SAFETY DATA SHEET

ULTRAFLOC 6060

SDS 048/R2
2022-03-28

Reg. No. 2003/017152/07

Safety Data Sheet (SDS) According to SA Hazardous Chemical Agents Regulations 2021, the UN Transport of Dangerous Goods Model Regulations, UN Globally Harmonised System of Classification & Labelling and EC Directive 1272/2008

ULTRAFLOC 6060 has been approved by NSF/ANSI/CAN 60 for treatment of potable water up to the maximum rates specified by the NSF.

SECTION 1. Identification – Chemical Product and Company

Trade Name	:	U6060, ULTRAFLOC U6060
Chemical Name	:	Mixture of polydiallyldimethylammonium Chloride and Aluminium Chlorohydrate
Proper Shipping Name	:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S
UN Number	:	3265
CAS Number	:	26062-79-3 & 12042-91-0
GHS product identifier	:	2-Propen-1-aminium, N,N-dimethyl-N-2-propen-1-yl-, chloride (1:1), homopolymer Dialuminium chloride pentahydroxide
Chemical Family	:	Cationic Polymer
Other means of identification	:	Clear, viscous liquid with slight odour
Recommended use of the chemical	:	Water treatment: coagulation & removal of impurities.
Restrictions on use	:	Use only as directed and recommended doses. Not for use by untrained persons
Supplier's details	:	NCP Chlorchem (Pty) Ltd
Address	:	Cnr. Norwalk Rd and Ossewa Str. Chloorkop, Gauteng, South Africa
Telephone No.	:	+27 (0) 11 921 3111
24hour Emergency phone number	:	+27 (0) 11 976 2115

SECTION 2. Hazards Identification

GHS classification of the substance: corrosive liquid, irritating to skin and eyes, and harmful to aquatic life

Hazard classes/Hazard categories **Transport – Class 8** Corrosive substances	GHS Hazard Statement
Skin Corrosion/ Irritation Category 2	H315 Causes skin irritation
Eye Damage Category 1	H318 Causes serious eye damage
Eye Irritation Category 2A	H319 Causes serious eye irritation
Aquatic Acute Category 1	H400 Very toxic to aquatic life
Aquatic Chronic Category 1	H410 Very toxic to aquatic life with long last effects
STOT SE Category 3	H335 May cause respiratory irritation
Corrosive to metals Category 1	H290 Corrosive to metals

The most important adverse effects to know in emergency are –
Corrosive – may cause skin irritation and serious eye irritation, severe aquatic pollutant and corrosive to metals – mild steel, copper, iron, aluminium and alloys

GHS label elements, including precautionary Statements:

GHS 07 Skin & eye irritation health hazard - exclamation mark
GHS 09 Aquatic toxicity – dead tree and fish
GHS 05 Corrosive – metals & eye damage
Signal word: Danger

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Hazard Statements - Skin and eye irritant - causes skin and serious eye irritation; May cause respiratory irritation; Very toxic to aquatic life

Precautionary statements:
P280 wear protective gloves,
P264 Wash hands thoroughly after handling,
P270 do not eat, drink or smoke when using /handling this product,
P302 +P352 if on skin - wash off with plenty of water,
P332 + P313 if skin irritation occurs or persists get medical attention,
P280 wear eye / face protection,
P305 + P351 + P338 if in eyes rinse cautiously,
P362 + P364 take off contaminated clothing and wash before reuse,
P261 + P271 avoid breathing mist, wear eye &face protection and use in well ventilated area,
P304 & P340 if mist inhaled and breathing difficulty – remove person to fresh air and get medical attention,
P301 if swallowed and feel unwell, get medical attention,
P406 Store in corrosion resistant containers

Response:
Refer Sections 5, 6 and 8
Storage:
Refer Section 7

Special Labelling requirements – refer Section 14 for transport labels

SECTION 3. Composition/information on ingredients

Chemical identity	:	Mixture
Other means of identity	:	Clear, viscous liquid with slight odour
Common name, synonyms, etc	:	Cationic Polymer
CAS number	:	26062-79-3 & 12042-91-0(ACH)
EC number	:	607-855-4 & 234-933-1
IUPAC names	:	Diallyldimethylammonium chloride polymer
Impurities and stabilizing additives	:	none

Ingredient name	UN Number	CAS number	%	Classification EC1272/2008
2-Propen-1-aminium, N,N-dimethyl-N-2-propen-1-yl-, chloride (1:1), homopolymer	3265	26062-79-3	25-35	607-855-4
Dialuminium chloride pentahydroxide	3264	12042-91-0	60-75	234-933-1

Section 4. First Aid Measures

Most important symptoms/effect, and necessary measures:

Product in eye – can cause serious eye irritation
Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for at least 20 minutes, by the clock, holding the eyelid(s) open. Remove contact lenses if easy and safe to do. Take care not to rinse contaminated water into the non-affected eye. If irritation persists, obtain medical attention immediately.

