

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

HUNTSMAN

Enriching lives through innovation

ARADUR® 1019 CH

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	20.08.2018	400001009074	Date of first issue: 20.08.2018

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

1.1 Product identifier

Trade name : ARADUR® 1019 CH

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

Use of the Substance/Mixture : Hardener

Recommended restrictions on use : For industrial use only.

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

1.4 Emergency telephone number

Emergency telephone number : 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

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

HUNTSMAN

Enriching lives through innovation

ARADUR® 1019 CH

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	20.08.2018	400001009074	Date of first issue: 20.08.2018

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin corrosion, Sub-category 1B	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.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

Hazard statements : H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.

Precautionary statements : **Prevention:**
P261 Avoid breathing mist or vapours.
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.
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:

3-[[3-(dimethylamino)propyl]amino]propionitrile

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

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

HUNTSMAN

Enriching lives through innovation

ARADUR® 1019 CH

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	20.08.2018	400001009074	Date of first issue: 20.08.2018

2.3 Other hazards

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
3-[[3-(Dimethylamino)propyl]amino]propionitrile	69852-45-5 274-159-1 01-2120271349-49	Skin Irrit. 2; H315 Eye Dam. 1; H318	>= 70 - < 90
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 Skin Sens. 1B; H317	>= 20 - < 29,85

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- | | |
|-------------------------|--|
| General advice | : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Treat symptomatically.
Get medical attention if symptoms occur. |
| If inhaled | : If inhaled, remove to fresh air.
Get medical attention if symptoms occur. |
| 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.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist. |
| If swallowed | : Clean mouth with water and drink afterwards plenty of water.
Keep respiratory tract clear.
Do NOT induce vomiting.
Never give anything by mouth to an unconscious person. |

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

HUNTSMAN

Enriching lives through innovation

ARADUR® 1019 CH

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	20.08.2018	400001009074	Date of first issue: 20.08.2018

If symptoms persist, call a physician.

Take victim immediately to hospital.

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

Treatment : Treat symptomatically.

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 : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : No hazardous combustion products are known

5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

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.
Refer to protective measures listed in sections 7 and 8.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

HUNTSMAN

Enriching lives through innovation

ARADUR® 1019 CH

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	20.08.2018	400001009074	Date of first issue: 20.08.2018

If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Neutralise with acid.
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal considerations see section 13., See Section 1 for emergency contact information.,
For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Do not breathe vapours/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.
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.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : When using do not eat or drink. When using do not 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 container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Keep in properly labelled containers.

Advice on common storage : For incompatible materials please refer to Section 10 of this SDS.

Recommended storage temperature : 2 - 40 °C

Further information on storage stability : Stable under normal conditions.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

HUNTSMAN

Enriching lives through innovation

ARADUR® 1019 CH

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	20.08.2018	400001009074	Date of first issue: 20.08.2018

7.3 Specific end use(s)

Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

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

Substance name	End Use	Exposure routes	Potential health effects	Value
N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine	Workers	Inhalation	Long-term systemic effects	3,7 mg/m3
	Workers	Inhalation	Acute systemic effects	7,5 mg/m3
	Workers	Inhalation	Long-term local effects	3,7 mg/m3
	Workers	Inhalation	Acute local effects	7,5 mg/m3
	Workers	Dermal	Long-term systemic effects	0,67 mg/kg
	Consumers	Inhalation	Long-term systemic effects	0,65 mg/m3
	Consumers	Inhalation	Long-term local effects	0,65 mg/m3
	Consumers	Oral	Long-term systemic effects	0,2 mg/kg

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

Substance name	Environmental Compartment	Value
N'-(3-aminopropyl)-N,N-dimethylpropane-1,3-diamine	Fresh water	9,2 µg/l
Remarks:	Assessment Factors	
	Marine water	0,92 µg/l
	Assessment Factors	
	Freshwater - intermittent	92 µg/l
	Assessment Factors	
	Sewage treatment plant	18,1 mg/l
	Assessment Factors	
	Fresh water sediment	0,0336 mg/kg
	Equilibrium method	
	Marine sediment	0,00336 mg/kg
	Equilibrium method	

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

HUNTSMAN

Enriching lives through innovation

ARADUR® 1019 CH

Version 1.0	Revision Date: 20.08.2018	SDS Number: 400001009074	Date of last issue: - Date of first issue: 20.08.2018
----------------	------------------------------	-----------------------------	--

	Soil	0,00132 mg/kg
	Equilibrium method	

8.2 Exposure controls

Personal protective equipment

- Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.
- Hand protection
- Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines
- Filter type : Organic vapour type (A)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Appearance : liquid
- Colour : No data is available on the product itself.
- Odour : amine-like
- Odour Threshold : No data is available on the product itself.
- pH : ca. 10 (20 °C)
Concentration: 500 g/l
- Freezing point : No data is available on the product itself.
- Melting point : No data is available on the product itself.
- Boiling point : > 200 °C
- Flash point : 105 °C
Method: Pensky-Martens closed cup
- Evaporation rate : No data is available on the product itself.
- Flammability (solid, gas) : No data is available on the product itself.

