

ARALDITE® AW 8595 US

Version Revision Date: SDS Number: Date of last issue: -

1.0 01/27/2016 400001012594 Date of first issue: 01/27/2016

SECTION 1. IDENTIFICATION

Product name : ARALDITE® AW 8595 US

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Manufacturer or supplier's details

Company name of supplier

: Huntsman Advanced Materials Americas LLC

Address

P.O. Box 4980 The Woodlands, TX 77387

United States of America

Telephone : Non-Emergency: (800) 257-5547

E-mail address of person responsible for the SDS

: MSDS@huntsman.com

Emergency telephone : Chemtrec: (800) 424-9300 or (703) 527-3887

Recommended use of the chemical and restrictions on use

Recommended use : Epoxy constituents

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin irritation : Category 2

Eye irritation : Category 2A

Skin sensitization : Category 1

Acute aquatic toxicity : Category 2

Chronic aquatic toxicity : Category 2

GHS Label element

Hazard pictograms





Signal Word : Warning

Hazard Statements : H315 Causes skin irritation.

H317 May cause an allergic skin reaction. H319 Causes serious eye irritation.

H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements : Prevention:

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash skin thoroughly after handling.



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P272 Contaminated work clothing must not be allowed out of

the workplace.

P273 Avoid release to the environment. P280 Wear eye protection/ face protection.

P280 Wear protective gloves.

Response:

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.

P333 + P313 If skin irritation or rash occurs: Get medical advice/

attention.

P337 + P313 If eye irritation persists: Get medical advice/

attention.

P362 Take off contaminated clothing and wash before reuse.

P391 Collect spillage.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients

Chemical Name	CAS-No.	Concentration (%)
Bisphenol A epoxy resin	25068-38-6	>= 60 - <= 100
1,3-bis(2,3-epoxypropoxy)-2,2-dimethylpropane	17557-23-2	>= 3 -<= 7

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.

Show this material safety data sheet to the doctor in

attendance.

Do not leave the victim unattended.

If inhaled : If unconscious place in recovery position and seek medical

advice.

If symptoms persist, call a physician.

In case of skin contact : If skin irritation persists, call a physician.

If on skin, rinse well with water. If on clothes, remove clothes.

In case of eye contact : Immediately flush eye(s) with plenty of water.

Remove contact lenses. Protect unharmed eye.

Keep eye wide open while rinsing.

If eye irritation persists, consult a specialist.



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If swallowed : Keep respiratory tract clear.

Do not give milk or alcoholic beverages.

Never give anything by mouth to an unconscious person.

If symptoms persist, call a physician.

Most important symptoms and effects, both acute and

delayed

: None known.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : No data is available on the product itself.

Unsuitable extinguishing

media

: High volume water jet

Specific hazards during fire

fighting

: Do not allow run-off from fire fighting to enter drains or water

courses.

Hazardous combustion

products

: No data is available on the product itself.

Specific extinguishing

methods

: No data is available on the product itself.

Further information : Collect contaminated fire extinguishing water separately. This

must not be discharged into drains.

Fire residues and contaminated fire extinguishing water must

be disposed of in accordance with local regulations.

Special protective equipment

for fire-fighters

Wear self-contained breathing apparatus for firefighting if

necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.

Environmental precautions : Prevent product from entering drains.

Prevent further leakage or spillage if safe to do so.

If the product contaminates rivers and lakes or drains inform

respective authorities.

Methods and materials for containment and cleaning up

: Soak up with inert absorbent material (e.g. sand, silica gel,

acid binder, universal binder, sawdust).

Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against

fire and explosion

: Normal measures for preventive fire protection.



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Advice on safe handling : Do not breathe vapors/dust.

Avoid exposure - obtain special instructions before use.

Avoid contact with skin and eyes. For personal protection see section 8.

Smoking, eating and drinking should be prohibited in the

application area.

Dispose of rinse water in accordance with local and national

regulations.

Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being

used.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated

place.

Containers which are opened must be carefully resealed and

kept upright to prevent leakage.

Electrical installations / working materials must comply with

the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally

required.

Hand protection

Remarks : The suitability for a specific workplace should be discussed

with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water

Tightly fitting safety goggles.

Wear face-shield and protective suit for abnormal processing

problems.

Skin and body protection : impervious clothing

Choose body protection according to the amount and

concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.

When using do not smoke.

Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : paste

Color : white



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Odor : No data is available on the product itself.

Odor Threshold : No data is available on the product itself.

pΗ No data is available on the product itself.

Flash point > 93.33 °C

Method: estimated, closed cup

Evaporation rate : No data is available on the product itself.

Flammability (solid, gas) : No data is available on the product itself.

Upper explosion limit : No data is available on the product itself.

Lower explosion limit : No data is available on the product itself.

Vapor pressure : No data is available on the product itself.

Relative vapor density : No data is available on the product itself.

Relative density : No data is available on the product itself.

Density : 1.25 - 1.32 g/cm3

Solubility(ies)

Water solubility negligible

Solubility in other solvents : No data is available on the product itself.

Partition coefficient: n-

octanol/water

: No data is available on the product itself.

Autoignition temperature : No data is available on the product itself.

Thermal decomposition : No data is available on the product itself.

Viscosity : No data is available on the product itself.

