Material Safety Data Sheet

Section 1: Identification of Substance/mixture and of the company undertaking

1.1: Product Identifier

Product Name WATERMARK 602X COAGULANT

1.2: Relevant Identified use of substance/mixture and uses advised against

1.3: Details of the Supplier of the safety data sheet

Company Name: Watermark Projects

Ellesmere Works
Southern Street
Walkden
Manchester
M28 3QN

Telephone: 01204 574721

Fax: 01204 861778

E-mail: info@watermarkprojects.co.uk

Website: www.watermarkprojects.co.uk

1.4: Emergency Telephone Numbers:

Emergency Telephone: 01204 574721

Section 2: Hazards Identification

2.1: Classification of substance/mixture according to Regulation (EC) No 1272/2008

Classification under CLP: H290 Met Corr 1
H314 Skin Corr 1B

Additional Information:

2.2: Label Elements: Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]

Label elements under CLP: H290 May be corrosive to metals
H314 Causes severe skin burns and eye damage

Signal Words: DANGER

Hazard Pictograms:

Precautionary Statements

Wear protective gloves/protective clothing/eye protection/face protection.

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF exposed or concerned:

Immediately call a POISON CENTER or doctor/physician.

2.3: Other Hazards

Section 3: Composition information on hazardous ingredients

Aluminium Chloride

EINECS	CAS No	CLP Classification	Percent
231-208-1	7446-70-0	Skin Corr 1B: H314	5 - 15

Hydrochloric Acid

EINECS	CAS No	CLP Classification	Percent
231-595-7	7647-01-0	Skin Corr 1: H314	0 - 5

Section 4: First Aid Measures

4.1: Description of First Aid measures

Skin Contact: Immediately flood eye with copious quantities of clean water, holding eyelids open. Seek medical attention.

Eye Contact: Remove contaminated clothing as quickly as possible. Wash affected area with plenty of water. Obtain medical advice if adverse symptoms persist.

Ingestion: Wash out mouth with water and give water to drink. Do not induce vomiting. If unconscious do not give anything by mouth. Obtain medical attention immediately.

Inhalation: Remove patient to fresh air. If symptoms persist obtain medical attention.

4.2: Most important symptoms and effects both accute and delayed

Skin Contact: No information

Eye Contact: No Information

Ingestion: No Information

Inhalation: No Iformation

4.3: Indication of any immediate medical treatment and special treatment required

In case of shortness of breath give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

Section 5: Fire fighting measures

5.1: Extinguishing media

Non combustible. Use media suitable for surrounding fire.Do not use waterjet as this will spread fire

Unsuitable Media

5.2: Special hazards arising from the substance/mixture

Decomposes to give toxic and acidic dense white fumes.

5.3: Advice for firefighters

Chemical protection suit, gloves and boots. Self contained breathing apparatus.

Section 6: Accidental Release Measures

6.1: Personal precautions, protective equipment and emergency procedures

Wear appropriate PPE - rubber gloves and goggles. Avoid excessive inhalation of vapours - breathing apparatus may be required for a major spill.

6.2: Environmental precautions

Prevent further leakage or spillage. Do not allow to enter watercourses or drains

6.3: Methods and Materials for containment and clean up

Soak up with inert absorbent material. Shovel into suitable container for disposal. Following product recovery flush area with water.

6.4: References to other sections

Section 7.0: Handling and Storage

7.1: Precautions for safe handling

Wear protective clothing as described in section 8 when handling the product. Do not eat smoke or drink whilst handling the product.

7.2: Conditions for safe storage.

Store in a cool, dry and ventilated area. Store in tightly closed original container. Avoid uncoated metal containers.

7.4: Specific End Use(s)

Section 8: Exposurecontrols/PersonalProtection

8.1: Control Parameters

Hydrochloric Acid

WORKPLACE EXPOSURE		Respirable Dust	
8 Hour TWA	15MinSTEL	8 HoursTWA	15MinSTEL
2 mg/m3	No Data	N/A	N/A

8.2: Exposure Controls

Engineering Measures	Ensure adequate ventilation, typically 10 air changes per hour.
Respiratory Protection	Respiratory protection required in case of high vapour concs.
Hand Protection	PVC or rubber gloves.
Eye Protection	Goggles or face shield.
Skin Protection	Lightweight protective clothing, rubber or plastic apron.

