

Elan-tech® ADH 891.892 dark grey (comp. B)

Version 2.0 SDB_GB

Revision Date 26.08.2019

Print Date 27.08.2019

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

1.1 Product identifier

Trade name : Elan-tech® AW 89.2 NF black

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

Use of the Substance/Mixture : Adhesives

1.3 Details of the supplier of the safety data sheet

Company : ELANTAS Europe S.r.l.
Strada Antolini 1
43044 Collecchio
Italy
Telephone : +3907363081
Telefax : +390736402746
E-mail address : msds.elantas.europe@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.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Long-term (chronic) aquatic hazard, Category 2	H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

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Hazard statements : H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/
vapours/ spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/
eye protection/ face protection.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off
immediately all contaminated clothing.
Rinse skin with water/shower.
P304 + P340 + P310 IF INHALED: Remove person to fresh
air and keep comfortable for breathing.
Immediately call a POISON
CENTER/doctor.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously
with water for several minutes. Remove
contact lenses, if present and easy to do.
Continue rinsing. Immediately call a
POISON CENTER/doctor.

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

Phenol, 4,4'-(1-methylethylidene)bis-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine and (chloromethyl)oxirane

Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine

N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine

Polymer of MXDA

Amines, polyethylenepoly-, triethylenetetramine fraction

m-phenylenebis(methylamine)

3-aminomethyl-3,5,5-trimethylcyclohexylamine

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.

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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Amines

Hazardous components

Chemical name	CAS-No. EC-No. Registration number	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	Skin Irrit.2; H315 Skin Sens.1; H317	>= 30 - < 50
3,6-dioxaoctamethylenediamine	929-59-9 213-203-6	Acute Tox.4; H302 Skin Corr.1B; H314 Skin Sens.1; H317	>= 20 - < 25
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine and (chloromethyl)oxirane	38294-69-8 01-2120766646-41	Acute Tox.4; H302 Skin Corr.1B; H314 Eye Dam.1; H318 Skin Sens.1A; H317 Aquatic Acute1; H400 Aquatic Chronic1; H410	>= 10 - < 12,5
Fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine	68082-29-1	Skin Irrit.2; H315 Eye Dam.1; H318 Skin Sens.1; H317 Aquatic Chronic2; H411	>= 7 - < 10
N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine	10563-29-8 234-148-4 01-2119970376-29	Acute Tox.4; H302 Skin Corr.1A; H314 Eye Dam.1; H318 Skin Sens.1B; H317	>= 7 - < 10
Polymer of MXDA	Not Assigned	Acute Tox.4; H302 Acute Tox.4; H332 Skin Sens.1; H317 Aquatic Chronic3; H412	>= 3 - < 5
Amines, polyethylenepoly-, triethylenetetramine fraction	90640-67-8 292-588-2 01-2119487919-13	Acute Tox.4; H302 Acute Tox.4; H312 Skin Corr.1B; H314 Skin Sens.1B; H317 Aquatic Chronic3; H412	>= 0,5 - < 1
m-phenylenebis(methylamine)	1477-55-0	Acute Tox.4; H302	>= 0,25 - < 0,5

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	216-032-5 01-2119480150-50	Acute Tox.4; H332 Skin Corr.1B; H314 Skin Sens.1B; H317 Aquatic Chronic3; H412	
3-aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2 220-666-8 01-2119514687-32	Acute Tox.4; H302 Acute Tox.4; H312 Skin Corr.1B; H314 Eye Dam.1; H318 Skin Sens.1; H317 Aquatic Chronic3; H412	>= 0,25 - < 0,5

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.
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 : Burn
superficial burning sensation
Redness
Severe irritation

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4.3 Indication of any immediate medical attention and special treatment needed

Treatment : The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

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 firefighting : 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 conditions.

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

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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.
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.