Self-Accelerating

decomposition temperature

(SADT)

: No data is available on the product itself.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed. Chemical stability : No decomposition if stored and applied as directed. Possibility of hazardous : No decomposition if stored and applied as directed.

reactions

Conditions to avoid : No data available

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of : No data is available on the product itself.

exposure



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Acute toxicity

Acute oral toxicity - Product : Acute toxicity estimate : > 5,000 mg/kg

Method: Calculation method

Acute inhalation toxicity : No data available

Acute dermal toxicity -

Product

: Acute toxicity estimate : > 5,000 mg/kg

Method: Calculation method

Acute toxicity (other routes of : No data available

administration)

Skin corrosion/irritation

Product:

Remarks: May cause skin irritation and/or dermatitis.

Serious eye damage/eye irritation

Product:

Remarks: May cause irreversible eye damage.

Respiratory or skin sensitization

Product:

Remarks: Causes sensitization.

Assessment: No data available

Germ cell mutagenicity

Ingredients:

Bisphenol A epoxy resin:

Genotoxicity in vitro : Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: positive

Concentration: 0 - 5000 ug/plate

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: positive

1,3-bis(2,3-epoxypropoxy)-2,2-dimethylpropane:

Genotoxicity in vitro : Metabolic activation: negative

Method: OECD Test Guideline 471

Result: positive

Ingredients:

Bisphenol A epoxy resin:

Genotoxicity in vivo : Cell type: Germ

Application Route: Oral

Method: OECD Test Guideline 478



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Result: negative

Cell type: Somatic Application Route: Oral Dose: 0 - 5000 mg/kg Method: OPPTS 870.5395

: Weight of evidence does not support classification as a germ

Result: negative

1,3-bis(2,3-epoxypropoxy)-2,2-dimethylpropane:

: Method: OECD Test Guideline 474 Genotoxicity in vivo

Result: negative

Ingredients:

Bisphenol A epoxy resin:

Germ cell mutagenicity-

cell mutagen. Assessment

Germ cell mutagenicity-

Assessment

: No data available

Carcinogenicity

Ingredients:

Bisphenol A epoxy resin:

Species: Rat, (male and female)

Application Route: Oral Exposure time: 24 month(s)

Dose: 15 mg/kg

Frequency of Treatment: 7 days/week Method: OECD Test Guideline 453

Result: negative

Species: Mouse, (male) Application Route: Dermal Exposure time: 24 month(s)

Dose: 0.1 mg/kg

Frequency of Treatment: 3 days/week Method: OECD Test Guideline 453

Result: negative

Species: Rat, (female) Application Route: Dermal Exposure time: 24 month(s)

Dose: 1 mg/kg

Frequency of Treatment: 5 days/week Method: OECD Test Guideline 453

Result: negative

1,3-bis(2,3-epoxypropoxy)-2,2-dimethylpropane:

Species: Mouse, (male and female)

Application Route: Dermal Exposure time: 24 month(s)

Dose: 30 mg/kg

Frequency of Treatment: 3 daily



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Result: Not classified due to inconclusive data.

Target Organs: Skin

Carcinogenicity -

Assessment

: No data available

IARC No ingredient of this product present at levels greater than or

equal to 0.1% is identified as probable, possible or confirmed

human carcinogen by IARC.

OSHA No ingredient of this product present at levels greater than or

equal to 0.1% is identified as a carcinogen or potential

carcinogen by OSHA.

NTP No ingredient of this product present at levels greater than or

equal to 0.1% is identified as a known or anticipated carcinogen

by NTP.

Reproductive toxicity

Ingredients:

Bisphenol A epoxy resin:

Effects on fertility : Test Type: Two-generation study

Species: Rat, male and female

Application Route: Oral

Dose: >750 milligram per kilogram

General Toxicity Parent: No-observed-effect level: 540 mg/kg

body weight

General Toxicity F1: No-observed-effect level: 540 mg/kg

body weight

Symptoms: No adverse effects. Method: OECD Test Guideline 416

Result: No effects on fertility and early embryonic

development were detected.

Ingredients:

Bisphenol A epoxy resin:

Effects on fetal development

Species: Rabbit, female

Application Route: Dermal

General Toxicity Maternal: NOAEL (No observed adverse

effect level): 30 mg/kg body weight

Method: Other guidelines Result: No teratogenic effects.

Species: Rabbit, female Application Route: Oral

General Toxicity Maternal: NOAEL (No observed adverse

effect level): 60 mg/kg body weight Method: OECD Test Guideline 414 Result: No teratogenic effects.

Species: Rat, female Application Route: Oral

General Toxicity Maternal: NOAEL (No observed adverse

effect level): 180 mg/kg body weight



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Method: OECD Test Guideline 414 Result: No teratogenic effects.

Reproductive toxicity -

Assessment

: No data available

STOT-single exposure

No data available

STOT-repeated exposure

No data available

Repeated dose toxicity

Ingredients:

Bisphenol A epoxy resin: Species: Rat, male and female

NOAEL (No observed adverse effect level): 50 mg/kg

Application Route: Ingestion Exposure time: 14 Weeks Number of exposures: 7 d Method: Subchronic toxicity

Species: Rat, male and female No-observed-effect level: 10 mg/kg Application Route: Skin contact Exposure time: 13 Weeks Number of exposures: 5 d Method: Subchronic toxicity

Species: Mouse, male

NOAEL (No observed adverse effect level): 100 mg/kg

Application Route: Skin contact Exposure time: 13 Weeks Number of exposures: 3 d Method: Subchronic toxicity

1,3-bis(2,3-epoxypropoxy)-2,2-dimethylpropane:

Species: Mouse, male and female Lowest observable effect level: 30 mg/kg

Application Route: Skin contact Exposure time: 17,280 h Number of exposures: 3 d Method: Chronic toxicity

Repeated dose toxicity -

Assessment

: No data available

Aspiration toxicity

No data available



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Experience with human exposure

General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

Ingestion: No data available

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

Further information

Product:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:

Bisphenol A epoxy resin:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 1.5 mg/l

Exposure time: 96 h Test Type: static test

Test substance: Fresh water Method: OECD Test Guideline 203

Ingredients:

Bisphenol A epoxy resin:

Toxicity to daphnia and other

aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 2.7 mg/l

Exposure time: 48 h
Test Type: static test

Test substance: Fresh water

Ingredients:

Bisphenol A epoxy resin:

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): 9.4 mg/l

Exposure time: 72 h Test Type: static test

Test substance: Fresh water



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Method: EPA-660/3-75-009

M-Factor (Acute aquatic

toxicity)

: No data available

Toxicity to fish (Chronic

toxicity)

: No data available

Ingredients:

Bisphenol A epoxy resin:

Toxicity to daphnia and other

aquatic invertebrates (Chronic toxicity)

: NOEC (Daphnia magna (Water flea)): 0.3 mg/l Exposure time: 21 d

Test Type: semi-static test
Test substance: Fresh water
Method: OECD Test Guideline 211

M-Factor (Chronic aquatic

toxicity)

: No data available

Ingredients:

Bisphenol A epoxy resin:

Toxicity to bacteria : IC50 (activated sludge): > 100 mg/l

Exposure time: 3 h
Test Type: static test

Test substance: Fresh water

Toxicity to soil dwelling

organisms

: No data available

Plant toxicity : No data available

Sediment toxicity : No data available

Toxicity to terrestrial

organisms

: No data available

Ecotoxicology Assessment

Acute aquatic toxicity : No data available

Chronic aquatic toxicity : No data available

Toxicity Data on Soil : No data available

Other organisms relevant to

the environment

: No data available

Further information: No data available

Persistence and degradability

Ingredients:

Bisphenol A epoxy resin:

Biodegradability : Inoculum: Sewage (STP effluent)



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Concentration: 20 mg/l

Result: Not readily biodegradable.

Biodegradation: 5 % Exposure time: 28 d

Method: OECD Test Guideline 301F

Biochemical Oxygen

Demand (BOD)

: No data available

Chemical Oxygen Demand

(COD)

: No data available

BOD/COD : No data available

ThOD : No data available

BOD/ThOD : No data available

Dissolved organic carbon

(DOC)

: No data available

Physico-chemical

removability

: No data available

Stability in water : No data available

Photodegradation : No data available

Impact on Sewage

Treatment

: No data available

Bioaccumulative potential

Ingredients:

Bisphenol A epoxy resin:

Bioaccumulation : Bioconcentration factor (BCF): 31

Remarks: Does not bioaccumulate.

Ingredients:

Bisphenol A epoxy resin:

Partition coefficient: n- : log Pow: 3.242 (25 °C)

octanol/water pH: 7.1

Method: OECD Test Guideline 117

Mobility in soil

Mobility : No data available

Ingredients:

Bisphenol A epoxy resin:

Distribution among : Koc: 445.

environmental compartments

Stability in soil : No data available



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Other adverse effects

Environmental fate and

pathways

: No data available

Results of PBT and vPvB

assessment

: No data available

Endocrine disrupting

potential

: No data available

Adsorbed organic bound

halogens (AOX)

: No data available

Hazardous to the ozone layer

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82

Protection of Stratospheric Ozone - CAA Section 602 Class I

Substances

Remarks: This product neither contains, nor was

manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A +

B).

Additional ecological

information - Product

: An environmental hazard cannot be excluded in the event of

unprofessional handling or disposal.

Toxic to aquatic life with long lasting effects.

Global warming potential

(GWP)

: No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water

courses or the soil.

Do not contaminate ponds, waterways or ditches with

chemical or used container.

Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.

Dispose of as unused product. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulation

IATA

UN/ID No. : UN 3082

Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.

(BISPHENOL A EPOXY RESIN)



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: 9 Class Packing group : 111

Labels : Miscellaneous

Packing instruction (cargo

aircraft)

Packing instruction : 964

(passenger aircraft)

IMDG

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

964

(BISPHENOL A EPOXY RESIN)

Class : 9 Packing group : 111 Labels 9 **EmS Code** F-A, S-F Marine pollutant yes

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

Not applicable for product as supplied.

Domestic regulation

DOT Classification

UN/ID/NA number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(BISPHENOL A EPOXY RESIN)

Class : 9 Packing group : 111

Labels CLASS 9 ERG Code 171

Marine pollutant : yes(BISPHENOL A EPOXY RESIN)

SECTION 15. REGULATORY INFORMATION

TSCA - 5(a) Significant New : Not relevant

Use Rule List of Chemicals

EPCRA - Emergency Planning and Community Right-to-Know

1-CHLORO-2,3-106-89-8 100 **EPOXYPROPANE**

SARA 311/312 Hazards : Acute Health Hazard

SARA 313 : This material does not contain any chemical components with

> known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act



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This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

California Prop 65 This product does not contain any chemicals known to the

State of California to cause cancer, birth, or any other

reproductive defects.

The ingredients of this product are reported in the following inventories:

CH INV : The mixture contains substances listed on the Swiss Inventory

TSCA : On TSCA Inventory

DSL : All components of this product are on the Canadian DSL.