Product on skin – can cause skin irritation
Avoid direct contact with this chemical. Remove contaminated clothing, shoes, and leather goods (e.g. watchbands, belts) and wash with lukewarm, gently running water for at least 20 minutes. If irritation persists, obtain medical attention immediately.
Completely decontaminate clothing, shoes and leather goods before re-use, or discard.

Product ingested - Do not induce vomiting. Drink water or milk if conscious. Never give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Obtain medical assistance immediately.

Product inhaled – may cause respiratory irritation. Remove to fresh air and obtain medical attention.

Section 5. Fire Fighting Measures

Suitable extinguishing media - Use water spray, carbon dioxide or dry chemical to extinguish fires. **Unsuitable extinguishing material –** None known

ERG - Emergency Response Guide 2020 and SANS 10232 - 3 Small

fires – immediate response action should quickly put out the fire.

Large fires – evacuate area, move containers out and away from fire if can be done safely without increasing risk. Isolate and contain fire as much as possible, and dike or use inert material for berm to contain run-off water for later disposal. NB need to prevent run-off containing product from contaminating any water source as very toxic to aquatic life.

Special hazards - Use water to keep containers cool to prevent pressure build up and possible explosion. Caution -exposed product may break down/decompose to produce carbon monoxide, carbon dioxide, ammonia, oxides of nitrogen and /or hydrogen chloride.
Avoid use of metal containers as corrosive to most, use PVC, HDPE, Polypropylene or rubber equipment and buckets.

Protective clothing - Wear full protective clothing and self-contained, positive breathing apparatus for large fires.
NB: Prompt actions can stop small fires but large fires involving chemicals require professional Emergency Response teams.

Section 6. Accidental Release Measures

Personal precautions - Spills of this product are very slippery. Wear personal protection
Environmental precautions - Do not dispose large volumes of any chemical into watercourses or sewers.

Clean-up methods
Small Spills: wear protective clothing and gloves to scoop up as much as possible and then wash and scrub away with plenty of water to remove any residue. Spill may be neutralized with soda ash to pH between 6 and 9; Caution as this will liberate carbon dioxide gas.

Large Spills: stop source of leaks if possible, and prevent entry into waterways, sewers or basements. Seal off area and contain by diking with soil or other inert material. Recover as much as possible and then apply an inert material such as sawdust or commercial absorbent to absorb the remainder. Collect in suitable containers and then wash and scrub away the residue.

GHS Disposal Precautionary Statement - P501 dispose of product and containers in accordance with SA National and / or regional Regulations refer National Environmental Management Waste Act - NEM: WA, it's Regulations and local by-laws. This informs permitted Waste Facilities and Service providers see the South African Waste Information Centre sawic.environment.gov.za

SECTION 7. Handling and Storage

Precautions for safe handling – wear appropriate personal protective equipment – see Section 8.
Eating, drinking and smoking shall be prohibited in areas where chemicals are handled, stored or processed**.** Workers must wash hands before eating, drinking or smoking to remove any chemicals that could be ingested or inhaled.
Remove contaminated clothing and protective equipment before entering eating areas

Storage requirements: Store in a cool place out of direct sun and avoid sources of potential contamination. Keep away from strong oxidising agents to avoid contamination and any violent reactions.

Handling precautions: Keep drums tightly closed when not in use. Avoid contact with skin, eyes or clothing. Avoid breathing mist. Handle as a corrosive liquid, wear rubber gloves if likely to come into skin contact.

Conditions for Safe Storage - refer SANS 10263: The Warehousing of dangerous goods, and **10263 - Part 8** The storage and handling of corrosive substances, for more specific information and relevant regulations and recognised practices for storage, warehousing and handling.

GHS Precautionary Statement P 406 store in corrosion resistant containers

Suitable materials

PVC – Poly Vinyl Chloride, HDPE – High Density Polyethylene, PP – Polypropylene, SS – Stainless Steel, PTFE - Polytetrafluoroethylene, most rubbers.