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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/m3 (Silica)	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. 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			
		TWA (Respirable dust)	2,4 mg/m3 (Silica)	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			

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

- Phenol, 4,4'-(1-methylethylidene)bis-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine and (chloromethyl)oxirane

 - : End Use: Workers
 - Exposure routes: Oral
 - Potential health effects: Long-term systemic effects
 - Value: 0,529 mg/m3

- End Use: Workers
 - Exposure routes: Dermal
 - Potential health effects: Long-term systemic effects
 - Value: 0,6 mg/kg

- Silica, amorphous, fumed, cryst.-free

 - : End Use: Workers
 - Exposure routes: Inhalation
 - Potential health effects: Long-term local effects
 - Value: 4 mg/m3

- Amines, polyethylenepoly-, triethylenetetramine fraction

 - : 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: Consumer use
 - 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: Workers
 - Exposure routes: Inhalation
 - Potential health effects: Short-term exposure
 - Value: 5380 mg/m3

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

- Phenol, 4,4'-(1-methylethylidene)bis-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine and (chloromethyl)oxirane

 - : Fresh water
 - Value: 0 mg/l

- Marine water
 - Value: 0 mg/l
 - Sewage treatment plant

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	Value: 1 mg/l
	Fresh water sediment
	Value: 0,002 mg/l
	Marine sediment
	Value: 0 mg/l
	Soil
	Value: 0 mg/l
Amines, polyethylenepoly-, triethylenetetramine fraction	: Sewage treatment plant
	Value: 4,25 mg/l
	Fresh water
	Value: 0,135 mg/l
	Fresh water sediment
	Value: 2,08 mg/kg
	Marine water
	Value: 0,0027 mg/l
	Marine sediment
	Value: 0,123 mg/kg
	Soil
	Value: 1,67 mg/kg
	Intermittent releases
	Value: 0,2 mg/l
3-aminomethyl-3,5,5- trimethylcyclohexylamine	: Fresh water
	Value: 0,06 mg/l
	Marine water
	Value: 0,006 mg/l
	Intermittent releases
	Value: 0,23 mg/l
	Fresh water sediment
	Value: 5,784 mg/kg
	Marine sediment
	Value: 0,578 mg/kg
	Sewage treatment plant
	Value: 3,18 mg/l
	Soil
	Value: 1,121 mg/kg

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 : Protective gloves complying with EN 374.

Skin and body protection : Protective suit

Respiratory protection : Use respirator when performing operations involving potential
exposure to vapour of the product.

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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. Equipment should conform to EN 14387

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 : black

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

Lower explosion limit : Not applicable

Vapour pressure : Not applicable

Relative vapour density : not determined

Density : 0,98 g/cm³ (25 °C)

Bulk density : not determined

Solubility(ies)
Solubility in other solvents : not determined

Partition coefficient: n-octanol/water : No data available

Ignition temperature : Not applicable

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Auto-ignition temperature	: Not applicable
Thermal decomposition	: Method: No data available
Viscosity	
Viscosity, dynamic	: 300.000 - 450.000 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.
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10.5 Incompatible materials

Materials to avoid	: Strong acids Strong oxidizing agents
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10.6 Hazardous decomposition products

Hazardous decomposition products	: This product may release the following: Nitrogen oxides (NO _x) Carbon monoxide Carbon dioxide (CO ₂)
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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

- Acute oral toxicity : Acute toxicity estimate : 1.182 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 : Remarks: No data available
- Acute toxicity (other routes of administration) : Remarks: No data available

Components:

Phenol, 4,4'-(1-methylethylidene)bis-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine and (chloromethyl)oxirane:

- Acute oral toxicity : LD50 (Rat, female): > 300 mg/kg
Method: OECD Test Guideline 420
GLP: yes

Amines, polyethylenepoly-, triethylenetetramine fraction:

- Acute oral toxicity : LD50 (Rat, male and female): 1.716 mg/kg
Method: OECD Test Guideline 401
GLP: yes
- Acute dermal toxicity : LD50 (Rabbit, male and female): 1.465 mg/kg
Method: OECD Test Guideline 402
GLP: yes

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

- Acute oral toxicity : Acute toxicity estimate : 500,0 mg/kg
Method: Converted acute toxicity point estimate
- Acute dermal toxicity : Acute toxicity estimate : 1.100 mg/kg
Method: Converted acute toxicity point estimate