Section 9.0: Physical and ChemicalProperties

9.1: Information on basic physical and chemical properties

State:	Liquid
Colour:	Pale Yellow
Odour:	Slight Acidic Odur
Relative Density:	1.21 - 1.26
pH:	<1

9.2: Other Information

Section 10: Stability and Reactivity

10.1: Reactivity

No hazards to be specifically mentioned

10.2: Chemical Stability

Stable under normal conditions

10.3: Possibility of Hazardous Reactions

May react with certain metals to liberate highly flammable hydrogen gas.

10.4: Conditions to Avoid

No special precautions required.

10.5: Incompatible Materials

Metals, organic materials, alkali, hypochlorite.

10.6: Hazardous Decomposition Products

Section 11: Toxicological Information

No Data available

Section 12: Ecological Information

12.1: Toxicity

Spilage may cause localised damage due to low pH. If well diluted and dispersed there should be no lasting effects. LC50 Danio >1,000 mg/l 96 Hr. EC50 Daphnia 98 mg/l 48 Hr

12.2: Persistence and Biodegradable

Material should not be allowed to spill into controlled waters as damage to fish is possible. Product consists of inorganic materials which are not biodegradable.

12.3: Bioaccumulative Potential

No data available

12.4: Mobility in Soil

No data available

12.5: Results of PBT and vPvB Assessment

No Data available

12.6: Other adverse effects

No data available

Section 13: Disposal Information

Dispose of in accordance with local and national regulations.

Section 14: Transport Information

UN Number	UN 2581
Shipping Name	ALUMINIUM CHLORIDE SOLUTION
Transport Class	8
Packing Group	III

Environment Hazard	No
Special Precautions	No special precautions required

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Section 15: Regulatory Information

15.1: Safety, Health and Environmental regulations/legislation specific for the substance/mixture

15.2: Chemical safety assessment

Section 16: Other information

The above information is based on our present knowledge of the product at the time of publication. It is given in good faith, no warranty is implied as to the quality or specification of the product. Information contained in this data does not constitute an assessment of workplace risks. The user must satisfy himself that the product is entirely suitable for their purpose

SAFETY DATA SHEET

HYDROCID 337

Compilation date: 29/01/2019
Revision No: 1

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

1.1. Product identifier

Product name: HYDROCID 337
CAS number: 7681-52-9
EINECS number: 231-668-3
Index number: 017-011-00-1

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

Use of substance / mixture: Industrial Biocide for use in evaporative cooling systems and process waters.

1.3. Details of the supplier of the safety data sheet

Company name: Hydro-X Limited
Eden Place
Outgang Lane
Dinnington
Sheffield
S25 3QT
Tel: 01909 565133
Fax: 01909 564301
Email: richard.sanderson@hydro-x.co.uk

1.4. Emergency telephone number

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: Aquatic Acute 1: H400; Skin Corr. 1A: H314; -: EUH031
Most important adverse effects: Causes severe skin burns and eye damage. Very toxic to aquatic life. Contact with acids liberates toxic gas.

2.2. Label elements

Label elements:
Hazard statements: H314: Causes severe skin burns and eye damage.
H400: Very toxic to aquatic life.
EUH031: Contact with acids liberates toxic gas.
Hazard pictograms: GHS05: Corrosion
GHS09: Environmental

Signal words: Danger
Precautionary statements: P102: Keep out of reach of children.
P264: Wash with soap and water thoroughly after handling.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P260: Do not breathe vapours.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

[cont...]

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water .
P321: Specific treatment (see information on this label)
P391: Collect spillage.
P405: Store locked up.

2.3. Other hazards

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

SODIUM HYPOCHLORITE SOLUTION CL ACTIVE - REACH registered number(s): 01-2119488154-34-XXXX

EINECS	CAS	PBT / WEL	CLP Classification	Percent
231-668-3	7681-52-9	-	Skin Corr. 1B: H314; Aquatic Acute 1: H400; -: EUH031	10-30%

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin. Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Transfer to hospital if there are burns or symptoms of poisoning.

Eye contact: Bathe the eye with running water for 15 minutes. Transfer to hospital for specialist examination.

Ingestion: Do not induce vomiting. Give 1 cup of water to drink every 10 minutes. If unconscious, check for breathing and apply artificial respiration if necessary. If unconscious and breathing is OK, place in the recovery position. Transfer to hospital as soon as possible.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. If unconscious, check for breathing and apply artificial respiration if necessary. If unconscious and breathing is OK, place in the recovery position. If conscious, ensure the casualty sits or lies down. If breathing becomes bubbly, have the casualty sit and provide oxygen if available. Transfer to hospital as soon as possible.

