

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

1.1. GHS product identifier

Product form	: Substance
Trade name	: FLOCBUILDER 4000
Chemical name	: N,N-Dimethyl-N-2-propenyl-2-propen-1-aminium chloride homopolymer ; Poly(dimethyldiallyl-ammonium chloride)
Type of product	: Polymers
CAS-No.	: 26062-79-3
Product code	: FLOCBUILDER 4000
Product group	: Trade product

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

No additional information available

1.4. Supplier's details

Improchem (Pty) Ltd T/A AECI Water
1 Wharhirst Road
Umbogintwini
South Africa
T +27 (031) 949 8200

1.5. Emergency phone number

Emergency number : 0800 SPILLS OR 0800 774557

SECTION 2: Hazard identification

2.1. GHS classification of the substance/mixture and any national or regional information

Classification according to the United Nations GHS

Flammable liquids Not classified

Hazardous to the aquatic environment – Acute Hazard, Category 1 H400

Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects : Causes skin and eye irritation, Aquatic toxicity is reduced by factors from 10 to 100 times in the presence of 5 to 10 mg/l organic carbon as is found in most surface waters.
The product is rapidly eliminated from the aquatic medium through irreversible adsorption onto suspended matter and dissolved organics, Very toxic to aquatic life.

2.2. GHS label elements, including precautionary statements

Labelling according to the United Nations GHS

Hazard pictograms (GHS ZA) :



Signal word (GHS-ZA) : Warning
Hazard statements (GHS ZA) : H400 - Very toxic to aquatic life
Precautionary statements (GHS ZA) : P102 - Keep out of reach of children.
P273 - Avoid release to the environment.
P391 - Collect spillage.
P501 - Dispose of contents/container to

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2.3. Other hazards which do not result in classification or are not covered by the GHS

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name : FLOCBUILDER 4000
CAS-No. : 26062-79-3
Chemical name : N,N-Dimethyl-N-2-propenyl-2-propen-1-aminium chloride homopolymer ;
Poly(dimethyldiallyl-ammonium chloride)

Product identifiers: See section 1.1

Name	Product identifier	%	Classification according to the United Nations GHS
Polydadmac	CAS-No.: 26062-79-3	10 – 35	Not classified

Full text of H-statements: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of necessary first aid measures

First-aid measures general : Get medical advice/attention if you feel unwell. Specific treatment see section 4 of SDS.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
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/effect, acute and delayed

Symptoms/effects after inhalation : No effects known.
Symptoms/effects after skin contact : May cause skin irritation to sensitive individuals.
Symptoms/effects after eye contact : May cause slight irritation.
Symptoms/effects after ingestion : No effects known.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

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

5.2. Specific hazards arising from the chemical

Fire hazard : Not flammable.
Explosion hazard : No direct explosion hazard.
Hazardous decomposition products in case of fire : Carbon dioxide. Carbon monoxide.

5.3. Special protective actions for fire-fighters

Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.

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Firefighting instructions	: Cool tanks/drums with water spray/remove them into safety. Dilute toxic gases with water spray. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Other information	: Spill area may be slippery.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area. Eliminate every possible source of ignition. If spilled, may cause the floor to be slippery.

6.1.1. For non-emergency personnel

Protective equipment : Gloves. Protective clothing. See "Material-Handling" to select protective clothing.
Emergency procedures : Ventilate spillage area.

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 : Stop leak if safe to do so. Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and materials for containment and cleaning up

For containment : Collect spillage.
Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

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.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Provide local exhaust or general room ventilation.
Storage conditions : Store in a well-ventilated place. Keep cool.
Storage area : Protect against frost. Meet the legal requirements.
Incompatible products : Oxidizing agent.
Incompatible materials : Corrosion tests were done using Polydamac and the Corrosion Rate was 1.68 mm/year which is less than max of 6.25 mm/year, above which a product is classified as corrosive.
Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources.
Information on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) bases.
Special rules on packaging : SPECIAL REQUIREMENTS: closing. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials : Keep only in the original container.
Storage temperature : < 50 °C

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

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8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

- Materials for protective clothing : Good resistance: Polyvinylchloride (PVC)
Hand protection : Protective gloves
Eye protection : Protective goggles. Safety glasses
Skin and body protection : Wear suitable protective clothing
Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s)



8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Basic physical and chemical properties

