SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 6.13
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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

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

1.1 Product identifiers

Product name : Antifoam A Concentrate

Product Number : A5633
Brand : Sigma
REACH No. : This product is a mixture. REACH Registration Number see section 3.

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

Identified uses : Laboratory chemicals, Manufacture of substances

1.3

1.4 Emergency telephone

Emergency Phone # : 000 800 1007 141 (CHEMTREC)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Short-term (acute) aquatic hazard, (Category 1)	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, (Category 1)	H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal Word Warning

Hazard Statements	
H410	Very toxic to aquatic life with long lasting effects.
Precautionary Statements	
P273	Avoid release to the environment.
P391	Collect spillage.
P501	Dispose of contents/ container to an approved waste disposal plant.
Supplemental Hazard Statements	none

Reduced Labeling (<= 125 ml)
Pictogram

Signal Word	Warning
Hazard Statements	none
Precautionary Statements	none
Supplemental Hazard Statements	none

2.3 Other hazards

This substance/mixture contains components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB).

Ecological information:
The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Toxicological information:
The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Component	Classification	Concentration
Octamethylcyclotetrasiloxane Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)		
CAS-No. 556-67-2 EC-No. 209-136-7 Index-No. 014-018-00-1 *	Flam. Liq. 3; Repr. 2; Aquatic Acute 1; Aquatic Chronic 1; H226, H361f, H400, H410 M-Factor - Aquatic Acute: 10 - Aquatic Chronic: 10	>= 3 - < 10 %
DIMETHYLCYCLOSILOXANES		
	Acute Tox. 4; H302	>= 1 - < 10 %

*		
Decamethylcyclopentasiloxane Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)		
CAS-No. 541-02-6 EC-No. 208-764-9 *		>= 1 - < 10 %

*A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, or the annual tonnage does not require a registration.

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

If inhaled
After inhalation: fresh air.

In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact
After eye contact: rinse out with plenty of water. Remove contact lenses.

If swallowed
After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.Foam Carbon dioxide (CO2) Dry powder

Unsuitable extinguishing media
noneFor this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture
Carbon oxides
silicon oxides
Formaldehyde
Carbon oxides
silicon oxides
Exposure to decomposition products may be a hazard to health.
Combustible.

Vapors are heavier than air and may spread along floors.
Forms explosive mixtures with air on intense heating.
Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters
In the event of fire, wear self-contained breathing apparatus.

5.4 Further information
Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Do not breathe vapors, aerosols. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2 Environmental precautions
Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions
Tightly closed.

Storage class
Storage class (TRGS 510): 10: Combustible liquids

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

8.2 Exposure controls

Personal protective equipment

Eye/face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection
not required

Respiratory protection
Not required; except in case of aerosol formation.

Control of environmental exposure
Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a)	Physical state	liquid
b)	Color	No data available
c)	Odor	No data available
d)	Melting point/freezing point	No data available
e)	Initial boiling point and boiling range	200 °C
f)	Flammability (solid, gas)	No data available
g)	Upper/lower flammability or explosive limits	No data available
h)	Flash point	> 101 °C - closed cup
i)	Autoignition temperature	No data available
j)	Decomposition temperature	No data available
k)	pH	No data available
l)	Viscosity	Viscosity, kinematic: 1500 mm2/s Viscosity, dynamic: No data available
m)	Water solubility	No data available
n)	Partition coefficient:	No data available

	n-octanol/water	
o)	Vapor pressure	No data available
p)	Density	0,97 g/mL at 25 °C
	Relative density	0,97
q)	Relative vapor density	
r)	Particle characteristics	No data available
s)	Explosive properties	Not applicable
t)	Oxidizing properties	The substance or mixture is not classified as oxidizing.

9.2 Other safety information
No data available

SECTION 10: Stability and reactivity

10.1 Reactivity
Not classified as a reactivity hazard.
Forms explosive mixtures with air on intense heating.
A range from approx. 15 Kelvin below the flash point is to be rated as critical.

10.2 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions
Violent reactions possible with:

10.4 Conditions to avoid
Strong heating.

10.5 Incompatible materials
Strong oxidizing agents

10.6 Hazardous decomposition products
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Mixture

Acute toxicity
Acute toxicity estimate Oral - > 2.000 mg/kg
(Calculation method)
Acute toxicity estimate Inhalation - 4 h - > 40 mg/l - vapor(Calculation method)

Acute toxicity estimate Dermal - > 5.000 mg/kg
(Calculation method)

Skin corrosion/irritation
Remarks: Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation
Remarks: Based on available data, the classification criteria are not met.