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

Skin contact: There may be irritation and redness at the site of contact. Severe burns may occur.

Eye contact: There may be irritation and redness. There may be severe pain. Corneal burns may occur.

Ingestion: There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur. There may be vomiting. Blood may be vomited.

Inhalation: There may be coughing and a sore throat. There may be congestion of the lungs causing severe shortness of breath. There may be loss of consciousness.

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

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Carbon dioxide.

[cont...]

5.2. Special hazards arising from the substance or mixture

Exposure hazards: Corrosive. In combustion emits toxic fumes.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to section 8 of SDS for personal protection details.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Transfer to a suitable container. Wash down the drain with large amounts of water.

6.4. Reference to other sections

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Ensure there is sufficient ventilation of the area. Avoid direct contact with the substance.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a cool, well ventilated area. Keep container tightly closed.

Suitable packaging: Polyethylene. Use vented caps.

7.3. Specific end use(s)

Section 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits: No data available.

DNEL/PNEC Values

DNEL / PNEC No data available.

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area.

Respiratory protection: Self-contained breathing apparatus must be available in case of emergency.

Hand protection: Butyl gloves. PVC gloves. Breakthrough time of the glove material > 1 hour.

Eye protection: Safety goggles. Face-shield. Ensure eye bath is to hand.

Skin protection: Protective clothing with elasticated cuffs and closed neck. Boots made of PVC. PVC apron covering the tops of the boots. Ensure safety shower is to hand.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Pale yellow

Odour: Perceptible odour

Oxidising: Oxidising (by EC criteria)

Viscosity: Non-viscous

[cont...]

Boiling point/range°C: >35 **Flash point°C:** >93
Relative density: 1.23 - 1.26 **pH:** >11.5

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions. Reacts with acid to to form chlorine gas

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

10.4. Conditions to avoid

Conditions to avoid: Heat.

10.5. Incompatible materials

Materials to avoid: Acids. Amines.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes.

Section 11: Toxicological information

11.1. Information on toxicological effects

Toxicity values:

Route	Species	Test	Value	Units
ORL	MUS	LD50	5800	mg/kg

Hazardous ingredients:

SODIUM HYPOCHLORITE SOLUTION...100% CL ACTIVE

ORL	MUS	LD50	5800	mg/kg

Relevant hazards for product:

Hazard	Route	Basis
Skin corrosion/irritation	DRM	Hazardous: calculated
Serious eye damage/irritation	OPT	Hazardous: calculated

Symptoms / routes of exposure

Skin contact: There may be irritation and redness at the site of contact. Severe burns may occur.
Eye contact: There may be irritation and redness. There may be severe pain. Corneal burns may occur.
Ingestion: There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur. There may be vomiting. Blood may be vomited.
Inhalation: There may be coughing and a sore throat. There may be congestion of the lungs causing severe shortness of breath. There may be loss of consciousness.

Section 12: Ecological information

[cont...]

12.1. Toxicity

Ecotoxicity values:

Species	Test	Value	Units
Fish	96H LC50	1	mg/l

Hazardous ingredients:

SODIUM HYPOCHLORITE SOLUTION...100% CL ACTIVE

FISH	96H LC50	1	mg/l

12.2. Persistence and degradability

Persistence and degradability: Only slightly biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No bioaccumulation potential.

12.4. Mobility in soil

Mobility: Soluble in water.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: Do not allow concentrated product to enter rivers or water courses.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Disposal should be carried out by licenced contractors. Do not allow entry to drains or waterways. Transfer to a suitable container and arrange for collection by specialised disposal company. Disposal to a special waste disposal plant, in accordance with local council regulations.

Disposal of packaging: Containers must be disposed of in a safe way.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

14.1. UN number

UN number: UN1791

14.2. UN proper shipping name

Shipping name: HYPOCHLORITE SOLUTION

14.3. Transport hazard class(es)

Transport class: 8

14.4. Packing group

Packing group: III

14.5. Environmental hazards

Environmentally hazardous: Yes **Marine pollutant:** No

[cont...]

14.6. Special precautions for user

Tunnel code: (E)

Section 15: Regulatory information

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

15.2. Chemical Safety Assessment

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 2015/830.
* indicates text in the SDS which has changed since the last revision.