Skin corrosion/irritation

Product:

Remarks: No data available

Components:

Phenol, 4,4'-(1-methylethylidene)bis-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine and (chloromethyl)oxirane:

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Species: reconstructed human epidermis (RhE)
Assessment: Causes burns.
Method: OECD Test Guideline 439
Result: Corrosive to skin
GLP: yes
Test substance: Read-across (Analogy)

Amines, polyethylenepoly-, triethylenetetramine fraction:

Species: Rabbit
Method: OECD Test Guideline 404
Result: Corrosive
GLP: yes

Serious eye damage/eye irritation

Product:

Remarks: No data available

Components:

Phenol, 4,4'-(1-methylethylidene)bis-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine and (chloromethyl)oxirane:

Species: Rabbit
Assessment: Risk of serious damage to eyes.
Method: OECD Test Guideline 405
Result: Corrosive to eyes
GLP: yes

Amines, polyethylenepoly-, triethylenetetramine fraction:

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:

Phenol, 4,4'-(1-methylethylidene)bis-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine and (chloromethyl)oxirane:

Test Type: Local lymph node assay (LLNA)
Species: Mouse
Assessment: The product is a skin sensitiser, sub-category 1A.
Method: OECD Test Guideline 429
Result: Causes sensitisation.
GLP: yes

Amines, polyethylenepoly-, triethylenetetramine fraction:

Test Type: Buehler Test
Species: Guinea pig

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Method: OECD Test Guideline 406
Result: May cause sensitisation by skin contact.
GLP: yes

Germ cell mutagenicity

Components:

Phenol, 4,4'-(1-methylethylidene)bis-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine and (chloromethyl)oxirane:

Genotoxicity in vitro : Test Type: Ames test
Test species: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Carcinogenicity

Product:

Remarks: No data available

Reproductive toxicity

Product:

Effects on fertility : Remarks: No data available

Remarks: No data available

Effects on foetal development : Remarks: No data available
Remarks: No data available

Components:

Phenol, 4,4'-(1-methylethylidene)bis-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine and (chloromethyl)oxirane:

Effects on foetal development : Test Type: reproductive and developmental toxicity study
Species: Rat, male and female
Strain: wistar
Application Route: Oral
General Toxicity Maternal: No observed adverse effect level: 60 mg/kg body weight
Teratogenicity: No observed adverse effect level F1: 60 mg/kg body weight
Developmental Toxicity: No observed adverse effect level F1: 60 mg/kg body weight
Embryo-foetal toxicity: No observed adverse effect level F1: 60 mg/kg body weight
Method: OECD Test Guideline 422
GLP: yes

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STOT - single exposure

STOT - repeated exposure

Repeated dose toxicity

Product:

Remarks: No data available

Components:

Phenol, 4,4'-(1-methylethylidene)bis-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine and (chloromethyl)oxirane:

Species: Rat, male and female

NOAEL: 60 mg/kg

Application Route: Oral

Method: OECD Test Guideline 422

GLP: yes

Aspiration toxicity

Components:

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

No aspiration toxicity classification

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:

Phenol, 4,4'-(1-methylethylidene)bis-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine and (chloromethyl)oxirane:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 0,16 mg/l

Exposure time: 96 h

Test Type: semi-static test

Method: OECD Test Guideline 203

GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 1,7 mg/l
Exposure time: 48 h

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Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae : ErL50 (Pseudokirchneriella subcapitata (green algae)): 0,31 mg/l
Exposure time: 72 h
Test Type: semi-static test
Method: OECD Test Guideline 201
GLP: yes

Toxicity to bacteria : (activated sludge): > 100 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209
GLP: yes

Amines, polyethylenepoly-, triethylenetetramine fraction:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 31,1 mg/l
Exposure time: 48 h
Test Type: static test
Method: Directive 67/548/EEC, Annex V, C.2.
GLP: yes

Toxicity to algae : ErC50 (Selenastrum capricornutum (green algae)): 20 mg/l
Exposure time: 72 h
Test Type: semi-static test
Method: OECD Test Guideline 201
GLP: yes