AICS : On the inventory, or in compliance with the inventory

NZIoC : Not in compliance with the inventory

ENCS

: On the inventory, or in compliance with the inventory ISHL

: On the inventory, or in compliance with the inventory KECI

: On the inventory, or in compliance with the inventory PICCS

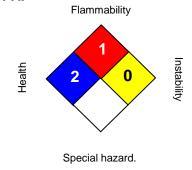
: On the inventory, or in compliance with the inventory IECSC

: On the inventory, or in compliance with the inventory

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	2
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,

2 = Moderate, 3 = High

4 = Extreme, * = Chronic

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While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE



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SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE. THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE. NO PART OF THIS DATA SHEET MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM, OR BY ANY MEANS, WITHOUT PERMISSION IN WRITING FROM HUNTSMAN. ALL REQUESTS FOR PERMISSION TO REPRODUCE MATERIAL FROM THIS DATA SHEET SHOULD BE DIRECTED TO HUNTSMAN, MANAGER, PRODUCT SAFETY AT THE ABOVE ADDRESS.



HARDENER HW 8595 US

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1.0 06/22/2016 400001012611 Date of first issue: 06/22/2016

SECTION 1. IDENTIFICATION

Product name : HARDENER HW 8595 US

Manufacturer or supplier's details

Company name of supplier

: Huntsman Advanced Materials Americas LLC

Address

P.O. Box 4980 The Woodlands,

TX 77387

United States of America

Telephone : Non-Emergency: (800) 257-5547

E-mail address of person responsible for the SDS

: MSDS@huntsman.com

Emergency telephone number : Chemtrec: (800) 424-9300 or (703) 527-3887

Recommended use of the chemical and restrictions on use

Recommended use : Hardener

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids : Category 4

Acute toxicity (Inhalation) : Category 4

Skin corrosion : Category 1B

Serious eye damage : Category 1

Skin sensitisation : Category 1

Reproductive toxicity : Category 2

Acute aquatic toxicity : Category 3

Chronic aquatic toxicity : Category 3

GHS label elements

Hazard pictograms







Signal word : Danger

Hazard statements : H227 Combustible liquid.

H314 Causes severe skin burns and eye damage.



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H317 May cause an allergic skin reaction.

H332 Harmful if inhaled.

H361 Suspected of damaging fertility or the unborn child. H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P210 Keep away from heat/sparks/open flames/hot surfaces.

No smoking.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment.

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): 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

P308 + P313 IF exposed or concerned: Get medical advice/attention.

P333 + P313 If skin irritation or rash occurs: Get medical advice/

P363 Wash contaminated clothing before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

CENTER/doctor.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

S-No. (Concentration (% w/w)
	S-No.	S-No. Concentration (



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2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated	68683-29-4	30 - 60
benzyldimethylamine	103-83-3	3 - 7
Diethylenetriamine	111-40-0	3 - 7
Aminoethylpiperazine	140-31-8	3 - 7
4,4'-isopropylidenediphenol	80-05-7	1 - 3
Tetraethylenepentamine	112-57-2	1 - 3

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.

Consult a physician.

Show this safety data sheet to the doctor in attendance.

Do not leave the victim unattended.

If inhaled : If unconscious place in recovery position and seek medical

advice.

If symptoms persist, call a physician.

In case of skin contact : Immediate medical treatment is necessary as untreated

wounds from corrosion of the skin heal slowly and with

difficulty.

If on skin, rinse well with water. If on clothes, remove clothes.

In case of eye contact : Small amounts splashed into eyes can cause irreversible

tissue damage and blindness.

In the case of contact with eyes, rinse immediately with plenty

of water and seek medical advice.

Continue rinsing eyes during transport to hospital.

Remove contact lenses. Protect unharmed eye.

Keep eye wide open while rinsing.

If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.

Do NOT induce vomiting.

Do not give milk or alcoholic beverages.

Never give anything by mouth to an unconscious person.

If symptoms persist, call a physician. Take victim immediately to hospital.

Most important symptoms and effects, both acute and

delayed

: None known.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : No data is available on the product itself.



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Carbon dioxide (CO2)

Unsuitable extinguishing

media

: High volume water jet

No data is available on the product itself.

Specific hazards during

firefighting

: Do not allow run-off from fire fighting to enter drains or water

courses.

Hazardous combustion

products

: No data is available on the product itself.

Specific extinguishing

methods

: No data is available on the product itself.

Further information : Collect contaminated fire extinguishing water separately. This

must not be discharged into drains.

Fire residues and contaminated fire extinguishing water must

be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored

separately in closed containments.

Use a water spray to cool fully closed containers.

Special protective equipment

for firefighters

Wear self-contained breathing apparatus for firefighting if

necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

: Use personal protective equipment.

Environmental precautions

: Prevent product from entering drains.

Prevent further leakage or spillage if safe to do so.

If the product contaminates rivers and lakes or drains inform

respective authorities.

Methods and materials for containment and cleaning up

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). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against

fire and explosion

: Do not spray on a naked flame or any incandescent material. Keep away from open flames, hot surfaces and sources of

ignition.

Advice on safe handling : Avoid formation of aerosol.

Do not breathe vapours/dust.

Avoid exposure - obtain special instructions before use.



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Avoid contact with skin and eyes. For personal protection see section 8.

Smoking, eating and drinking should be prohibited in the

application area.

Provide sufficient air exchange and/or exhaust in work rooms. To avoid spills during handling keep bottle on a metal tray. Dispose of rinse water in accordance with local and national

regulations.

Persons susceptible to 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.

Conditions for safe storage : No smoking.

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept

upright to prevent leakage.

Electrical installations / working materials must comply with the

technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally

required.

Hand protection

Remarks : The suitability for a specific workplace should be discussed

with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water

Tightly fitting safety goggles

Wear face-shield and protective suit for abnormal processing

problems.

Skin and body protection : Impervious clothing

Choose body protection according to the amount and

concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.

When using do not smoke.

Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : amber

Odour : amine-like

Odour Threshold : No data is available on the product itself.