Phrases used in s.2 and s.3: EUH031: Contact with acids liberates toxic gas.
H314: Causes severe skin burns and eye damage.
H400: Very toxic to aquatic life.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

SAFETY DATA SHEET
MASTER S4

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name MASTER S4

Product No. 162355, SDS

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

Identified uses Intended for industrial or professional uses only. Flotation/separating agent for PET plastic recycling

1.3. Details of the supplier of the safety data sheet

Supplier
MacDermid Performance Solutions UK Ltd
198 Golden Hillock Road
Birmingham
B11 2PN
U.K.
Tel: +44 (0) 121 606 8100

Contact Person sdsit@macdermid.com

1.4. Emergency telephone number

24 Hour Emergency Incident Number +44 (0)1235 239 670 -NCEC Ricardo (National Chemical Emergency Centre, CareChem 24)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and Chemical Hazards	Not classified.
Human health	Not classified.
Environment	Not classified.

Classification (1999/45/EEC) Not classified.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

2.2. Label elements

Label In Accordance With (EC) No. 1272/2008

No pictogram required.

Supplemental label information

EUH210	Safety data sheet available on request.

2.3. Other hazards

This product does not contain any PBT or vPvB substances.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Polydimethylsiloxane **5 - <25%**

CAS-No.: 63148-62-9 **EC No.:**

Classification (EC 1272/2008)	Classification (67/548/EEC)
Not classified.	Not classified.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General information

Remove affected person from source of contamination.

Inhalation

Move the exposed person to fresh air at once. Rinse nose and mouth with water. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention if any discomfort continues.

Ingestion

Rinse nose, mouth and throat with water. Promptly get affected person to drink large volumes of water to dilute the swallowed chemical. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Get medical attention.

Skin contact

Remove contaminated clothes and rinse skin thoroughly with water. Get medical attention if any discomfort continues.

Eye contact

Promptly wash eyes with plenty of water while lifting the eye lids. Make sure to remove any contact lenses from the eyes before rinsing. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

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

General information

See section 11 for additional information on health hazards.

Inhalation

Vapours may irritate throat and respiratory system and cause coughing. Spray mists may cause respiratory tract irritation.

Ingestion

May irritate and cause stomach pain, vomiting and diarrhoea. May cause discomfort if swallowed.

Skin contact

The liquid may irritate the skin. Prolonged contact may cause redness, irritation and dry skin.

Eye contact

May cause temporary eye irritation. Irritation, burning, lachrymation, blurred vision after liquid splash. Spray and vapour in the eyes may cause irritation and smarting.

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

No specific first aid measures noted.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

The product is non-combustible. Use fire-extinguishing media appropriate for surrounding materials.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

Unusual Fire & Explosion Hazards

Beware, risk of formation of toxic and corrosive gases.

Specific hazards

Fire or high temperatures create: Oxides of: Silicon. Will decompose at temperatures exceeding: 50 °C

5.3. Advice for firefighters

Special Fire Fighting Procedures

Avoid breathing fire vapours. Keep up-wind to avoid fumes. Ventilate closed spaces before entering them. Keep run-off water out of sewers and water sources. Dike for water control. If risk of water pollution occurs, notify appropriate authorities.

Protective equipment for fire-fighters

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective clothing as described in Section 8 of this safety data sheet. Avoid inhalation of vapours/spray and contact with skin and eyes. In case of inadequate ventilation, use respiratory protection. In case of spills, beware of slippery floors and surfaces.

6.2. Environmental precautions

Collect and dispose of spillage as indicated in section 13. Do not allow to enter drains, sewers or watercourses. Avoid release to the environment. Do not allow ANY environmental contamination.

6.3. Methods and material for containment and cleaning up

Wear necessary protective equipment. Stop leak if possible without risk. To prevent release, place container with damaged side up. Absorb spillage with non-combustible, absorbent material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Runoff or release to sewer, waterway or ground is forbidden. Inform Authorities if large amounts are involved.

6.4. Reference to other sections

Wear protective clothing as described in Section 8 of this safety data sheet. Collect and dispose of spillage as indicated in section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Do not handle broken packages without protective equipment. Avoid inhalation of vapours/spray and contact with skin and eyes. Use mechanical ventilation in case of handling which causes formation of vapours. Avoid contact with strong oxidisers. Do not eat, drink or smoke when using the product. Observe good chemical hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed original container in a dry, cool and well-ventilated place. Keep separate from food, feedstuffs, fertilisers and other sensitive material. Do not freeze. This product is irreversibly harmed if frozen or crystallised. Do not store near heat sources or expose to high temperatures.