- Physical state : Liquid
Appearance : Liquid.
Colour : Clear to pale yellow.
Clear to pale yellow
Odour : Characteristic odour. Mild odour.
Characteristic odour Mild odour
Odour threshold : No data available
pH : No data available
pH solution : No data available
Relative evaporation rate (butylacetate=1) : No data available
Relative evaporation rate (ether=1) : No data available
Melting point : Not applicable
Freezing point : No data available
Boiling point : > 100 °C
Flash point : > 93.3 °C
Auto-ignition temperature : No data available
Decomposition temperature : > 300 °C
Flammability : Non flammable.
Vapour pressure : 17.5 mm Hg
Vapour pressure at 50°C : No data available
Relative vapour density at 20°C : 0.62
Relative density : 1.033
Relative density of saturated gas/air mixture : No data available
Density : 1.02 – 1.06 kg/l @ 25 c
Relative gas density : No data available
Solubility : Soluble in water.
Water: soluble
Partition coefficient n-octanol/water (Log Pow) : No data available
Partition coefficient n-octanol/water (Log Kow) : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : 50 – 400 cP Brookfield LV , Spindle 2 @ 30 rpm
Explosive properties : No data available
Oxidising properties : No data available
Explosive limits : No data available
Lower explosion limit : No data available
Upper explosion limit : No data available

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Physical state : Liquid
Appearance : Liquid.

9.2. Data relevant with regard to physical hazard classes (supplemental)

Other properties : Clear. Substance has acid reaction.

SECTION 10: Stability and Reactivity

10.1. Reactivity

On heating/burning: release of toxic and corrosive gases/vapours (nitrous vapours, hydrogen chloride, carbon monoxide - carbon dioxide). Reacts with (strong) oxidizers. Reacts with (some) bases.

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

Corrosion tests were done using Polydadmac and the Corrosion Rate was 1.68 mm/year which is less than the max of 6.25 mm/year, above which a product is classified as corrosive.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

FLOCBUILDER 4000 (26062-79-3)

LD50 oral rat	3000 mg/kg
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Polydadmac (26062-79-3)

LD50 oral rat	> 2000 mg/kg (Rat)
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Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
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 : Very toxic to aquatic life.

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Ecology - air	: Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Not included in the list of fluorinated greenhouse gases (Regulation (EC) No 842/2006). TA-Luft Klasse 5.2.5.
Ecology - water	: Aquatic toxicity is reduced by factors from 10 to 100 times in the presence of 5 to 10 mg/l organic carbon as is found in most surface waters. The product is rapidly eliminated from the aquatic medium through irreversible adsorption onto suspended matter and dissolved organics.
Hazardous to the aquatic environment, short-term (acute)	: Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

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LC50 - Fish [1]	0.1 – 1 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Brachydanio rerio)
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12.2. Persistence and degradability

FLOCBUILDER 4000 (26062-79-3)

Persistence and degradability	Not readily biodegradable in water. No (test)data on mobility of the substance available. Photolysis in the air.
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Polydadmac (26062-79-3)

Persistence and degradability	Not readily biodegradable in water. No (test)data on mobility of the substance available. Photolysis in the air.
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12.3. Bioaccumulative potential

FLOCBUILDER 4000 (26062-79-3)

Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
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Polydadmac (26062-79-3)

Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
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12.4. Mobility in soil

FLOCBUILDER 4000 (26062-79-3)

Mobility in soil	No additional information available
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12.5. Other adverse effects

Ozone	: Not classified
Other adverse effects	: No additional information available

SECTION 13: Disposal Considerations

13.1. Disposal methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Specific preliminary treatment. Remove to an authorized incinerator with energy recovery. Do not discharge into drains or the environment.
Additional information	: Hazardous waste according to Directive 2008/98/EC.




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SECTION 14: Transport information

In accordance with SANS / IMDG / IATA

SANS	IMDG	IATA
14.1. UN number		
Not regulated for transport		
14.2. UN Proper Shipping Name		
Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)		
Not applicable	Not applicable	Not applicable
		
14.4. Packing group, if applicable		
Not applicable	Not applicable	Not applicable
14.5. Environmental hazards		
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes
No supplementary information available		

14.6. Special precautions for user

SANS

Transport regulations (UN) : Subject

IMDG

Transport regulations (IMDG) : Subject to the provisions

IATA

Transport regulations (IATA) : Subject to the provisions

14.7. Transport in bulk according to IMO instructions

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations specific for the product in question

No additional information available

SECTION 16: Other information

Issue date : 21/10/2024
Revision date : 21/10/2027

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)

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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-statements:

H400	Very toxic to aquatic life
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Safety Data Sheet (SDS), South Africa (HCA)

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