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Hq : No data is available on the product itself.

Flash point : ca. 79 °CMethod: Pensky-Martens closed cup, closed cup

Evaporation rate : No data is available on the product itself.

Flammability (solid, gas) : No data is available on the product itself.

Flammability (liquids) : No data is available on the product itself.

Upper explosion limit : No data is available on the product itself.

Lower explosion limit : No data is available on the product itself.

Vapour pressure : No data is available on the product itself.

Relative vapour density No data is available on the product itself.

Relative density 0.94

Density : No data is available on the product itself.

Solubility(ies)

Water solubility partly soluble

Solubility in other solvents : No data is available on the product itself.

Partition coefficient: n-

octanol/water

: No data is available on the product itself.

Auto-ignition temperature : No data is available on the product itself.

Thermal decomposition : No data is available on the product itself.

Self-Accelerating

decomposition temperature

(SADT)

: No data is available on the product itself.

Viscosity : No data is available on the product itself.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed. Chemical stability No decomposition if stored and applied as directed. Possibility of hazardous

reactions

: No decomposition if stored and applied as directed.

Vapours may form explosive mixture with air.

Conditions to avoid : Heat, flames and sparks.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of : No data is available on the product itself.



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exposure

Acute toxicity

Acute oral toxicity - Product : Acute toxicity estimate : > 5,000 mg/kg

Method: Calculation method

Acute inhalation toxicity -

Product

: Acute toxicity estimate: 3.86 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Calculation method

Acute dermal toxicity -

Product

: Acute toxicity estimate : > 5,000 mg/kg

Method: Calculation method

Acute toxicity (other routes of : No data available

administration)

Skin corrosion/irritation

Product:

Remarks: Extremely corrosive and destructive to tissue.

Serious eye damage/eye irritation

Product:

Remarks: May cause irreversible eye damage.

Respiratory or skin sensitisation

Product:

Remarks: Causes sensitisation.

Assessment: No data available

Germ cell mutagenicity

Components:

benzyldimethylamine:

Genotoxicity in vitro : Test Type: Ames test

Concentration: 5000 ug/plate

Metabolic activation: with and without metabolic activation

Method: reverse mutation assay

Result: negative

GLP: yes

Test Type: Chromosome aberration test in vitro

Species: Chinese hamster cells Concentration: .213 mg/ml

Metabolic activation: with and without metabolic activation

Method: Chromosome aberration test in vitro

Result: positive

GLP: yes



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Test Type: Ames test

Species: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Species: Chinese hamster lung cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Aminoethylpiperazine:

Genotoxicity in vitro : Concentration: 5000 ug/plate

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Metabolic activation: negative Method: OECD Test Guideline 482

Result: negative

4,4'-isopropylidenediphenol:

Genotoxicity in vitro

: Metabolic activation: with and without metabolic activation

Result: negative

Tetraethylenepentamine:

Genotoxicity in vitro

: Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 479

Result: positive

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: positive

Metabolic activation: negative Method: OECD Test Guideline 482

Result: negative

Components:

benzyldimethylamine:

Genotoxicity in vivo : Test Type: In vivo micronucleus test

Species: Mouse Cell type: Somatic Application Route: Oral Exposure time: 24 h Dose: 150 mg/kg Result: negative

Diethylenetriamine:



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Genotoxicity in vivo : Cell type: Somatic

Application Route: Oral Dose: 85 - 850 mg/kg

Method: OECD Test Guideline 474

Result: negative

Application Route: Oral

Result: negative

Aminoethylpiperazine:

Genotoxicity in vivo : Application Route: Intraperitoneal injection

Dose: 175 - 560 mg/kg

Method: OECD Test Guideline 474

Result: negative

4,4'-isopropylidenediphenol:

Genotoxicity in vivo : Method: OECD Test Guideline 474

Result: negative

Tetraethylenepentamine:

Genotoxicity in vivo : Application Route: Intraperitoneal injection

Method: OECD Test Guideline 474

Result: negative

Carcinogenicity

Components:

Diethylenetriamine: Species: Mouse, (male) Application Route: Dermal

Dose: 56.3 mg/kg

Frequency of Treatment: 3 daily

Result: negative

4,4'-isopropylidenediphenol: Species: Rat, (male and female)

Application Route: Oral Exposure time: 103 weeks Frequency of Treatment: 7 daily

Result: negative

Carcinogenicity -

: No data available

Assessment

IARC No component of this product present at levels greater than or

equal to 0.1% is identified as probable, possible or confirmed

human carcinogen by IARC.

OSHANo component of this product present at levels greater than or

equal to 0.1% is identified as a carcinogen or potential

carcinogen by OSHA.

NTP No component of this product present at levels greater than or

equal to 0.1% is identified as a known or anticipated carcinogen

by NTP.



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Reproductive toxicity

Components:

Diethylenetriamine:

Effects on fertility : Species: Rat, male and female

Application Route: Oral

General Toxicity - Parent: No observed adverse effect level:

30 mg/kg wet weight

Method: OECD Test Guideline 421

Aminoethylpiperazine:

Species: Rat, male and female

Application Route: Oral

Method: OECD Test Guideline 422

Result: No effects on fertility and early embryonic

development were detected.

4,4'-isopropylidenediphenol:

Species: Rat, male and female

Application Route: Oral

Method: OECD Test Guideline 416

Result: Embryotoxic effects and adverse effects on the

offspring were detected.