Storage Class

Chemical storage.

7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

Notes:

The temperature range listed here will maintain the quality of the material during its specified shelf-life. This temperature range restriction is not required to maintain safe storage conditions.

Min. Storage Temp (°C)	5
Max. Storage Temp (°C)	40

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Ingredient Comments

No exposure limits noted for ingredient(s).

8.2. Exposure controls

Protective equipment

Process conditions

Use engineering controls to reduce air contamination to permissible exposure level.

Engineering measures

Provide adequate general and local exhaust ventilation. All handling to take place in well-ventilated area.

Respiratory equipment

No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists. Seek advice from supervisor on the companies' respiratory protection standards.

Hand protection

Protective gloves should be used if there is a risk of direct contact or splash. Seek advice from local supervisor. Splash protection: (breakthrough time > 60 minutes). Polyvinyl chloride (PVC). Neoprene. Prolonged contact: (breakthrough time > 480 minutes). Butyl rubber. (For material thickness = 0.5 mm minimum). Protective gloves should conform to EN 374. The condition of gloves should be checked prior to each use. The selection of gloves should be made with consideration to working practises and the duration of exposure. Consideration should be given to other chemicals being handled and the working environment (e.g. sharps, fine work). Note: Observe manufacturers's recommendations, as the selection of suitable gloves does not only depend on glove material type, and permeability may vary between manufacturers.

Eye protection

Wear splash-proof eye goggles to prevent any possibility of eye contact.

Other Protection

Provide eyewash station and safety shower. Wear suitable protective clothing as protection against splashing or contamination.

Hygiene measures

Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes wet or contaminated. Promptly remove any clothing that becomes wet or contaminated. Contaminated clothing to be placed in closed container until disposal or decontamination. Warn cleaning personnel of chemical's hazardous properties. Eating, smoking and water fountains prohibited in immediate work area.

Environmental Exposure Controls

Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	Milky. / White.
Odour	Odourless.
Solubility	Miscible with water
Initial boiling point and boiling range (°C)	(760 mm Hg) ~ 110 °C
Melting point (°C)	
Not available.	
Relative density	~ 1.00 g/ml (20 °C)
Vapour density (air=1)	
Not available.	
Vapour pressure	< 0.01 kPa (20 °C)
Evaporation rate	
Not available.	
pH-Value, Diluted Solution	5 - 7 (3 %)
Viscosity	
Not available.	
Decomposition temperature (°C)	> 50 °C
Odour Threshold, Lower	
Not applicable.	
Odour Threshold, Upper	
Not applicable.	
Flash point (°C)	
Not applicable.	
Auto Ignition Temperature (°C)	
Not applicable.	
Flammability Limit - Lower(%)	
Not applicable.	
Flammability Limit - Upper(%)	
Not applicable.	
Partition Coefficient (N-Octanol/Water)	
Not available.	
Explosive properties	
Not applicable.	

Oxidising properties

Not applicable.

Comments Information declared as "Not available" or "Not applicable" is not considered to be justified for enabling proper control measures to be taken.

9.2. Other information

Volatile Organic Compound (VOC) 0 %w/w

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Stable under recommended operating conditions.

10.2. Chemical stability

No specific stability hazards associated with this product.

10.3. Possibility of hazardous reactions

Avoid contact with strong oxidisers.

Hazardous Polymerisation

Will not polymerise.

10.4. Conditions to avoid

Do not store near heat sources or expose to high temperatures.

10.5. Incompatible materials

Materials To Avoid

Strong oxidising substances.

10.6. Hazardous decomposition products

None under normal conditions. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Fire or high temperatures create: Oxides of: Silicon. Will decompose at temperatures exceeding: 50 °C

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity:

Based on available data the classification criteria are not met.

Skin Corrosion/Irritation:

Based on available data the classification criteria are not met.

Serious eye damage/irritation:

Based on available data the classification criteria are not met.

Respiratory or skin sensitisation:

Based on available data the classification criteria are not met.

Germ cell mutagenicity:

Based on available data the classification criteria are not met.

Carcinogenicity:

Based on available data the classification criteria are not met.