Unsuitable materials
Mild steel, iron, copper, aluminium and alloys

SECTION 8. Exposure Controls/Personal Protection

Control parameters e.g. occupational exposure limit values or biological limit values

Ingredient name	%	Exposure limits – OHS Act South Africa 1993
2-Propen-1-aminium, N,N-dimethyl-N-2-propen-1-yl-, chloride (1:1), homopolymer	25-35	No data available
Dialuminium chloride pentahydroxide	60-75	

ACGIH TLV(TWA) No data available
TLV(STEL) No data available

Engineering control measures: Local ventilation should be available if mists are produced.

Personal protection – respiratory: Unlikely route of exposure, but if mists are encountered could be irritating to the respiratory tract, use NIOSH approved respirator.

Personal protection – hand: listed skin irritant thus avoid contact with this chemical. Wear rubber gloves.

Personal protection – eye: listed eye irritant thus wear safety glasses with side shields at all times. Contact lenses should not be worn.

Personal protection – skin: listed skin irritant thus wear overalls, safety shoes/boots and apron.

Personal protection – ingestion: Restrict access to unauthorized persons. Wash hands after contact.

Other protection - A safety shower and eye wash facility should be nearby and ready for use.

SECTION 9. Physical and Chemical Properties

Appearance	Clear, viscous liquid.
Odour	Slight
Odour Threshold	no data available
pH	3.0-4.5
Initial boiling point/range	95°C-100°C
Melting point/range	Not applicable
Flash point	Not applicable
Flammability	Not flammable
Explosive properties	Not applicable
Vapour pressure	Not volatile at STP (Standard Temperature & Pressure)
Specific gravity	1.20-1.25@25°C
Viscosity	<100cPs@25°C
% volatile by volume	~70
Evaporation rate	Similar to that of water
Solubility - water	Complete

SECTION 10. Stability and Reactivity

Chemical Stability: Stable under normal conditions of storage and handling.

Reactivity: Will react violently with strong oxidising agents.

Conditions to avoid: Do not mix with other chemicals, especially oxidising agents.

Corrosive to: iron, copper and aluminum and alloys.

Incompatible materials: Strong oxidizing agents.

Hazardous decomposition products: Thermal decomposition or combustion may produce carbon monoxide, carbon dioxide, ammonia, oxides of nitrogen and/or hydrogen chloride.

Polymerization: Hazardous polymerization will not occur.

SECTION 11. Toxicological Information

Acute toxicity	Result	Species	Dose/ Exposure	Caution
Oral	No available data			Ingestion may cause nausea and vomiting
Dermal	No available data			
Inhalation	No available data			

GHS – EU Group Classification, and C & L Inventory:
Skin Corrosion/Irritation: Category 2, H315 Causes skin irritation
Eye Irritation: Category 2A, H319 Causes serious eye irritation
Respiratory or skin Sensitization: Not Classified
Germ Cell Mutagenicity: Not Classified
Carcinogenicity: Not Classified
Reproductive Toxicity: Not Classified
STOT – Specific Target Organ Toxicity Single or Repeat Exposure: May cause respiratory irritation
Aspiration Hazard: Not Classified but inhalation of mist may irritate the respiratory tract

SECTION 12. Ecological Information

GHS – EU Group Classification, and C & L Inventory:
Hazardous to the Aquatic Environment
Acute (short term) Category 1 – Hazard Statement H400 very toxic to aquatic life
Chronic (long term) Category 3 – Hazard Statement H412 Harmful to aquatic life with long lasting effects

Biodegradability No data available
Bio-accumulation No data available
Mobility No data available
Hazardous to the Ozone layer: Not Classified

SECTION 13. Disposal Considerations

Disposal methods
Disposal must be made in accordance with the applicable National and Regional Government regulations at approved and permitted chemical disposal sites – refer to he SA National Environmental Management Waste Act - NEM: WA, it's Regulati local by-laws. This informs permitted Waste Facilities and Service providers see the South African Waste Information Centre sawic.environment.gov.za
Disposal of used packaging
Packagings and containers, even those that have been emptied, will retain product residue and vapours, handle empty containers as if they were full. Remove all possible traces of product and wash prior to disposal of packaging and containers. Dispose in compliance with Regulations – see above and Industry Best Practice Always observe and comply with hazard warnings.

