

DEF35

Safety Data Sheet

according to Regulation (EU) 2015/830

Issue date: 4/5/2022 Revision date: 4/5/2025

Version: 1.1

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

1.1. Product identifier

Product form	: Mixture
Trade name	: DEF35
Product code	: DEF35
Type of product	: Defoamer
Synonyms	: Polydimethyl siloxane
Product group	: Trade product

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Defoamer

1.2.2. Uses advised against

Restrictions on use : Keep out of the reach of children, Product for industrial use only

1.3. Details of the supplier of the safety data sheet

ImproChem(Pty) Ltd T/A AECI Water
1 Wharhirst Road
Umbogintwini - South Africa
T +27(31) 949 8200

1.4. Emergency telephone number

Emergency number : 0800 SPILLS or 0800 774557

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation, Category 2	H315
Skin sensitisation, Category 1	H317
Carcinogenicity, Category 1B	H350
Hazardous to the aquatic environment – Chronic Hazard, Category 2	H411

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

May cause cancer by inhalation.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS08

GHS09

Signal word (CLP)	: Danger
Hazardous ingredients	: FORMALDEHYDE 37%
Hazard statements (CLP)	: H350 - May cause cancer (Inhalation).
Precautionary statements (CLP)	: P308+P313 - IF exposed or concerned: Get medical advice/attention.
EUH-statements	: EUH208 - Contains Formaldehyde 37 % solution .May produce an allergic reaction.

Labelling according to Directive 67/548/EEC or 1999/45/EC

2.3. Other hazards

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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ETHOX NONYL PHENOL - 20 MOLE substance listed as REACH Candidate (4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof]) substance listed in REACH Annex XIV (4-Nonylphenol, branched and linear, ethoxylated (substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof))	(CAS-No.) 9016-45-9	< 5	Not Classified
ETHOX OCTYLPHENOL, 5 MOLES substance listed as REACH Candidate (4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]) substance listed in REACH Annex XIV (4-(1,1,3,3-Tetramethylbutyl) phenol, ethoxylated (covering well-defined substances and UVCB substances, polymers and homologues))	(CAS-No.) 9002-93-1	< 3	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 2, H411
FORMALDEHYDE 37%	(CAS-No.) 50-00-0 (EC-No.) 200-001-8 (EC Index-No.) 605-001-00-5 (REACH-no) 01-2119488953-20	< 0.5	Carc. 1B, H350 Muta. 2, H341 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Skin Corr. 1B, H314 Skin Sens. 1, H317

Specific concentration limits:

Name	Product identifier	Specific concentration limits
FORMALDEHYDE 37%	(CAS-No.) 50-00-0 (EC-No.) 200-001-8 (EC Index-No.) 605-001-00-5 (REACH-no) 01-2119488953-20	(0.2 ≤C < 100) Skin Sens. 1, H317 (5 ≤C < 100) STOT SE 3, H335 (5 ≤C < 25) Eye Irrit. 2, H319 (5 ≤C < 25) Skin Irrit. 2, H315 (25 ≤C < 100) Skin Corr. 1B, H314

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Treat symptomatically. IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Treat symptomatically.
First-aid measures after skin contact	: Wash immediately with lots of water (15 minutes)/shower. Remove clothing while washing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation	: May cause cancer.
Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: Unlikely to cause harmful effects. Large amounts: May cause gastrointestinal irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Not flammable.
Explosion hazard	: No direct explosion hazard.

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Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Precautionary measures fire : Evacuate area. Eliminate all ignition sources if safe to do so.
Firefighting instructions : Cool laterally with water containers exposed to flames, even after the fire is extinguished. Do not enter fire area without proper protective equipment, including respiratory protection. Evacuate area.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Material is slippery when spilled. Avoid contact with skin, eyes and clothing. Do not handle until all safety precautions have been read and understood. Eliminate every possible source of ignition. Evacuate area.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Ventilate spillage area. Only qualified personnel equipped with suitable protective equipment may intervene. Avoid breathing dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Collect spillage.
Methods for cleaning up : Take up liquid spill into absorbent material. Shovel or sweep up and put in a closed container for disposal. Notify authorities if product enters sewers or public waters.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.
Handling temperature : > 150 °C Release of formaldehyde, requiring respiratory protection
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ensure adequate ventilation, especially in confined areas. Facilities: shower, eye shower.
Storage conditions : Store in a well-ventilated place. Keep cool. Store locked up.
Incompatible materials : Oxidising agents.
Storage temperature : < 150 °C
Heat and ignition sources : Keep away from ignition sources.
Storage area : Keep container in a well-ventilated place. Keep only in the original container. Store in a cool area.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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FORMALDEHYDE 37% (50-00-0)

United Kingdom - Occupational Exposure Limits

Local name	Formaldehyde
WEL TWA (OEL TWA) [1]	2.5 mg/m ³
WEL TWA (OEL TWA) [2]	2 ppm
WEL STEL (OEL STEL)	2.5 mg/m ³
WEL STEL (OEL STEL) [ppm]	2 ppm