Components:

benzyldimethylamine:

Effects on foetal : Species: Rat

development Application Route: Oral

Teratogenicity: No observed adverse effect level: 150 mg/kg

body weight

Method: OECD Test Guideline 414 Result: No teratogenic effects

Diethylenetriamine:

Species: Rat

Application Route: Oral

General Toxicity Maternal: No observed adverse effect level:

100 mg/kg body weight

Method: OECD Test Guideline 421

Aminoethylpiperazine:

Species: Rat, male and female

Application Route: Oral

General Toxicity Maternal: No observed adverse effect level:

224 - 285 mg/kg body weight Method: OECD Test Guideline 422 Result: No teratogenic effects

4,4'-isopropylidenediphenol:

Species: Rat, female Application Route: Oral

General Toxicity Maternal: No observed adverse effect level:

< 160 mg/kg body weight

Method: OECD Test Guideline 416 Result: No teratogenic effects



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Tetraethylenepentamine:

Species: Rabbit, female Application Route: Dermal

General Toxicity Maternal: No-observed-effect level: 50 mg/kg

body weight

Method: OECD Test Guideline 414 Result: No teratogenic effects

Species: Rat, female Application Route: Oral

General Toxicity Maternal: No observed adverse effect level:

750 mg/kg body weight

Method: OECD Test Guideline 414 Result: No teratogenic effects

Components:

4,4'-isopropylidenediphenol:

Reproductive toxicity - : Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

STOT - single exposure

Components:

Diethylenetriamine:

Target Organs: Respiratory Tract

Assessment: May cause respiratory irritation.

4,4'-isopropylidenediphenol:

Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

STOT - repeated exposure

No data available

Repeated dose toxicity

Components:

benzyldimethylamine:

Species: Rat, male and female

NOEL: 50 mg/kg

Application Route: Ingestion Exposure time: 672 h Number of exposures: 7 d Method: Subacute toxicity

Species: Rat, male and female

NOAEL: ca. 150 mg/kg Application Route: Ingestion Exposure time: 672 h Number of exposures: 7 d Method: Subacute toxicity



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Diethylenetriamine:

Species: Rat, male and female

: 70 - 80 mg/m3

Application Route: Ingestion Test atmosphere: vapour Exposure time: 360 h Number of exposures: 7 d Method: Subchronic toxicity

Species: Rat, male and female

NOAEL: 114 mg/kg/d

Application Route: Skin contact

Exposure time: 9,600 h Number of exposures: 6 d Method: Chronic toxicity

Aminoethylpiperazine:

Species: Rat, male and female NOAEL: 151 - 285 mg/kg/d Application Route: Ingestion Exposure time: 672 h Method: Subacute toxicity

Species: Rat, male and female NOAEL: > 1000 mg/kg/d

Application Route: Skin contact

Exposure time: 696 h Number of exposures: 5 d Method: Subacute toxicity

4,4'-isopropylidenediphenol: Species: Dog, male and female

: 75 mg/kg, 10 mg/m3
Application Route: Ingestion
Test atmosphere: dust/mist
Exposure time: 2,160 h
Number of exposures: 7 d
Method: Subchronic toxicity

Species: Rat, male and female

LOAEL: 600 mg/kg

Application Route: Ingestion Exposure time: 672 h Number of exposures: 7 d Method: Subchronic toxicity

Tetraethylenepentamine: Species: Rat, male and female

NOAEL: 50 mg/kg/d

Application Route: Ingestion Exposure time: 26 Weeks Method: Subchronic toxicity



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Species: Rabbit, male and female

NOAEL: 50 mg/kg/d

Application Route: Skin contact

Exposure time: 744 h Number of exposures: 5 d Method: Subacute toxicity

Repeated dose toxicity -

Assessment

: No data available

Aspiration toxicity

Components:

benzyldimethylamine:

May be harmful if swallowed and enters airways.

Experience with human exposure

General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

Ingestion: No data available

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

Further information

Product:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

benzyldimethylamine:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 37.8 mg/l

Exposure time: 96 h



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Test Type: static test

Test substance: Fresh water Method: OECD Test Guideline 203

Diethylenetriamine:

: LC50: 430 mg/l Toxicity to fish

> Exposure time: 96 h Test Type: semi-static test Test substance: Fresh water

Method: Directive 67/548/EEC, Annex V, C.1.

Aminoethylpiperazine:

Toxicity to fish : LC50: 2,190 mg/l

> Exposure time: 96 h Test Type: static test

Test substance: Fresh water

4,4'-isopropylidenediphenol:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 7.5 mg/l

Exposure time: 96 h

Tetraethylenepentamine:

Toxicity to fish : LC50 (Poecilia reticulata (guppy)): 420 mg/l

> Exposure time: 96 h Test Type: semi-static test Test substance: Fresh water

Method: Directive 67/548/EEC, Annex V, C.1.

Components:

2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-

piperazinyl)ethyl]amino]butyl-terminated:

aquatic invertebrates

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 1,000 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

benzyldimethylamine:

Toxicity to daphnia and other

aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): > 100 mg/l

Exposure time: 48 h Test Type: static test

Test substance: Fresh water

Method: Directive 67/548/EEC, Annex V, C.2.

Diethylenetriamine:

Toxicity to daphnia and other

aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 32 mg/l

Exposure time: 48 h Test Type: static test

Test substance: Fresh water

Aminoethylpiperazine:

aquatic invertebrates

Toxicity to daphnia and other

EC50 (Daphnia magna (Water flea)): 58 mg/l

Exposure time: 48 h Test Type: static test

Method: OECD Test Guideline 202

Remarks: Harmful to aquatic organisms, may cause long-term

adverse effects in the aquatic environment.



