according to Regulation (EC) No. 1907/2006



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

1.1 Product identifier

Trade name : ARALDITE® 203 HARDENER

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

Use of the : Adhesives

Substance/Mixture

1.3 Details of the supplier of the safety data sheet

Company : Huntsman Advanced Materials (Europe)BVBA

Address : Everslaan 45

3078 Everberg

Belgium

Telephone : +41 61 299 20 41 Telefax : +41 61 299 20 40

E-mail address of person

responsible for the SDS

: Global_Product_EHS_AdMat@huntsman.com

E-mail address to request full REACH registration number upon

EU member State Authority request :

REACH Registration Nr AM@huntsman.com

1.4 Emergency telephone

Emergency telephone : Centres Antipoison et de Toxicovigilance:

ANGERS: 02 41 48 21 21 BORDEAUX: 05 56 96 40 80

LILLE: 0 825 812 822 LYON: 04 72 11 69 11 MARSEILLE 04 91 75 25 25 NANCY: 03 83 32 36 36 PARIS: 01 40 05 48 48 RENNES: 02 99 59 22 22

STRASBOURG: 03 88 37 37 37 TOULOUSE: 05 61 77 74 47 EUROPE: +32 35 75 1234

France ORFILA: +33(0)145425959

ASIA: +65 6336-6011 China: +86 20 39377888 +86 532 83889090

India: + 91 22 42 87 5333 Australia: 1800 786 152 New Zealand: 0800 767 437 USA: +1/800/424.9300



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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 3

Acute toxicity, Category 4

Acute toxicity, Category 4

Skin corrosion/irritation, Category 1B

Serious eye damage/eye irritation,

Category 1

Skin sensitization, Category 1

Chronic aquatic toxicity, Category 3

2.2 Label elements

Labeling (REGULATION (EC) No 1272/2008)

Hazard pictograms







Signal Word : Danger

Hazard Statements : H226 Flammable liquid and vapour.

H302 + H312 Harmful if swallowed or in contact with skin
Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.

H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting

effects.

Precautionary Statements : Prevention:

P280 Wear protective gloves.

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P241 Use explosion-proof electrical/ ventilating/

lighting/ equipment.

P273 Avoid release to the environment.

Response:

P304 IF INHALED:

P340 Remove victim to fresh air and keep at rest

in a position comfortable for breathing.

P310 Immediately call a POISON CENTER or

doctor/ physician.

P301 IF SWALLOWED:
P331 Do NOT induce vomiting.
P303 IF ON SKIN (or hair):

P361 Take off immediately all contaminated

clothing.

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P353 Rinse skin with water or shower.

P305 IF IN EYES:

Storage:

P235 Keep cool.

Disposal:

ENVT12 Dispose of waste product or used

containers according to local regulations.

Hazardous ingredients which must be listed on the label:

3,6-diazaoctanethylenediamin

2.3 Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous ingredients

Chemical Name	CAS-No.	Classification	Concent
	EC-No.	(REGULATION (EC)	ration
	Registration number	No 1272/2008)	(%)
Trientine	112-24-3	Acute Tox. 4; H302,	>= 30 -
	203-950-6	H312	<= 60
	05-2114706116-59-0000	Skin Corr. 1B; H314	
		Skin Sens. 1; H317	
		Aquatic Chronic 3;	
		H412	
3-Aminopropyldiethylamine	104-78-9	Flam. Liq. 3; H226	>= 30 -
	203-236-4	Acute Tox. 4; H302,	<= 60
	05-2117325004-61-0000	H312	
		Skin Corr. 1B; H314	
		Skin Sens. 1; H317	

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

If inhaled : Move to fresh air.

Keep patient warm and at rest. If symptoms persist, call a physician.

In case of skin contact : Take off contaminated clothing and shoes immediately.

Wash off with soap and plenty of water. If symptoms persist, call a physician.

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

Remove contact lenses. Seek medical advice.