Reproductive Toxicity:

Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure:

Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure:

Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard:

Not anticipated to present an aspiration hazard based on chemical structure.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

The product is not expected to be hazardous to the environment. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.1. Toxicity

Based on available data the classification criteria are not met.

12.2. Persistence and degradability

Degradability

The product is expected to be biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential

The product does not contain any substances expected to be bioaccumulating.

Partition coefficient

Not available.

12.4. Mobility in soil

Mobility:

The product is miscible with water. May spread in water systems.

12.5. Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB substances.

12.6. Other adverse effects

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

General information

When handling waste, consideration should be made to the safety precautions applying to handling of the product. Keep in original container.

13.1. Waste treatment methods

Environmental manager must be informed of all major spillages. Dispose of waste and residues in accordance with local authority requirements. Do not allow runoff to sewer, waterway or ground.

SECTION 14: TRANSPORT INFORMATION

General Not regulated. The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not relevant

14.2. UN proper shipping name

Not relevant

14.3. Transport hazard class(es)

Not relevant

14.4. Packing group

Not relevant

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant

No.

14.6. Special precautions for user

Not relevant

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not relevant

SECTION 15: REGULATORY INFORMATION

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

Statutory Instruments

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716). Control of Substances Hazardous to Health.

EU Legislation

Dangerous Substance Directive 67/548/EEC. Dangerous Preparations Directive 1999/45/EC. Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP), amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. Commission Regulation (EU) No 453/2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). Regulation (EC) No 790/2009 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures (CLP). Regulation (EC) No 286/2011 amending Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures (CLP).

Authorisations (Title VII Regulation 1907/2006)

No specific authorisations are noted for this product.

Restrictions (Title VIII Regulation 1907/2006)

No specific restrictions of use are noted for this product.

Water hazard classification

WGK 1

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

General information

Physical data included in this SDS do not constitute the Product Specification -see separately supplied documentation. Supply classification prepared by calculation.

Revision Comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

Issued By	HS&E Manager.
Revision Date	27/06/2017
Revision	6
Safety Data Sheet Status	Approved.
Signature	Dott. Adriano D'Auria
Signature 2	NS /R&D

Risk Phrases In Full

NC	Not classified.

Disclaimer

This information relates only to the specific material as supplied and may not be valid for such material if used in combination with any other material(s) or in any other process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. The data should not be construed as guaranteeing specific properties of the product described or its suitability for a particular application, nor does it make any warranty, either express or implied of merchantability for the product itself. It is the user's responsibilty to satisfy himself as to the suitability and completeness of such information for his own particular use.

Section 1: Identification of Substance/mixture and of the company undertaking

1.1: Product Identifier

Product Name WATERMARK N223 POLYMER

1.2: Relevant Identified use of substance/mixture and uses advised against

1.3: Details of the Supplier of the safety data sheet

Company Name: Watermark Projects
Ellesmere Works
Southern Street
Walkden
Manchester
M28 3QN

Telephone: 01204 574721
Fax: 01204 861778
E-mail: info@watermarkprojects.co.uk
Website: www.watermarkprojects.co.uk

1.4: Emergency Telephone Numbers:

Emergency Telephone: 01204 574721

Section 2: Hazards Identification

2.1: Classification of substance/mixture according to Regulation (EC) No 1272/2008

Classification under CLP: H319 Eye Irrit 2

Additional Information:

2.2: Label Elements: Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]

Label elements under CLP: H319 Causes serious eye irritation

Signal Words: WARNING

Hazard Pictograms:

Precautionary Statements

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice

2.3: Other Hazards

Section 3: Composition information on hazardous ingredients

Alcohols, C10-16, ethoxylated

EINECS	CAS No	Classification according to Regulation (EC) 1272:2008	Percent
	68002-97-1	Acute Tox. Category 4,H302 Eye Dam. Category 1:H318, Aquatic Chronic 3:H412,	0 - 3

Alcohols, C12-14, ethoxylated

EINECS	CAS No	Classification according to Regulation (EC) 1272:2008	Percent
	68439-50-9	Acute Tox. Category 4,H302 Eye Dam. Category 1:H318, Aquatic Chronic 3:H412,	0 - 3

Alcohols, C12-16, ethoxylated

EINECS	CAS No	Classification according to Regulation (EC) 1272:2008	Percent
	68551-12-2	Acute Tox. Category 4,H302 Eye Dam. Category 1:H318, Aquatic Chronic 3:H412,	0 - 3