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4,4'-isopropylidenediphenol:

Toxicity to daphnia and other aquatic invertebrates

: EC50: 3.9 - 10.2 mg/l Exposure time: 48 h

(Ceriodaphnia dubia (Water flea)):

Tetraethylenepentamine:

Toxicity to daphnia and other aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 24.1 mg/l Exposure time: 48 h

Test Type: static test

Test substance: Fresh water

Method: Tested according to Annex V of Directive

67/548/EEC.

Components:

2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-

piperazinyl)ethyl]amino]butyl-terminated:

Toxicity to algae : EC50 (No information available.): > 1,000 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

benzyldimethylamine:

Toxicity to algae : ErC50 (Desmodesmus subspicatus (Scenedesmus

subspicatus)): 1.34 mg/l Exposure time: 72 h Test Type: static test Test substance: Fresh water

Method: Directive 67/548/EEC, Annex V, C.3.

EC10 (Desmodesmus subspicatus (Scenedesmus

subspicatus)): 0.24 mg/l Exposure time: 72 h Test Type: static test

Method: Directive 67/548/EEC, Annex V, C.3.

Diethylenetriamine:

Toxicity to algae : EbC50 (Selenastrum capricornutum (green algae)): 1,164

mg/l

Exposure time: 72 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 201

Aminoethylpiperazine:

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): > 1,000

mg/l

Exposure time: 72 h

Test substance: Fresh water Method: OECD Test Guideline 201

4,4'-isopropylidenediphenol:

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): 2.5 - 3.1

mg/l

Exposure time: 96 h



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Tetraethylenepentamine:

Toxicity to algae : ErC50 (Selenastrum capricornutum (green algae)): 6.8 mg/l

Exposure time: 72 h Test Type: static test

Test substance: Fresh water Method: OECD Test Guideline 201

M-Factor (Acute aquatic

toxicity)

: No data available

Components:

Diethylenetriamine:

Toxicity to fish (Chronic

toxicity)

: NOEC: 10 mg/l Exposure time: 28 d

Test Type: semi-static test Test substance: Fresh water Method: OECD Test Guideline 210

4,4'-isopropylidenediphenol:

Toxicity to fish (Chronic

toxicity)

: NOEC (Pimephales promelas (fathead minnow)): 0.016 mg/l

Exposure time: 444 d

Test Type: flow-through test
Test substance: Fresh water
Method: Fish Life Cycle Toxicity
Remarks: Toxic to aquatic organisms.

Components:

benzyldimethylamine:

Toxicity to daphnia and other

aquatic invertebrates (Chronic toxicity)

: NOEC (Daphnia magna (Water flea)): 0.789 mg/l

Exposure time: 21 d
Test Type: semi-static test
Test substance: Fresh water

Method: Directive 67/548/EEC, Annex V, C.20

Diethylenetriamine:

Toxicity to daphnia and other

aquatic invertebrates (Chronic toxicity)

: NOEC (Daphnia magna (Water flea)): 5.6 mg/l

Exposure time: 21 d
Test Type: semi-static test
Test substance: Fresh water

Method: Directive 67/548/EEC, Annex V, C.20

M-Factor (Chronic aquatic

toxicity)

: No data available

Components:

benzyldimethylamine:

Toxicity to bacteria : EC50 (Pseudomonas putida): 749.6 mg/l

Exposure time: 17 h Test Type: static test

Test substance: Fresh water Method: DIN 38 412 Part 8



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: EC10 (Pseudomonas putida): 534 mg/l

Exposure time: 17 h
Test Type: static test

Test substance: Fresh water Method: DIN 38 412 Part 8

Tetraethylenepentamine:

Toxicity to bacteria : EC50: 97.3 mg/l

Exposure time: 2 h Test Type: static test

Test substance: Fresh water

Components:

Diethylenetriamine:

Toxicity to soil dwelling

organisms

: EC50 (Eisenia fetida (earthworms)): > 1,000 mg/kg

Exposure time: 56 d

Method: OECD Test Guideline 222

Plant toxicity : No data available

Sediment toxicity : No data available

Toxicity to terrestrial

organisms

: No data available

Ecotoxicology Assessment

Components:

benzyldimethylamine:

Acute aquatic toxicity : Harmful to aquatic organisms.

Diethylenetriamine:

Acute aquatic toxicity : This product has no known ecotoxicological effects.

Components:

benzyldimethylamine:

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

4,4'-isopropylidenediphenol:

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Toxicity Data on Soil : No data available

Other organisms relevant to

the environment

: No data available

Further information: No data available

Persistence and degradability

Components:

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



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Biodegradability : Result: Not readily biodegradable.

benzyldimethylamine:

Biodegradability : Inoculum: activated sludge

Concentration: 30 mg/l

Result: Not readily biodegradable.

Biodegradation: 0 - 2 % Exposure time: 28 d

Method: OECD Test Guideline 301C

Diethylenetriamine:

Biodegradability : Inoculum: activated sludge

Result: Readily biodegradable

Biodegradation: 87 % Exposure time: 21 d

Method: OECD Test Guideline 301D

Aminoethylpiperazine:

Biodegradability : Inoculum: activated sludge

Result: Not readily biodegradable.