If swallowed : Rinse mouth with water.

Consult a physician if necessary.

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4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local

circumstances and the surrounding environment.

Unsuitable extinguishing

media

: None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire

fighting

: Do not use a solid water stream as it may scatter and spread

fire

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

courses.

May form explosive mixtures in air.

Flash back possible over considerable distance.

Hazardous combustion

products

: No data is available on the product itself.

5.3 Advice for firefighters

Special protective equipment

for fire-fighters

: In the event of fire, wear self-contained breathing apparatus.

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.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.

Wear respiratory protection. Ensure adequate ventilation.

Evaporates.

Remove all sources of ignition.

Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Pay attention to flashback.

6.2 Environmental precautions

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Environmental precautions : Prevent product from entering drains.

Do not allow contact with soil, surface or ground water.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Dilute with water.

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

acid binder, universal binder, sawdust).

Keep in suitable, closed containers for disposal.

Ventilate the area.

6.4 Reference to other sections

None

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid contact with skin and eyes.

Avoid inhalation of vapor or mist. For personal protection see section 8.

Provide adequate precautions, such as electrical grounding

and bonding, or inert atmospheres.

Avoid spark promoters. Ground/bond container and

equipment. These alone may be insufficient to remove static

electricity.

Keep away from flames and sparks.

Keep away from heat.

Use only with adequate ventilation.

Smoking, eating and drinking should be prohibited in the

application area.

Dispose of rinse water in accordance with local and national

regulations.

Advice on protection against

fire and explosion

: Normal measures for preventive fire protection. Vapors are heavier than air and may spread along floors. Vapors may

form explosive mixtures with air.

Hygiene measures : Handle in accordance with good industrial hygiene and safety

practice. Ensure adequate ventilation, especially in confined areas. Avoid exposure to vapor. Do not inhale aerosol. When using do not eat, drink or smoke. Wash hands before breaks

and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

: Keep containers tightly closed in a dry, cool and wellventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Take measures to prevent the build up of electrostatic charge. Use

explosion-proof equipment. No smoking.

Advice on common storage : Strong bases

Strong oxidizing agents

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Storage class (TRGS 510) : 8A, Combustible, corrosive hazardous materials

Other data : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Personal protective equipment

Eye protection : Safety glasses

Hand protection

Material : butyl-rubber Break through time : > 8 h

Nitrile rubber 10 - 480 min

Remarks : The suitability for a specific workplace should be discussed

with the producers of the protective gloves. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions

(mechanical strain, duration of contact).

Skin and body protection : Protective suit

Respiratory protection : Use respiratory protection unless adequate local exhaust

ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : liquid

Color : red

Odor : amine-like

Boiling point : > 150 °C

Flash point : 51 °C

Method: Pensky-Martens closed cup, closed cup

Density : 0,91 g/cm3 (25 °C)

Solubility(ies)

Water solubility : insoluble (20 °C)

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Decomposition temperature : > 200 °C

Viscosity

Viscosity, dynamic : 10 - 20 mPa.s (25 °C)

9.2 Other information

No data available

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 : Stable under normal conditions.

10.4 Conditions to avoid

Conditions to avoid : None known.

10.5 Incompatible materials

Materials to avoid : Strong acids and strong bases

Strong oxidizing agents

10.6 Hazardous decomposition products

Burning produces obnoxious and toxic fumes., Carbon oxides, Nitrogen oxides (NOx)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Ingredients:

3,6-diazaoctanethylenediamin:

Acute oral toxicity : LD50 (Rat, male and female): 1.716,2 mg/kg

Method: OECD Test Guideline 401

Acute inhalation toxicity : No data available

Ingredients:

3,6-diazaoctanethylenediamin:

Acute dermal toxicity : LD50 (Rabbit, male and female): 1.465,4 mg/kg

Method: OECD Test Guideline 402

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Acute toxicity (other routes of : No data available

administration)

Skin corrosion/irritation

Ingredients:

3,6-diazaoctanethylenediamin:

Species: Rabbit

Assessment: Corrosive

Method: OECD Test Guideline 405

Result: Corrosive

Serious eye damage/eye irritation

Ingredients:

3,6-diazaoctanethylenediamin:

Species: Rabbit

Assessment: Corrosive

Method: OECD Test Guideline 404

Result: Corrosive

Respiratory or skin sensitization

Ingredients:

1,2-Ethanediamine, N1,N2-bis(2-aminoethyl)-:

Routes of exposure: Skin Species: Guinea pig

Method: OECD Test Guideline 406 Result: Causes sensitization.

No data available Assessment:

Germ cell mutagenicity

Ingredients:

3,6-diazaoctanethylenediamin:

Genotoxicity in vitro : Concentration: 0 - 200 µg/L

> Metabolic activation: negative Method: OECD Test Guideline 482

Result: negative

Ingredients:

3.6-diazaoctanethylenediamin:

Genotoxicity in vivo : Application Route: Intraperitoneal injection

Dose: 0 - 600 mg/kg

Method: OECD Test Guideline 474

Result: negative

Carcinogenicity

Ingredients:

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3,6-diazaoctanethylenediamin: Species: Mouse, (male) Application Route: Dermal

Dose: 42 mg/kg

Frequency of Treatment: 3 daily Method: OECD Test Guideline 451

Result: negative

Carcinogenicity - Assessment

: No data available

Reproductive toxicity

Effects on fertility : No data available

Ingredients:

3,6-diazaoctanethylenediamin:

Effects on fetal development : Species: Rat

Application Route: Oral

General Toxicity Maternal: NOAEL (No observed adverse

effect level): > 750 mg/kg body weight Method: OECD Test Guideline 414 Result: No teratogenic effects.

Species: Rabbit

Application Route: Dermal

General Toxicity Maternal: NOAEL (No observed adverse

effect level): 125 mg/kg body weight 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:

3,6-diazaoctanethylenediamin: Species: Rat, male and female

NOAEL (No observed adverse effect level): 50

Application Route: Ingestion

Exposure time: 26 WeeksNumber of exposures: 7 d

Method: Subchronic toxicity

Repeated dose toxicity -

: No data available

Assessment

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Aspiration toxicity

No data available

Experience with human exposure

General Information: No data available

Inhalation: No data available

Skin contact: No data available

No data available Eye contact:

Ingestion: No data available

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

Further information

Ingestion: No data available

SECTION 12: Ecological information

12.1 Toxicity

Ingredients:

3,6-diazaoctanethylenediamin:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 330 mg/l

> Exposure time: 96 h Test Type: static test

Test substance: Fresh water Method: Fish Acute Toxicity Test

Ingredients:

3,6-diazaoctanethylenediamin:

Toxicity to daphnia and other

: EC50 (Daphnia magna (Water flea)): 31,1 mg/l aquatic invertebrates

Exposure time: 48 h Test Type: static test

Test substance: Fresh water

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

Ingredients:

3,6-diazaoctanethylenediamin:

Toxicity to algae : ErC50 (Selenastrum capricornutum (green algae)): 20 mg/l

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

M-Factor (Acute aquatic

toxicity)

: No data available

Toxicity to fish (Chronic

toxicity)

: No data available

Ingredients:

3,6-diazaoctanethylenediamin:

Toxicity to daphnia and other

aquatic invertebrates

(Chronic toxicity)

: EC10: 1,9 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea)

Test Type: semi-static test
Test substance: Fresh water
Method: OECD Test Guideline 202

M-Factor (Chronic aquatic

toxicity)

: No data available

Ingredients:

3,6-diazaoctanethylenediamin:

Toxicity to bacteria

: EC50 (activated sludge): 800 mg/l

Exposure time: 0,5 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

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Remarks : No data available

Further information: No data available

12.2 Persistence and degradability

Ingredients:

3,6-diazaoctanethylenediamin:

Biodegradability : Inoculum: activated sludge

Result: Not readily biodegradable.