Alcohols, C13-15, branched and linear, ethoxylated

EINECS	CAS No	Classification according to Regulation (EC) 1272:2008	Percent
	157627-86-6	Acute Tox. Category 4,H302 Eye Dam. Category 1:H318, Aquatic Chronic 3:H412,	0 - 3

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics

EINECS	CAS No	Classification according to Regulation (EC) 1272:2008	Percent
		Asp. Tox. Category 1,H304	20 - 25

Hydrocarbons, C12-C13, isoalkanes, cyclics, < 2% aromatics

EINECS	CAS No	Classification according to Regulation (EC) 1272:2008	Percent
		Asp. Tox. Category 1,H304	0 - 25

Hydrocarbons, C12-C15, n-alkanes, isoalkanes, cyclics, < 2% aromatics

EINECS	CAS No	Classification according to Regulation (EC) 1272:2008	Percent
		Asp. Tox. Category 1,H304	0 - 25

Hydrocarbons, C13-C15, n-alkanes, isoalkanes, cyclics, < 2% aromatics

EINECS	CAS No	Classification according to Regulation (EC) 1272:2008	Percent
		Asp. Tox. Category 1,H304	0 - 25

Hydrocarbons, C13-C16, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics

EINECS	CAS No	Classification according to Regulation (EC) 1272:2008	Percent
		Asp. Tox. Category 1,H304	0 - 25

Section 4: First Aid Measures

4.1: Description of First Aid measures

Skin Contact: Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water. Wash contaminated clothing before reuse. Call a physician if irritation persists.

Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Ingestion: If swallowed, call a poison control centre or doctor immediately. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person.

Inhalation: Remove to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician.

4.2: Most important symptoms and effects both accute and delayed

Skin Contact: Irritating to skin.

Eye Contact:

Ingestion:

Inhalation:

4.3: Indication of any immediate medical treatment and special treatment required

Symptomatic treatment.

Section 5: Fire fighting measures

5.1: Extinguishing media

Water spray
Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable Media

High volume water jet

5.2: Special hazards arising from the substance/mixture

No information available.

5.3: Advice for firefighters

Wear self-contained breathing apparatus and protective suit. Cool containers/tanks with water spray.

Section 6: Accidental Release Measures

6.1: Personal precautions, protective equipment and emergency procedures

Where the exposure level is not known, wear approved, positive pressure, self-contained respirator. Where the exposure level is known, wear approved respirator suitable for the level of exposure. For personal protection see SDS section 8. Chemical resistant boots.

6.2: Environmental precautions

Discharge into the environment must be avoided. Prevent product from entering drains.

6.3: Methods and Materials for containment and clean up

Sweep up to prevent slipping hazard. Soak up with inert absorbent material (e.g. sand,

silica gel, acid binder, universal binder, sawdust). Shovel into suitable container for disposal. After cleaning, flush away traces with water. Use detergent if needed.

6.4: References to other sections

Section 7.0: Handling and Storage

7.1: Precautions for safe handling

Avoid contact with skin, eyes and clothing. Use personal protective equipment

7.2: Conditions for safe storage.

Store at room temperature. To avoid product degradation and equipment corrosion, do not use iron, copper or aluminium containers or equipment. Flashpoint determination was performed using a Pensky Martens type closed cup method. The method indicates a flash point greater than 93,3° C (200° F). Although there was no flashpoint detected below 93,3° C (200° F) some flammable vapours were evolved during the test as evidenced by the enlargement of the flame. Therefore caution should be exercised during storage and handling.

7.4: Specific End Use(s)

Flocculating agent

Section 8: Exposurecontrols/PersonalProtection

8.1: Control Parameters

C9-C15 Aliphatics

8 Hour TWA: **15MinSTEL:** 1.2 mg/m3

8.2: Exposure Controls

Engineering Measures	Dose and handle in closed system if possible. Handle only in a place equipped with local exhaust (or other appropriate exhaust). Remove and wash contaminated clothing before re-use. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before breaks and immediately after handling the product. Ensure adequate ventilation.
Respiratory Protection	Use the indicated respiratory protection if the occupational exposure limit is exceeded. (filter ABEK-P3)
Hand Protection	Glove material: Nitrile rubber, Permeability tests are not available for this product.Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
Eye Protection	Tightly fitting safety goggles or face-shield.
Skin Protection	Protective clothing.