Biodegradation: 0 % Exposure time: 28 d

Method: OECD Test Guideline 301F

4,4'-isopropylidenediphenol:

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 1 - 2 % Exposure time: 28 d

Tetraethylenepentamine:

Biodegradability : Inoculum: activated sludge

Result: Not biodegradable Biodegradation: 17 % Exposure time: 84 d

Method: Inherent Biodegradability: Modified SCAS Test

Components:

Aminoethylpiperazine:

Biochemical Oxygen : 5 mg/l

Demand (BOD) Incubation time: 5 d

Components:

Aminoethylpiperazine:

Chemical Oxygen Demand : 560 mg/l

(COD)

BOD/COD : No data available

ThOD : No data available

BOD/ThOD : No data available

Dissolved organic carbon

(DOC)

: No data available

Physico-chemical : No data available



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removability

Stability in water : No data available

Components:

Diethylenetriamine:

Photodegradation : Test Type: Air

Rate constant: 500000

Degradation (direct photolysis): 50 %

Aminoethylpiperazine:

Photodegradation : Test Type: Air

Degradation (direct photolysis): 50 %

Test Type: Water

Impact on Sewage

Treatment

: No data available

Bioaccumulative potential

Components:

benzyldimethylamine:

Bioaccumulation : Species: Cyprinus carpio (Carp)

Bioconcentration factor (BCF): 2.1 - 22

Exposure time: 42 d

Test substance: Fresh water Method: flow-through test

Remarks: Bioaccumulation is unlikely.

Species: Cyprinus carpio (Carp)

Bioconcentration factor (BCF): 2.1 - 6.4

Exposure time: 14 d

Test substance: Fresh water Method: flow-through test

Remarks: Bioaccumulation is unlikely.

Diethylenetriamine:

Bioaccumulation : Species: Cyprinus carpio (Carp)

Bioconcentration factor (BCF): 0.3 - 6.3

Exposure time: 42 d

Test substance: Fresh water Method: flow-through test

Remarks: Bioaccumulation is unlikely.

Aminoethylpiperazine:

Bioaccumulation : Species: Fish

Remarks: Does not bioaccumulate.

Components:

benzyldimethylamine:

Partition coefficient: n- : log Pow: 1.98

octanol/water pH: 13



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Diethylenetriamine:

Partition coefficient: n-: log Pow: -1.58 (20 °C)

octanol/water pH: 7

Aminoethylpiperazine:

Partition coefficient: n-: log Pow: -1.48 (20 °C)

octanol/water

Tetraethylenepentamine:

Partition coefficient: n-: log Pow: -3.16

octanol/water

Mobility in soil

Mobility : No data available

Components:

Diethylenetriamine:

Distribution among : Koc: 19111

environmental compartments

Aminoethylpiperazine:

Distribution among : Koc: ca. 37000

environmental compartments Tetraethylenepentamine:

Distribution among

: Koc: 3.2 - 3.7Method: OECD Test Guideline 106

environmental compartments

Stability in soil : No data available

Other adverse effects

Environmental fate and : No data available

pathways

Results of PBT and vPvB

assessment

: No data available

Endocrine disrupting

potential

: No data available

Adsorbed organic bound

halogens (AOX)

: No data available

Hazardous to the ozone layer

: Regulation: 40 CFR Protection of Environment; Part 82 Ozone-Depletion Potential

Protection of Stratospheric Ozone - CAA Section 602 Class I

Substances

Remarks: This product neither contains, nor was

manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A +

B).

Additional ecological

An environmental hazard cannot be excluded in the event of information - Product

unprofessional handling or disposal.

Harmful to aquatic life with long lasting effects.



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Global warming potential

(GWP)

: No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water

courses or the soil.

Do not contaminate ponds, waterways or ditches with

chemical or used container.

Send to a licensed waste management company.

Contaminated packaging Empty remaining contents.

> Dispose of as unused product. Do not re-use empty containers.

Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International Regulation

IATA

UN/ID No. : UN 2735

: Polyamines, liquid, corrosive, n.o.s. Proper shipping name

(BENZYLDIMETHYLAMINE, DIETHYLENE TRIAMINE)

Class : 8 Packing group : 11

Labels : Corrosive 855

Packing instruction (cargo

aircraft)

Packing instruction : 851

(passenger aircraft)

IMDG

UN number : UN 2735

Proper shipping name : POLYAMINES, LIQUID, CORROSIVE, N.O.S.

(BENZYLDIMETHYLAMINE, DIETHYLENE TRIAMINE)

Class 8 Packing group Ш Labels 8

EmS Code F-A, S-B Marine pollutant no

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

Not applicable for product as supplied.

National Regulations



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DOT Classification

UN/ID/NA number : UN 2735

Proper shipping name : POLYAMINES, LIQUID, CORROSIVE, N.O.S.

(BENZYLDIMETHYLAMINE, DIETHYLENE TRIAMINE)

Class : 8 Packing group : II

Labels : CORROSIVE

ERG Code : 153 Marine pollutant : no

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

SARA 311/312 Hazards : No SARA Hazards

SARA 313 : The following components are subject to reporting levels

established by SARA Title III, Section 313:

4,4'- 80-05-7 2.6225 %

isopropylidenediphenol

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

California Prop. 65 WARNING: This product contains a chemical known to the

State of California to cause birth defects or other reproductive

harm.

4,4'-isopropylidenediphenol 80-05-7

The components of this product are reported in the following inventories:

CH INV : The formulation contains substances listed on the Swiss

Inventory, On the inventory, or in compliance with the

inventory

TSCA : On the inventory, or in compliance with the inventory

DSL : This product contains one or several components listed in the

Canadian NDSL.

AICS : Not in compliance with the inventory NZIoC : Not in compliance with the inventory ENCS : Not in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : Not in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TCSI : Not in compliance with the inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)



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TSCA - 5(a) Significant New Use Rule List of Chemicals

No substances are subject to a Significant New Use Rule.

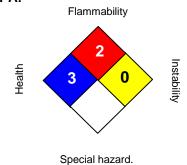
US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	3*
FLAMMABILITY	2
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,

2 = Moderate, 3 = High

4 = Extreme, * = Chronic

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