1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

1.1 Product identifier

Product name:	CAPS Prime O 1L
Chemical name:	Hexamethyldisiloxane, HMDSO
CAS-No.:	107-46-0

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

Additive for Arcotec CCVD-Dosing device

1.3 Details of the supplier of the safety data sheet

Company	Arcotec GmbH Rotweg 24 71297 Mönsheim Germany
Telephone	+49 (0)704492120 (weekdays 9.00 - 15.00 clock)
Fax	
E-mail	info@arcotec.com
Website	http://www.arcotec.com

2. HAZARDS IDENTIFICATION

2.1 Classification according to Regulation (EC) No 1272/2008

Flammable liquids, Category 2, H225
Acute aquatic toxicity, Category 1, H400
Chronic aquatic toxicity, Category 2, H411
For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

according to Regulation (EC) No 1272/2008

Hazard pictograms GHS02  GHS09 

Signal word **DANGER**

Hazard statements

H225	Highly flammable liquid and vapour.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P273	Avoid release to the environment.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P370+P378	In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.
P391	Collect spillage.

Other hazards

Static-accumulating flammable liquid.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

CAS-No	EG-No	INDEX-No	Classification	Concentration
Hexamethyldisiloxane				
107-46-0	203-492-7	---	Flam. Liq. – 2 – H225 Aquatic Acute – 1 – H400 Aquatic Chronic – 2 – H411	> 99.0 - ≤ 100.0 %

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

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice:

If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation

Move person to fresh air; if effects occur, consult a physician.

Skin contact

Wash off with plenty of water.

Eye contact
Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Ingestion
No emergency medical treatment necessary.

4.2 Most important symptoms and effects, both acute and delayed
irritant effects, cough, tears and redness

4.3 Indication of any immediate medical attention and special treatment needed
Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing media
Water spray Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical.

Unsuitable extinguishing media
High volume water jet. Do not use direct water stream.

5.2 Special hazards arising from the substance or mixture
Hazardous combustion products: Carbon oxides Silicon oxides.

Flash back possible over considerable distance. Exposure to combustion products may be a hazard to health. Vapours may form explosive mixtures with air.

5.3 Advice for firefighters
Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Use water spray to cool unopened containers. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of re ignition has passed. Remove undamaged containers from fire area if it is safe to do so.

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

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Remove all sources of ignition. Ventilate the area. Follow safe handling advice and personal protective equipment recommendations.

6.2 Environmental precautions

Do not release the product to the aquatic environment above defined regulatory levels Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and materials for containment and cleaning up

Non-sparking tools should be used. Soak up with inert absorbent material. Suppress (knock down) gases/vapours/mists with a water spray jet. Clean up remaining materials from spill with suitable absorbant. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid inhalation of vapour or mist. Keep container tightly closed. Keep away from heat and sources of ignition. Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the environment. Non-sparking tools should be used. Handle in accordance with good industrial hygiene and safety practice.
Use with local exhaust ventilation. Use only in an area equipped with explosion proof exhaust ventilation. Ensure all equipment is electrically grounded before beginning transfer operations. This material can accumulate static charge due to its inherent physical properties and can therefore cause an electrical ignition source to vapours. In order to prevent a fire hazard, as bonding and grounding may be insufficient to remove static electricity, it is necessary to provide an inert gas purge before beginning transfer operations. Restrict flow velocity in order to reduce the accumulation of static electricity. Ground and bond container and receiving equipment.

7.2 Conditions for safe storage, including any incompatibilities

Keep in properly labelled containers. Keep tightly closed. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Keep away from heat and sources of ignition. Do not store with the following product types: Strong oxidizing agents. Organic peroxides. Flammable

solids. Pyrophoric liquids. Pyrophoric solids. Self-heating substances and mixtures. Substances and mixtures, which in contact with water, emit flammable gases. Explosives. Gases.

7.3 Specific end use(s)

For the relevant identified use according to section 1, the instructions given in this section 7 must be observed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with occupational exposure limits

No occupational exposure limits known.