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 110 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: Directive 67/548/EEC, Annex V, C.1.
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 23 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae : ErC50 (Scenedesmus capricornutum (fresh water algae)): > 50 mg/l
Exposure time: 72 h
Test Type: static test
Method: Directive 67/548/EEC, Annex V, C.3.
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 3 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: semi-static test

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GLP: yes

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Physico-chemical
removability : Remarks: No data available

Components:

Phenol, 4,4'-(1-methylethylidene)bis-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine and (chloromethyl)oxirane:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge
Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301B
GLP: yes

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

Biodegradability : Test Type: aerobic
Result: Not readily biodegradable.
Method: Directive 67/548/EEC Annex V, C.4.A.
GLP: yes

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Components:

Phenol, 4,4'-(1-methylethylidene)bis-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine and (chloromethyl)oxirane:

Partition coefficient: n-
octanol/water : log Pow: 0,292 (20 - 25 °C)
pH: 12
Method: OECD Test Guideline 117
GLP: yes

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

Partition coefficient: n-
octanol/water : log Pow: 0,99
Method: OECD Test Guideline 107
GLP: yes

12.4 Mobility in soil

Components:

Phenol, 4,4'-(1-methylethylidene)bis-, polymer with N,N'-bis(2-aminoethyl)-1,2-ethanediamine and (chloromethyl)oxirane:

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Distribution among environmental compartments : Koc: 566 Method: estimated

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/ADN : UN 2735

IMDG : UN 2735

IATA : UN 2735

14.2 UN proper shipping name

ADR/RID/ADN : AMINES, LIQUID, CORROSIVE, N.O.S.
(TRIETHYLENE GLYCOL DIAMINE, Reaction Product of
Badge with Teta)

IMDG : AMINES, LIQUID, CORROSIVE, N.O.S.
(TRIETHYLENE GLYCOL DIAMINE, Reaction Product of
Badge with Teta)

IATA : Amines, liquid, corrosive, n.o.s.
(TRIETHYLENE GLYCOL DIAMINE, Reaction Product of
Badge with Teta)

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14.3 Transport hazard class(es)

ADR/RID/ADN : 8
IMDG : 8
IATA : 8

14.4 Packing group

ADR/RID/ADN
Packing group : III
Classification Code : C7
Hazard Identification Number : 80
Labels : 8
Tunnel restriction code : E
Remarks :

IMDG
Packing group : III
Labels : 8
EmS Code : F-A, S-B
Remarks : IMDG Code segregation group 18 - Alkalis

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

14.5 Environmental hazards

ADR/RID/ADN
Environmentally hazardous : yes

IMDG
Marine pollutant : yes

IATA
Environmentally hazardous : yes

14.6 Special precautions for user

Remarks : The transport of dangerous goods, including their loading and unloading, must be done by people who received the necessary training required by Modal Regulations.

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

Not applicable for product as supplied.

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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 the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Not applicable

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 III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

	Quantity 1	Quantity 2
E2 ENVIRONMENTAL HAZARDS	200 t	500 t

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
Volatile organic compounds (VOC) content: 10 %, 98 g/l
Remarks: VOC content excluding water

Other regulations : For the product composition, we do not add any of the substances listed in the European Directive 2011/65/EU (RoHS 2, RoHS 3, and China RoHS).
The product is thus in line with those directives.
We do not add Conflict minerals to the product.

15.2 Chemical safety assessment

Not applicable

SECTION 16: Other information

Full text of H-Statements

H302 : Harmful if swallowed.
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.
H332 : Harmful if inhaled.
H400 : Very toxic to aquatic life.
H410 : Very toxic to aquatic life with long lasting effects.
H411 : Toxic to aquatic life with long lasting effects.
H412 : Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox. : Acute toxicity

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Aquatic Acute	: Short-term (acute) aquatic hazard
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Eye Dam.	: Serious eye damage
Skin Corr.	: Skin corrosion
Skin Irrit.	: Skin irritation
Skin Sens.	: Skin sensitisation

Further information

Training advice	: Provide adequate information, instruction and training for operators.
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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.