FORMALDEHYDE 37% (50-00-0)

United Kingdom	Local name	Formaldehyde
United Kingdom	WEL TWA (OEL TWA) [1]	2.5 mg/m ³
United Kingdom	WEL TWA (OEL TWA) [2]	2 ppm
United Kingdom	WEL STEL (OEL STEL)	2.5 mg/m ³
United Kingdom	WEL STEL (OEL STEL) [ppm]	2 ppm

8.2. Exposure controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Personal protective equipment	: Gloves, shoulder length. Protective clothing. Protective goggles. Safety Boots. Insufficient ventilation: wear respiratory protection.
Hand protection	: Gloves, shoulder length
Eye protection	: Protective goggles
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment. [In case of inadequate ventilation] wear respiratory protection.



Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: White to off-white.
Odour	: Slight.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: > 100 °C
Flash point	: > 120 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: 1
Relative density	: No data available
Solubility	: Emulsifies with water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available

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Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Oxidizing agent.

10.6. Hazardous decomposition products

Formaldehyde.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

NONYLPHENOLETHOXYLATE 9 MOL (9016-45-9)

LD50 oral rat	< 2000 mg/kg
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ETHOX OCTYLPHENOL, 5 MOLES (9002-93-1)

LD50 dermal rabbit	> 3000 mg/kg
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FORMALDEHYDE 37% (50-00-0)

LD50 oral	100 mg/kg bodyweight
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LD50 dermal	270 mg/kg bodyweight
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LC50 Inhalation - Rat (Dust/Mist)	497 mg/m ³
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Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: May cause cancer (Inhalation)
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

NONYLPHENOLETHOXYLATE 9 MOL (9016-45-9)

LC50 - Fish [1]	5.6 mg/l (Brachydanio rerio)
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EC50 - Crustacea [1]	19 mg/l
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ETHOX OCTYLPHENOL, 5 MOLES (9002-93-1)

LC50 - Fish [1]	4 – 8.9 mg/l (Pimephales promelas)
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EC50 - Crustacea [1]	18 – 26 mg/l
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FORMALDEHYDE 37% (50-00-0)

LC50 - Fish [1]	6.7 mg/l
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EC50 - Crustacea [1]	14.7 mg/l
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FORMALDEHYDE 37% (50-00-0)	
EC50 - Other aquatic organisms [1]	5.8 mg/l EC50 waterflea (48 h)
EC50 - Other aquatic organisms [2]	3.48 mg/l IC50 algae (72 h) mg/l

12.2. Persistence and degradability

ETHOX OCTYLPHENOL, 5 MOLES (9002-93-1)	
Chemical oxygen demand (COD)	2.19 mg/l

FORMALDEHYDE 37% (50-00-0)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.64 g O ₂ /g substance
Chemical oxygen demand (COD)	1.06 g O ₂ /g substance
ThOD	1.068 g O ₂ /g substance
BOD (% of ThOD)	0.8 % ThOD

12.3. Bioaccumulative potential

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Bioaccumulative potential	Low bioaccumulation potential.

FORMALDEHYDE 37% (50-00-0)	
Partition coefficient n-octanol/water (Log Pow)	0.35

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component	
NONYLPHENOLETHOXYLATE 9 MOL (9016-45-9)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
ETHOX OCTYLPHENOL, 5 MOLES (9002-93-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR)	: Not applicable
UN-No. (IMDG)	: Not applicable
UN-No. (IATA)	: Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: Not applicable
Proper Shipping Name (IMDG)	: Not applicable
Proper Shipping Name (IATA)	: Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: Not applicable
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IMDG

Transport hazard class(es) (IMDG)	: Not applicable
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IATA

Transport hazard class(es) (IATA)	: Not applicable
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14.4. Packing group

Packing group (ADR)	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable

14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

14.6. Special precautions for user

- Overland transport

Not applicable

- Transport by sea

Not applicable

- Air transport

Not applicable

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

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains a substance on the REACH candidate list: 4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof] (CAS 9016-45-9), 4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues] (CAS 9002-93-1)

Contains REACH Annex XIV substances: 4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof] (CAS 9016-45-9), 4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues] (CAS 9002-93-1)

Substance name	Authorisation number	Sunset date	REACH authorisation exemptions
4-Nonylphenol, branched and linear, ethoxylated (substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof) (CAS 9016-45-9)		04/01/2021	
4-(1,1,3,3-Tetramethylbutyl)phenol, ethoxylated (covering well-defined substances and UVCB substances, polymers and homologues) (CAS 9002-93-1)		04/01/2021	

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

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Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Full text of H- and EUH-statements:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Carc. 1B	Carcinogenicity, Category 1B
EUH208	Contains Formaldehyde 37 % solution (fieldvalue=_SENSITIZER_COMPONENTS). May produce an allergic reaction.
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H400	Very toxic to aquatic life.

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H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
Muta. 2	Germ cell mutagenicity, Category 2
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

SDS ImproChem Test

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