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
In vitro tests did not show mutagenic effects
Test Type: Ames test
Result: negative

Carcinogenicity
No data available

Reproductive toxicity

Reproductive toxicity- Rat- male and female- Ingestion
No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

Developmental Toxicity- Rat- male and female

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

11.2 Additional Information

Endocrine disrupting properties

Product:

Assessment	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Repeated dose toxicity - Rat - Ingestion
Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

Components

Octamethylcyclotetrasiloxane

Acute toxicity
LD50 Oral - Rat - male - > 4.800 mg/kg
(OECD Test Guideline 401)
LC50 Inhalation - Rat - male and female - 4 h - 36 mg/l - dust/mist
(OECD Test Guideline 403)
LD50 Dermal - Rat - male and female - > 2.400 mg/kg
(OECD Test Guideline 402)
Remarks: (IUCLID)

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation - 24 h
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: No eye irritation
(OECD Test Guideline 405)

Respiratory or skin sensitization
Maximization Test - Guinea pig
Result: Does not cause skin sensitization.
(OECD Test Guideline 406)

Germ cell mutagenicity
Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Result: negative
Test Type: Ames test
Test system: S. typhimurium
Result: negative
Test Type: In vitro mammalian cell gene mutation test
Test system: Mouse lymphoma test
Result: negative
Method: OECD Test Guideline 475
Species: Rat - male and female
Result: negative
Method: OECD Test Guideline 478
Species: Rat - male and female - Bone marrow
Result: negative

Carcinogenicity
No data available

Reproductive toxicity
Suspected of damaging fertility.
Suspected of damaging fertility.

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure

Aspiration hazard
No data available

DIMETHYLCYCLOSILOXANES

Acute toxicity
Oral: No data available
Inhalation: No data available
Dermal: No data available

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Decamethylcyclopentasiloxane

Acute toxicity
LD50 Oral - Rat - > 5.000 mg/kg
(OECD Test Guideline 401)
LC50 Inhalation - Rat - male and female - 4 h - 8,67 mg/l - aerosol
(OECD Test Guideline 403)
LD50 Dermal - Rabbit - male and female - > 2.000 mg/kg
(OECD Test Guideline 402)

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation - 24 h
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: No eye irritation - 24 h
(OECD Test Guideline 405)

Respiratory or skin sensitization
in vivo assay - Mouse
Result: Does not cause skin sensitization.
(OECD Test Guideline 429)

Germ cell mutagenicity
Test Type: Ames test
Test system: S. typhimurium
Result: negative
Method: OECD Test Guideline 486
Species: Rat - male and female
Result: negative

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure

Aspiration hazard
No data available

SECTION 12: Ecological information

12.1 Toxicity

Mixture
No data available

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
This substance/mixture contains components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB).

12.6 Endocrine disrupting properties
Product:

Assessment	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects
No data available

Components

Octamethylcyclotetrasiloxane

Toxicity to fish	flow-through test LC50 - Oncorhynchus mykiss (rainbow trout) - > 0,022 mg/l - 96 h (US-EPA)
Toxicity to daphnia and other aquatic invertebrates	flow-through test EC50 - Daphnia magna (Water flea) - > 0,015 mg/l - 48 h (US-EPA)
Toxicity to algae	ErC50 - Pseudokirchneriella subcapitata - > 0,022 mg/l - 96 h (US-EPA)
Toxicity to fish(Chronic toxicity)	flow-through test NOEC - Oncorhynchus mykiss (rainbow trout) - >= 0,0044 mg/l - 93 d Remarks: (ECHA)
Toxicity to daphnia and other aquatic	flow-through test NOEC - Daphnia magna (Water flea) - 0,0079 mg/l - 21 d

invertebrates(Chronic (US-EPA) toxicity)

DIMETHYLCYCLOSILOXANES

No data available

Components

Decamethylcyclopentasiloxane
No toxicity at the limit of solubility.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
No data available

SECTION 14: Transport information

14.1 UN number
ADR/RID: 3082 IMDG: 3082 IATA: 3082

14.2 UN proper shipping name
ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Octamethylcyclotetrasiloxane) (Octamethylcyclotetrasiloxane)
IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Octamethylcyclotetrasiloxane) (Octamethylcyclotetrasiloxane)
IATA: Environmentally hazardous substance, liquid, n.o.s. (Octamethylcyclotetrasiloxane) (Octamethylcyclotetrasiloxane)

14.3 Transport hazard class(es)
ADR/RID: 9 IMDG: 9 IATA: 9

14.4 Packaging group
ADR/RID: III IMDG: III IATA: III

14.5 Environmental hazards
ADR/RID: yes IMDG Marine pollutant: yes IATA: yes

14.6 Special precautions for user
Tunnel restriction code : (-)

Further information
EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.Packages smaller than or equal to 5 kg / L , not dangerous goods of Class 9

SECTION 15: Regulatory information

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Authorisations and/or restrictions on use

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	: Decamethylcyclopentasiloxane
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	: Decamethylcyclopentasiloxane Octamethylcyclotetrasiloxane

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	E1	ENVIRONMENTAL HAZARDS

Other regulations

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements

H226	Flammable liquid and vapor.
H302	Harmful if swallowed.
H361f	Suspected of damaging fertility.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Classification of the mixture		**Classification procedure:**
Aquatic Acute1	H400	Calculation method
Aquatic Chronic1	H410	Calculation method

Further information

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.