Section 9.0: Physical and ChemicalProperties

9.1: Information on basic physical and chemical properties

State:	Liquid, emulsion
Colour:	Grey to white
Odour:	Ammoniacal
Specific Gravity:	1.00
pH:	6 - 8

9.2: Other Information

Section 10: Stability and Reactivity

10.1: Reactivity

No data available

10.2: Chemical Stability

Stable under normal conditions.

10.3: Possibility of Hazardous Reactions

Hazardous polymerisation does not occur.

10.4: Conditions to Avoid

No data available

10.5: Incompatible Materials

Strong oxidizing agents

10.6: Hazardous Decomposition Products

Carbon oxides, nitrogen oxides (NOx), ammonia,

Section 11: Toxicological Information

Distillates (petroleum), hydrotreated light:

Inhalation	Rat	LC50/4H	20 mg/l
Dermal	Rabbit	LD50	>2000 mg/kg
Oral	Rat	LD50	>5000mg/kg

Section 12: Ecological Information

12.1: Toxicity

This material is not classified as dangerous for the environment. The effects on aquatic organisms are due to an external (non-systemic) mode of action and are significantly reduced (by a factor of 7-20) within 30 minutes due to the binding of the product to dissolved organic carbon and inorganic sorbents such as clays and silts. Acute toxicity tests conducted using environmentally representative water.

LC50/96 h/Pimephales promelas (fathead minnow)/US EPA TSCA Test Guidelines: 21 mg/l
Remarks: Information given is based on data obtained from similar substances.
LC50/96 h/Oncorhynchus mykiss (rainbow trout)/US EPA TSCA Test Guidelines: 70.7 mg/l
Remarks: Information given is based on data obtained from similar substances.
LC50/96 h/Danio rerio (zebra fish)/OECD Test Guideline 203: > 100 mg/l
Remarks: Information given is based on data obtained from similar substances.
EC50/10 d/Corophium volutator (amphipoda)/PARCOM: 857 mg/l
EC50/48 h/Acartia tonsa (copepod)/PARCOM: 7.4 mg/l
EC50/48 h/Daphnia magna (Water flea)/Immobilization/OECD Test Guideline 202: > 100 mg/l
Remarks: Information given is based on data obtained from similar substances.
LC50/48 h/Daphnia magna (Water flea)/US EPA TSCA Test Guidelines: 1.96 mg/l
Remarks: Information given is based on data obtained from similar substances.
IC50/72 h/Skeletonema costatum (diatom)/ISO 10253: ca. 27 mg/l
IC50/72 h/Green algae (Selenastrum capricornutum)/Growth inhibition/OECD Test Guideline 201: > 100 mg/l
Remarks: Information given is based on data obtained from similar substances.

12.2: Persistence and Biodegradable

Biological degradability:
Modified Sturm Test/OECD Test Guideline 301B:
The polymeric ingredient is not readily biodegradable.
Seawater Shake Flask Method/OECD Test Guideline 306/28 d: 13 %

12.3: Bioaccumulative Potential

Because of the high molecular weight of the polymer diffusion through biological membranes is very
small. Bioaccumulation is unlikely.
Partition coefficient: n-octanol/water: Not applicable

12.4: Mobility in Soil

Water solubility: completely miscible
Surface tension: No data available

12.5: Results of PBT and vPvB Assessment

No information available.

12.6: Other adverse effects

No data available
Additional ecological information: Ecotoxicological information provided is based on a structurally or
compositionally similar product.

Section 13: Disposal Information

Dispose of as special waste in compliance with local and national regulations.
Packages that cannot be cleaned must be disposed of the same way as the unused product.

Section 14: Transport Information

UN Number	
Shipping Name	Not Classified
Transport Class	
Packing Group	
Environment Hazard	
Special Precautions	
Tunnel Code	Transport Category

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Section 15: Regulatory Information

15.1: Safety, Health and Environmental regulations/legislation specific for the substance/mixture

15.2: Chemical safety assessment

Section 16: Other information

Components listed in section 3 above that have a zero minimum and a common maximum range are interchangeably used components based on availability. Only one of these components is contained in the product up to the maximum amount noted.

The above information is based on our present knowledge of the product at the time of publication. It is given in good faith, no warranty is implied as to the quality or specification of the product. Information contained in this data does not constitute an assessment of workplace risks. The user must satisfy himself that the product is entirely suitable for their purpose