ARADUR® 1019 CH

Version 1.0	Revision Date: 20.08.2018	SDS Number: 400001009074	Date of last issue: - Date of first issue: 20.08.2018
----------------	------------------------------	-----------------------------	--

Burning rate	: No data is available on the product itself.
Upper explosion limit / Upper flammability limit	: No data is available on the product itself.
Lower explosion limit / Lower flammability limit	: No data is available on the product itself.
Vapour pressure	: 0,02 hPa (20 °C)
Relative vapour density	: No data is available on the product itself.
Relative density	: 0,89 (20 °C)
Density	: 0,89 g/cm ³ (20 °C)
Solubility(ies) Water solubility	: completely miscible (20 °C)
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.
Decomposition temperature	: > 185 °C
Viscosity Viscosity, dynamic	: 10 - 20 mPa.s (20 °C)
Explosive properties	: No data is available on the product itself.
Oxidizing properties	: No data is available on the product itself.

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : No hazards to be specially mentioned.

10.4 Conditions to avoid

Conditions to avoid : None known.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

HUNTSMAN

Enriching lives through innovation

ARADUR® 1019 CH

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	20.08.2018	400001009074	Date of first issue: 20.08.2018

10.5 Incompatible materials

Materials to avoid : Strong acids
Strong bases
Strong oxidizing agents

10.6 Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity - Product : Acute toxicity estimate : > 2 000 mg/kg
Method: Calculation method

Acute inhalation toxicity : No data available

Components:

3-[[3-(dimethylamino)propyl]amino]propiononitrile:

Acute dermal toxicity : LD50 (Rabbit, male and female): 4 500 mg/kg

LD50 (Rat, male and female): > 4 600 mg/kg

Method: OECD Test Guideline 402

Remarks: No mortality observed at this dose.

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

Acute dermal toxicity : LD50 (Rat): Assessment: The substance or mixture has no acute dermal toxicity

Acute toxicity (other routes of administration) : No data available

Skin corrosion/irritation

Components:

3-[[3-(dimethylamino)propyl]amino]propiononitrile:

Species: Rabbit

Exposure time: 24 h

Method: OECD Test Guideline 404

Result: Irritating to skin.

GLP: no

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

Species: Rabbit

Assessment: Corrosive

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

HUNTSMAN

Enriching lives through innovation

ARADUR® 1019 CH

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	20.08.2018	400001009074	Date of first issue: 20.08.2018

Method: OECD Test Guideline 404

Result: Corrosive

Serious eye damage/eye irritation

Components:

3-[[3-(dimethylamino)propyl]amino]propiononitrile:

Species: Rabbit

Method: OECD Test Guideline 405

Result: Risk of serious damage to eyes.

GLP: no

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

Assessment: Severe eye irritation

Result: Corrosive

Respiratory or skin sensitisation

Components:

3-[[3-(dimethylamino)propyl]amino]propiononitrile:

Test Type: Maurer optimisation test

Exposure routes: Dermal

Species: Rat

Result: negative

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

Exposure routes: Skin

Species: Guinea pig

Method: OECD Test Guideline 406

Result: The product is a skin sensitiser, sub-category 1B.

Assessment: No data available

Germ cell mutagenicity

Components:

3-[[3-(dimethylamino)propyl]amino]propiononitrile:

Genotoxicity in vitro : Test Type: reverse mutation assay

Test system: Salmonella typhimurium

Concentration: 25, 75, 225, 675 and 2025 µg/0

Metabolic activation: with and without metabolic activation

Method: reverse mutation assay

Result: negative

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

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

Method: OECD Test Guideline 487

Result: negative

: Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

HUNTSMAN

Enriching lives through innovation

ARADUR® 1019 CH

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	20.08.2018	400001009074	Date of first issue: 20.08.2018

Result: negative

: Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

Genotoxicity in vivo : No data available

Carcinogenicity

Components:

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

Species: Mouse, male

Application Route: Dermal

Exposure time: 20 month(s)

Frequency of Treatment: 3 daily

Result: negative

Carcinogenicity - Assessment : No data available

Reproductive toxicity

Components:

3-[[3-(dimethylamino)propyl]amino]propiononitrile:

Effects on fertility

: Test Type: Two-generation study

Species: Rat, male and female

Application Route: Oral

Dose: 0, 25,75 and 150 milligram per kilogram

General Toxicity - Parent: No observed adverse effect level:
150 mg/kg body weight

General Toxicity F1: No observed adverse effect level: 150
mg/kg body weight

General Toxicity F2: NOAEL: 150 mg/kg body weight

Method: This information is not available.

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

Species: Rat, male and female

Application Route: Oral

Method: OECD Test Guideline 422

Result: Animal testing did not show any effects on fertility.

Components:

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

Effects on foetal

: Species: Rat, male and female

development

Application Route: Oral

General Toxicity Maternal: No observed adverse effect level:
15 mg/kg body weight

Developmental Toxicity: No observed adverse effect level: 15
mg/kg body weight

Embryo-foetal toxicity: No observed adverse effect level: 15

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

HUNTSMAN

Enriching lives through innovation

ARADUR® 1019 CH

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	20.08.2018	400001009074	Date of first issue: 20.08.2018

mg/kg body weight
Method: OECD Test Guideline 422
Result: No effects on fertility and early embryonic development were detected.

Components:

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

Reproductive toxicity - : No evidence of adverse effects on sexual function and fertility,
Assessment or on development, based on animal experiments.

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Repeated dose toxicity

Components:

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

Species: Rat, male and female

NOEC: 550

Application Route: Ingestion

Test atmosphere: vapour

Exposure time: 3 Weeks Number of exposures: 7 d

Method: Subchronic toxicity

Species: Mouse, male

NOAEL: $\geq 56,3$

Application Route: Skin contact

Exposure time: 20 h Number of exposures: 3 d

Method: Chronic toxicity

Repeated dose toxicity - : No data available
Assessment

Aspiration toxicity

No data available

Experience with human exposure

General Information: No data available

Inhalation: No data available

Skin contact: No data available

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

HUNTSMAN

Enriching lives through innovation

ARADUR® 1019 CH

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	20.08.2018	400001009074	Date of first issue: 20.08.2018

Eye contact: No data available

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

Components:

3-[[3-(dimethylamino)propyl]amino]propiononitrile:

Toxicity to fish : NOEC (Oncorhynchus mykiss (rainbow trout)): ≥ 62 mg/l
End point: mortality
Exposure time: 96 h
Test Type: semi-static test
Analytical monitoring: yes
Test substance: Fresh water
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : NOEC (Daphnia magna (Water flea)): 100 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Analytical monitoring: yes
Test substance: Fresh water
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae : EyC50 (Pseudokirchneriella subcapitata (algae)): 30 mg/l
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes

ErC50 (Pseudokirchneriella subcapitata (algae)): 62 mg/l
Exposure time: 72 h

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

HUNTSMAN

Enriching lives through innovation

ARADUR® 1019 CH

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	20.08.2018	400001009074	Date of first issue: 20.08.2018

Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes

NOEC (*Pseudokirchneriella subcapitata* (green algae)): 12,5 mg/l

Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes

Toxicity to microorganisms : NOEC (activated sludge): 1 000 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209

EC50 (activated sludge): 6,6 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209

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

Toxicity to fish : LC50 (*Brachydanio rerio* (zebrafish)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 9,2 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 202

Toxicity to algae : ErC50 (*Selenastrum capricornutum* (green algae)): 21 mg/l
Exposure time: 72 h
Test Type: static test
Test substance: Fresh water
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50 (*Pseudomonas putida*): 181 mg/l
Exposure time: 16 h
Test Type: static test
Test substance: Fresh water
Method: DIN 38 412 Part 8

12.2 Persistence and degradability

Components:

3-[[3-(dimethylamino)propyl]amino]propionitrile:

Biodegradability : Test Type: aerobic
Inoculum: Domestic sewage

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

HUNTSMAN

Enriching lives through innovation

ARADUR® 1019 CH

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	20.08.2018	400001009074	Date of first issue: 20.08.2018

Concentration: 100 mg/l
Result: Not readily biodegradable.
Biodegradation: Measured 7 %
Related to: Biochemical oxygen demand
Exposure time: 28 d
Method: OECD Test Guideline 301F