Derived No Effect Level (DNEL)

Workers DNEL, long-term	Systemic effects	inhalation	890 mg/m³
Workers DNEL, long-term	Systemic effects	dermal	126 mg/kg
Consumers DNEL, long-term	Systemic effects	inhalation	266 mg/m³
Consumers DNEL, long-term	Systemic effects	dermal	25 mg/kg

Predicted No Effect Concentration (PNEC)

PNEC Fresh water	0.008 mg/l
PNEC Fresh water sediment	4.8 mg/kg
PNEC Marine water	0.0008 mg/l
PNEC Marine sediment	0.48 mg/kg
PNEC Sewage treatment plant	10 mg/l

8.2 Exposure controls

Engineering controls

Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations.
Suitable assessment methods for checking the effectiveness of the protective measures taken include metrological and non-metrological investigation methods as described in the Technical Rules for Hazardous Substances (TRGS) 4021.

Personal protective equipment

Select personal protective equipment depending on the concentration and quantity of hazardous substances specific to the workplace.

Eye/face protection

Use safety glasses (with side shields) and face shield. Safety glasses (with side shields) should be consistent with EN 166 or equivalent.

Skin and body protection
Body protection must be chosen depending on activity and possible exposure.

Hand protection
Use chemical resistant protective gloves. (For Instance: nitrile rubber, 0.4 mm thickness at direct contact or nitrile rubber, 0.11 mm thickness at splash contact.)
The protective gloves to be used must comply with the specifications of EC Directive 89/686 / EEC and the standard EN 374 resulting from it.

Respiratory protection
Not required for good ventilation but avoid inhalation of vapours.
Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator. Use the following CE approved air-purifying respirator: Organic vapour cartridge, type A.

Hygiene measures
Not smoking, eating or drinking during processing.
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of work. Take off immediately all contaminated clothing.

Environmental exposure controls
Do not discharge into drains/surface waters/groundwater. Local authorities should be advised if significant spillages cannot be contained.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	liquid
Colour	colourless
Odour	characteristic

Safety relevant data

pH-value	No data available
Melting point/range	-68 °C
Boiling point/range	100 °C (1013 hPa)
Flash point	4 °C
Evaporation Rate	No data available
Flammability	No data available
Lower explosion limit	1.5 % (V)
Upper explosion limit	14.65 % (V)
Vapour Pressure	20 hPa (20 °C) or 175 hPa (50 °C)

Relative Vapour Density	No data available
Relative Density	0.76 g/cm^3
Water solubility	0,00037 g/l (20 °C)
Partition coefficient: n-octanol/water	log Pow: > 3.16 (25 °C)
Auto-ignition temperature	352 °C
Decomposition temperature	No data available
Kinematic Viscosity	0.65 mm²/s at 25° C
Explosive properties	not explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.

Other information

Molecular weight	162.38 g/mol

10. STABILITY AND REACTIVITY

10.1 Reactivity

Vapours may form explosive mixture with air.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Can react with strong oxidizing agents. Adequate ventilation is required. Vapours may form explosive mixture with air. Highly flammable liquid and vapour.

10.4 Conditions to avoid

Heat, flames and sparks and avoid other sources of ignition. Avoid direct sunlight and UV light.

10.5 Incompatible materials

oxidizing agents, strong acids, strong acids.

10.6 Hazardous decomposition products

No hazardous decomposition products if stored and handled as prescribed/indicated. In case of fire hazardous decomposition products may be produced (Formaldehyde, see SECTION 5).

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity: Very low toxicity if swallowed. Harmful effects not anticipated from

swallowing small amounts.
LD50 Rat: > 12000 mg/kg

Acute dermal toxicity: Prolonged skin contact is unlikely to result in absorption of harmful amounts.
LD50 Rat: > 2000 mg/kg (No deaths occurred at this concentration.)

Acute inhalation toxicity: Prolonged exposure is not expected to cause adverse effects.
LC50 Rat: 106 mg/l; 4h; Vapour

Skin corrosion/irritation

Brief contact is essentially non irritating to skin. Prolonged contact may cause skin irritation with local redness.

