water Value: 1 mg/l Marine water Value: 0,1 mg/l Fresh water sediment Value: 5,27 mg/kg Marine sediment Value: 0,527 mg/kg Soil Value: 0,456 mg/kg Sewage treatment plant Value: 39 mg/l Intermittent releases Value: 2,3 mg/l
3,6-diazaoctanethylenediamin	: Fresh water Value: 0,19 mg/l Marine water Value: 0,038 mg/l Fresh water sediment Value: 95,9 mg/kg Marine sediment Value: 19,2 mg/kg Soil Value: 19,1 mg/kg Sewage treatment plant

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Value: 4,25 mg/l

8.2 Exposure controls

Engineering measures

Effective exhaust ventilation system
effective ventilation in all processing areas

Personal protective equipment

- Eye protection : Safety glasses with side-shields conforming to EN166
Do not wear contact lenses.
Ensure that eyewash stations and safety showers are close to the workstation location.
- Hand protection
Material : Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374.
- Skin and body protection : Protective suit
- Respiratory protection : Use respirator when performing operations involving potential exposure to vapour of the product.
The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.
Respirator with a vapour filter (EN 141)
- Protective measures : Avoid contact with skin.
Wear suitable protective equipment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Appearance : liquid
- Colour : yellow
- Odour : ammoniacal
- Odour Threshold : not determined
- pH : not determined
- Melting point/freezing point : Not applicable
- Boiling point/boiling range : > 150 °C
- Flash point : 100 °C
- Evaporation rate : not determined
- Upper explosion limit : Not applicable

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Lower explosion limit	: Not applicable
Vapour pressure	: Not applicable
Relative vapour density	: not determined
Density	: 0,98 g/cm ³ (25 °C)
Bulk density	: not determined
Solubility(ies)	
Solubility in other solvents	: not determined
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: Not applicable
Thermal decomposition	: Method: No data available
Viscosity	
Viscosity, dynamic	: 100.000 - 155.000 mPa.s (25 °C)
Viscosity, kinematic	: not determined
Explosive properties	: Not applicable
Oxidizing properties	: Not applicable

9.2 Other information

Surface tension	: not determined
Sublimation point	: Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions	: Reacts with the following substances: Acids Strong oxidizing agents
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10.4 Conditions to avoid

Conditions to avoid : No decomposition if used as directed.

10.5 Incompatible materials

Materials to avoid : Strong acids
Strong oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products : This product may release the following:
Nitrogen oxides (NO_x)
Carbon monoxide
Carbon dioxide (CO₂)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity : Acute toxicity estimate : 1.145 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate : > 20 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate : > 2.000 mg/kg
Method: Calculation method

Components:

2-piperazin-1-ylethylamine:

Acute oral toxicity : LD50 (Rat, male): 2.097 mg/kg

Acute dermal toxicity : LD50 (Rabbit, male): 866 mg/kg

benzyl alcohol:

Acute inhalation toxicity : LC50 (Rat, male and female): > 4.178 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: yes

3,6-diazaoctanethylenediamin:

Acute oral toxicity : LD50 (Rat, male): 1.716 mg/kg
Method: OECD Test Guideline 401
GLP: yes

Acute dermal toxicity : LD50 (Rabbit): 1.465 mg/kg
Method: OECD Test Guideline 402

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GLP: yes

Skin corrosion/irritation

Product:

Remarks: Acute dermal irritation/corrosion

Components:

2-piperazin-1-ylethylamine:

Species: Rabbit

Result: Corrosive

benzyl alcohol:

Species: Rabbit

Method: OECD Test Guideline 404

Result: No skin irritation

GLP: yes

3,6-diazaoctanethylenediamin:

Method: OECD Test Guideline 435

Result: Corrosive

Serious eye damage/eye irritation

Product:

Remarks: Severe eye irritation

Components:

2-piperazin-1-ylethylamine:

Species: Rabbit

Result: Risk of serious damage to eyes.

benzyl alcohol:

Species: Rabbit

Method: OECD Test Guideline 405

Result: Eye irritation

GLP: yes

3,6-diazaoctanethylenediamin:

Species: Rabbit

Method: OECD Test Guideline 405

Result: Risk of serious damage to eyes.

GLP: yes

Respiratory or skin sensitisation

Product:

Remarks: No data available

Components:

2-piperazin-1-ylethylamine:

Test Type: Maximisation Test (GPMT)

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Exposure routes: Dermal
Species: Guinea pig
Method: OECD Test Guideline 406
Result: May cause sensitisation by skin contact.