Stability in water : Degradation half life (DT50): > 1 yr (25 °C)
pH: 4

Degradation half life (DT50): ca. 1 yr (25 °C)
pH: 7

Degradation half life: ca. 1 yr (25 °C)
pH: 9

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

Biodegradability : Result: Readily biodegradable.
Biodegradation: 100 %
Exposure time: 28 d
Method: ISO Method, other

12.3 Bioaccumulative potential

Components:

3-[[3-(dimethylamino)propyl]amino]propiononitrile:

Partition coefficient: n-octanol/water : log Pow: -0,47 (24 °C)
Method: OECD Test Guideline 107

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

Partition coefficient: n-octanol/water : log Pow: 0,5

log Pow: -0,56 (25 °C)
pH: 11,6
Method: OECD Test Guideline 107

12.4 Mobility in soil

Components:

3-[[3-(dimethylamino)propyl]amino]propiononitrile:

Distribution among environmental compartments : log Koc: > 5

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..

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

HUNTSMAN

Enriching lives through innovation

ARADUR® 1019 CH

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	20.08.2018	400001009074	Date of first issue: 20.08.2018

12.6 Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : 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.
Dispose of as hazardous waste in compliance with local and national regulations.
Dispose of contents/ container to an approved waste disposal plant.

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 2735
14.2 UN proper shipping name : Amines, liquid, corrosive, n.o.s.
(DIMETHYL DIPROPYL TRIAMINE)
14.3 Transport hazard class(es) : 8
14.4 Packing group : II
Labels : Corrosive
Packing instruction (cargo aircraft) : 855
Packing instruction (passenger aircraft) : 851

IMDG

14.1 UN number : UN 2735
14.2 UN proper shipping name : AMINES, LIQUID, CORROSIVE, N.O.S.
(DIMETHYL DIPROPYL TRIAMINE)
14.3 Transport hazard class(es) : 8
14.4 Packing group : II
Labels : 8
EmS Code : F-A, S-B

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

HUNTSMAN

Enriching lives through innovation

ARADUR® 1019 CH

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	20.08.2018	400001009074	Date of first issue: 20.08.2018

14.5 Environmental hazards

Marine pollutant : no

ADR

14.1 UN number : UN 2735

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

(DIMETHYL DIPROPYL TRIAMINE)

14.3 Transport hazard class(es) : 8

14.4 Packing group : II

Labels : 8

14.5 Environmental hazards

Environmentally hazardous : no

RID

14.1 UN number : UN 2735

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

(DIMETHYL DIPROPYL TRIAMINE)

14.3 Transport hazard class(es) : 8

14.4 Packing group : II

Labels : 8

14.5 Environmental hazards

Environmentally hazardous : no

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - 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

REACH - List of substances subject to authorisation - Future sunset date : Not applicable

Occupational Illnesses (R-461-3, France) : Not applicable

Other regulations:

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

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

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

HUNTSMAN

Enriching lives through innovation

ARADUR® 1019 CH

Version 1.0	Revision Date: 20.08.2018	SDS Number: 400001009074	Date of last issue: - Date of first issue: 20.08.2018
----------------	------------------------------	-----------------------------	--

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	: Not in compliance with the inventory
PICCS	: Not in compliance with the inventory
IECSC	: Not in compliance with the inventory
TCSI	: Not in compliance with the inventory
TSCA	: On the inventory, or in compliance with the inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), ENCS (Japan), KECI (Korea), NZIOC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (United States of America (USA))

15.2 Chemical safety assessment

Chemical Safety Assessments for all substances in this product are either Complete or Not applicable.

SECTION 16: Other information

Full text of H-Statements

H302	: Harmful if swallowed.
H314	: Causes severe skin burns and eye damage.
H315	: Causes skin irritation.
H317	: May cause an allergic skin reaction.
H318	: Causes serious eye damage.

Full text of other abbreviations

Acute Tox.	: Acute toxicity
Eye Dam.	: Serious eye damage
Skin Corr.	: Skin corrosion
Skin Irrit.	: Skin irritation
Skin Sens.	: Skin sensitisation

Further information

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

HUNTSMAN

Enriching lives through innovation

ARADUR® 1019 CH

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	20.08.2018	400001009074	Date of first issue: 20.08.2018

Classification of the mixture:

Skin Corr. 1B	H314
Eye Dam. 1	H318
Skin Sens. 1	H317

Classification procedure:

Calculation method
Calculation method
Calculation method

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 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.

The trademarks above are the property of Huntsman Corporation or an affiliate thereof.

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.