Serious eye damage/eye irritation

May cause slight temporary eye irritation.

Sensitization

Did not cause allergic or sensitization reactions.

Germ cell mutagenicity

The substance was not mutagenic.

Carcinogenicity

No relevant data found.

Teratogenicity

No relevant data found.

Reproductive toxicity

No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

No relevant data found.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

No relevant data found.

Aspiration Hazard

No relevant data found.

Additional Information

No relevant data found.

Handle in accordance with good industrial hygiene and safety practice.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Acute toxicity to fish

Material is very toxic to aquatic organisms.

LC50, Oncorhynchus mykiss (rainbow trout): 0.46 mg/l; 96 h

Acute toxicity to algae/aquatic plants

ErC50, Selenastrum capricornutum (green algae): > 0.55 mg/l; 72 h

Chronic aquatic toxicity

NOEC, Daphnia (Water flea): 0.08 mg/l; 21 d

12.2 Persistence and degradability

Material is expected to biodegrade very slowly.

12.3 Bioaccumulative potential

Bioaccumulation potential is high: Bioconcentration factor (BCF) > 3000

12.4 Mobility in soil

No or only moderate potential for mobility in soil.

12.5 Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

12.6 Other adverse effects

Avoid release to the environment.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Do not dump into any sewers, on the ground, or into any body of water. Do not dispose of with household waste. This product, when being disposed of in its unused and uncontaminated state should be treated as a hazardous waste according to EC Directive 2008/98/EC. Any disposal practices must be in compliance with all national and provincial laws and any municipal or local by-laws governing hazardous waste. For used, contaminated and residual materials additional evaluations may be required.

Contaminated packaging
Dispose contaminated packaging like the unused product.

The definitive assignment of this material to the appropriate EWC group and thus its proper EWC code will depend on the use that is made of this material.

14. TRANSPORT INFORMATION

Classification for ROAD and Rail transport (ADR/RID):

14.1 UN-number:	UN 1993
14.2 UN proper shipping name	FLAMMABLE LIQUID, N.A.G.
14.3 Transport hazard classes	3
14.4 Packing group	II
14.5 Environmental hazards	environmentally hazardous substance
14.6 Special precautions for user	Special Provision 640D Hazard Identification Number: 33

Classification for SEA transport (IMO – IMDG):

14.1 UN-number:	UN 1993
14.2 UN proper shipping name	FLAMMABLE LIQUID, N.O.S.
14.3 Transport hazard classes	3
14.4 Packing group	II
14.5 Environmental hazards	environmentally hazardous substance
14.6 Special precautions for user	EmS: F-E, S-E
14.7 Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA-DGR):

14.1 UN-number:	UN 1993
14.2 UN proper shipping name	FLAMMABLE LIQUID, N.O.S.
14.3 Transport hazard classes	3
14.4 Packing group	II
14.5 Environmental hazards	Not applicable.
14.6 Special precautions for user	No data available.

Transport regulations are cited in accordance with international regulations and in the form in which they are used in Germany. Possible deviations in other countries are not taken into account. This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

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

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

Listed in Regulation: FLAMMABLE LIQUIDS
Number in Regulation: P5c
5 000 t
50 000 t

Listed in Regulation: ENVIRONMENTAL HAZARDS
Number in Regulation: E1
100 t
200 t

Water hazard class (Germany)
WGK 2, significantly water endangering

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out for this substance.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3, according to Regulation (EC) No 1272/2008

H225	Highly flammable liquid and vapour.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Abbreviations and acronyms

CAS	Chemical Abstracts Service
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
GHS	Globally Harmonized System
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
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
PBT	Persistent, Bioaccumulative and Toxic substance
REACH	Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
TRGS	Technical Rule for Hazardous Substances
POW	Partition coefficient: n-octanol/water
vPvB	Very Persistent and Very Bioaccumulative

Information Source and References

Suppliers Safety Data Sheets
https://echa.europa.eu

Further information's

This document supersedes all previously issued documents for this product.
This safety data sheet fulfils the requirements of the regulation (EG) No 1907/2006.

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