SECTION 14. Transport information

	UN & SANS 10228	IMDG	ICAO / IATA
UN Number	UN 3265	UN 3265	UN 3265
UN proper shipping name – PSN	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.	CORROSIVE LIQUID, ACIDIC ORGANIC, N.O.S.
Transport Class 8 - Corrosive			
Packing group	III	III	III
Environmental hazards	Aquatic Pollutant	IMDG Supplement S-B	N/A
Additional information			
Emergency Response Guide - ERG 2020	Refer Guide 153 for Corrosive liquid info on Emergency response	Refer IMDG 40 - 20 2020 Supplement & MARPOL	Refer ICAO & IATA 2022

SECTION 15. Regulatory information

NSF/ AINSI 60 Standard for Drinking Water Treatment Chemicals
OHS Act - Occupational Health and Safety Act 85 of 1993, its Regulations and Amendments: HCA – Regulations for Hazardous Chemical Agents, 2021, which prescribe GHS Classification, GHS compliant SDS & Labels, packaging compliance + site Risk Assessment and monitoring to inform personnel Health / Biological Monitoring.
MHI – Major Hazards Installations Regulations - OHS Act: require site Risk Assessment to ascertain potential impacts outside of the site and potential impacts on the public or neighbours. Copy to be lodged with the Dept Labour, and local Emergency Services.
Pressure Equipment Regulations - OHS Act encompasses containers and service equipment
NEMA – National Environmental Management Act 107 of 1998: Duty of Care and Producer Responsibility for products and packaging on a Life Cycle basis. Environmental Impact Assessment Regulations for new installations or proposed increase in capacity over 25%
NEM:WA – National Environmental Waste Act 59 of 2008: Extended Producer Responsibility, requirements and regulations for waste management, classification and disposal
NEM:AQA – National Environmental Air Quality Act 39 of 2004: AQA Licenses and Emissions
National Department of Health – Hazardous Substances Act 15 of 1973
EU Regulation EC 1272/2008 (EU GHS /CLP) – Safety Data Sheets and Labelling

SECTION 16. Other information

Training - Persons handling and working with this product should be Trained in the hazards and safe handling as required in the Chapter 1.3 of the UN Model Regulations for Transport of Dangerous Goods before commencing work with chemicals.

ECHA – European Chemical Agency Website, Chemical information, C&L Inventory, Chemicals of Very High Concern (SVHCs) and Chemicals for Community Rolling Action Plan (CoRAP)
ERG 2020 Transport Canada and US Dept Transportation PHMSA - Pipeline and Hazardous Materials Safety Administration
Other relevant information including information on preparation and revision of the SDS –
ISO 11014:2009 Safety Data Sheets for Chemical Products – content and order of sections adopted as SANS 11014:2010
UN Recommendations for Transport of Dangerous Goods Model Regulations commonly known as the **UNTDG "Orange Books"** 22nd revision 2021, published June 2021
UN Globally Harmonized System of Classification and Labelling of Chemicals – GHS commonly known as **the GHS "Purple Book" 9th** revision 2021
IMDG – International Maritime Dangerous Goods Code, 2020 edition, amendment 40 - 20
IATA Technical Regulations 63rd edition, January 2022

Date of original MSDS : 2013-03-20 **Compiled by HH Maringa**
Date of Revision 1 : 2016-08-12 **Revised by E Anderson**

Reg. No. 2003/017152/07

Date of Revision 2 : 2022-03-28 Revised by E Anderson

Approved as per Management of Change No.: 24-05-2022-284

EXCLUSION OF LIABILITY

All information and instructions provided in this Safety Data Sheet (SDS) in respect of the substance is given in terms of the provisions of the Occupational Health and Safety Act No 85 of 1993 and its Regulations. Information is based on best available scientific and technical knowledge as at the date indicated on this SDS, and is presented in good faith to be correct.

The information provided in this SDS apply only to the product in its present form and not to any formulation or mix. It should be used only as directed, and any formulations or other use is at the responsibility of the user of the product as formulated and/or mixed to investigate and establish any hazards or risks which may arise out of its use, wherever such user may be situated.

It is the legal responsibility of the person in receipt of this SDS, wherever such may be situated, to ensure that the information provided is communicated to, and understood by any person who may come in contact with the product in any place and in any manner whatsoever. If such recipient produces formulations or mixes using the product, then it is the recipient's sole responsibility to comply with the provisions of the Act in respect of the provision of the necessary SDS, and/or to comply with any other applicable legislation.