3,6-diazaoctanethylenediamin:

Test Type: Buehler Test
Exposure routes: Dermal
Species: Guinea pig
Method: OECD Test Guideline 406
Result: May cause sensitisation by skin contact.
GLP: yes

Germ cell mutagenicity

Carcinogenicity

Reproductive toxicity

STOT - single exposure

STOT - repeated exposure

Repeated dose toxicity

Product:

Remarks: No data available

Aspiration toxicity

Further information

Product:

Remarks: No data available

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Components:

2-piperazin-1-ylethylamine:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 2.190 mg/l
Exposure time: 96 h
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 58 mg/l
Exposure time: 48 h

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according to Regulation (EC) No. 1907/2006



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- Method: OECD Test Guideline 202
GLP: yes
- Toxicity to algae : ErC50 (Selenastrum capricornutum (green algae)): > 1.000 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes
- benzyl alcohol:**
Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 230 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
GLP: yes
- Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): 770 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes
- 3,6-diazaoctanethylenediamin:**
Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 31,1 mg/l
Exposure time: 48 h
Test Type: static test
GLP: yes
- Toxicity to algae : ErC50 (Selenastrum capricornutum (green algae)): Exposure time: 72 h
Test Type: semi-static test
Method: OECD Test Guideline 201
GLP: yes

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Components:

2-piperazin-1-ylethylamine:

Biodegradability : Result: Not readily biodegradable.
Method: OECD Test Guideline 301F
GLP: yes

3,6-diazaoctanethylenediamin:

Biodegradability : Test Type: aerobic
Result: Not readily biodegradable.
Method: OECD Test Guideline 301D
GLP: yes

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12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Components:

2-piperazin-1-ylethylamine:

Partition coefficient: n-octanol/water : log Pow: -1,48 (20 °C)

12.4 Mobility in soil

Components:

2-piperazin-1-ylethylamine:

Distribution among environmental compartments : Medium:Soil
Koc: 37000

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

12.6 Other adverse effects

Product:

Additional ecological information : Remarks: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : In accordance with local and national regulations.
Container hazardous when empty.
Do not dispose of with domestic refuse.
Do not mix waste streams during collection.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

14.1 UN number

ADR/RID : UN 2735

IMDG : UN 2735

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IATA : UN 2735

14.2 UN proper shipping name

ADR/RID : AMINES, LIQUID, CORROSIVE, N.O.S.
(TRIETHYLENE GLYCOL DIAMINE)

IMDG : AMINES, LIQUID, CORROSIVE, N.O.S.
(TRIETHYLENE GLYCOL DIAMINE)

IATA : Amines, liquid, corrosive, n.o.s.
(TRIETHYLENE GLYCOL DIAMINE)

14.3 Transport hazard class(es)

ADR/RID : 8

IMDG : 8

IATA : 8

14.4 Packing group

ADR/RID
Packing group : III
Classification Code : C7
Hazard Identification Number : 80
Labels : 8

IMDG
Packing group : III
Labels : 8
EmS Code : F-A, S-B

IATA
Packing instruction (cargo aircraft) : 856
Packing instruction (passenger aircraft) : 852
Packing group : III
Labels : 8

14.5 Environmental hazards

ADR/RID
Environmentally hazardous : no

IMDG
Marine pollutant : no

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on : Not applicable

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the market and use of certain dangerous substances, preparations and articles (Annex XVII)

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Seveso II - Directive 2003/105/EC amending Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances
Not applicable

15.2 Chemical Safety Assessment

Not applicable

SECTION 16: Other information

Full text of R-Phrases

R20/22 : Harmful by inhalation and if swallowed.
R21/22 : Harmful in contact with skin and if swallowed.
R22 : Harmful if swallowed.
R34 : Causes burns.
R36/38 : Irritating to eyes and skin.
R41 : Risk of serious damage to eyes.
R43 : May cause sensitisation by skin contact.
R52 : Harmful to aquatic organisms.
R52/53 : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R53 : May cause long-term adverse effects in the aquatic environment.

Full text of H-Statements

H302 : Harmful if swallowed.
H311 : Toxic in contact with skin.
H312 : Harmful in contact with skin.
H314 : Causes severe skin burns and eye damage.
H315 : Causes skin irritation.
H317 : May cause an allergic skin reaction.
H318 : Causes serious eye damage.
H319 : Causes serious eye irritation.
H332 : Harmful if inhaled.
H373 : May cause damage to organs through prolonged or repeated exposure.
H412 : Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox. : Acute toxicity
Aquatic Chronic : Chronic aquatic toxicity
Eye Dam. : Serious eye damage
Eye Irrit. : Eye irritation
Skin Corr. : Skin corrosion
Skin Irrit. : Skin irritation

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Skin Sens. : Skin sensitisation
STOT RE : Specific target organ toxicity - repeated exposure

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