Biodegradation: 0 % Exposure time: 162 d

Method: OECD Test Guideline 301D

Inoculum: activated sludge Result: Not readily biodegradable.

Biodegradation: 20 % Exposure time: 84 d

Method: Inherent Biodegradability: Modified SCAS Test

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

12.3 Bioaccumulative potential

Bioaccumulation : No data available

12.4 Mobility in soil

Mobility : No data available

Ingredients:

3,6-diazaoctanethylenediamin:

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Distribution among

environmental compartments

: Koc: 1584,9 - 5012. Method: OECD Test Guideline 106

Stability in soil

: No data available

12.5 Results of PBT and vPvB assessment

Assessment : No data available

12.6 Other adverse effects

Environmental fate and

pathways

: No data available

Endocrine disrupting

potential

: No data available

Adsorbed organic bound

halogens (AOX)

: No data available

Ozone-Depletion Potential No data available

Additional ecological

information

: No data available

Global warming potential

(GWP)

: No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Can be landfilled or incinerated, when in compliance with local

regulations.

Where possible recycling is preferred to disposal or

incineration.

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

IATA

14.1 UN number : UN 2734

14.2 UN proper shipping

name

: Amines, liquid, corrosive, flammable, n.o.s.

(TRIETHYLENE TETRAMINE, N,N-DIETHYL-1,3-

DIAMINOPROPANE)

14.3 Transport hazard

class(es)

Subsidiary risk

: 8

iary risk : 3

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14.4 Packing group : II

Labels : Corrosive, Flammable Liquids

855

Packing instruction (cargo

aircraft)

Packing instruction : 851

(passenger aircraft)

IMDG

14.1 UN number : UN 2734

14.2 UN proper shipping : AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.

name

(TRIETHYLENE TETRAMINE, N,N-DIETHYL-1,3-

DIAMINOPROPANE)

14.3 Transport hazard : 8

class(es)

Subsidiary risk : 3
14.4 Packing group : II
Labels : 8 (3)
EmS Code : F-E, S-C

14.5 Environmental hazards

Marine pollutant : no

ADR

14.1 UN number : UN 2734

14.2 UN proper shipping

name

: AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.

(TRIETHYLENE TETRAMINE, N,N-DIETHYL-1,3-

DIAMINOPROPANE)

14.3 Transport hazard : 8

class(es)

Subsidiary risk : 3 14.4 Packing group : II Labels : 8 (3)

14.5 Environmental hazards

Marine pollutant : no

RID

14.1 UN number : UN 2734

14.2 UN proper shipping : AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.

name

(TRIETHYLENE TETRAMINE, N,N-DIETHYL-1,3-

DIAMINOPROPANE)

14.3 Transport hazard : 8

class(es)

Subsidiary risk : 3
14.4 Packing group : II
Labels : 8 (3)

14.5 Environmental hazards

Marine pollutant : no

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

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

TSCA : Not On TSCA Inventory

DSL : This product contains the following components that are not

on the Canadian DSL nor NDSL.

AICS : Not in compliance with the inventory

NZIoC : Not in compliance with the inventory

ENCS : Not in compliance with the inventory

ISHL : Not in compliance with the inventory

KECI : Not in compliance with the inventory

PICCS : Not in compliance with the inventory

IECSC : 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), TSCA (USA)

15.2 Chemical Safety Assessment

SECTION 16: Other information

Full text of H-Statements

H226 : Flammable liquid and vapour.

H302 : Harmful if swallowed.

H312 : Harmful in contact with skin.

H314 : Causes severe skin burns and eye damage.

H317 : May cause an allergic skin reaction.

H412 : Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox. : Acute toxicity

Aquatic Chronic : Chronic aquatic toxicity Flam. Liq. : Flammable liquids : Skin Corr. : Skin corrosion

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Skin Sens. : Skin sensitization

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