

SECTION I: Identification of the Substance/Mixture and of the Company/Undertaking**1.1 Product Identifier**

Product name: Firmway

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

Use: Wetting agent

1.3 Details of the supplier of the safety data sheetCompany: Aquatrols Europe Ltd
The Panorama, Office G47
Park Street
Ashford
Kent TN23 3DLWebsite: eu.aquatrols.com

Phone number: + 44 (0)1233 756 241

Email: jyichye@aquatrols.com**1.4 Emergency telephone**Phone number: CHEMTEL - (800) 255-3924
CHEMTEL INTERNATIONAL- +1-813-248-0585**SECTION II: Hazards Identification****2.1 Classification of the substance or mixture**

Product description: Mixture

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

Not a hazardous mixture according to Regulation (EC) No. 1272/2008

2.2 GHS label elements

Labelled according to Regulation (EC) No. 1272/2008

Not a hazardous product according to the Globally Harmonized System (GHS)

2.3 Other hazards which do not result in classification

Slightly irritating to eyes and skin.

SECTION III: COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Substance/Mixture:** Mixture**3.2 Hazardous ingredients**

No ingredients are hazardous

3.3 Non-hazardous ingredients and impurities

Chemical Name	CAS No. EC No.	Classification according to Regulation EC 1272/2008 (CLP)	Concentration
Ethylene oxide/propylene oxide block copolymer	9003-11-6 -	Not classified	10.5%
Ethylene oxide/propylene oxide block copolymer	9003-11-6 -	Not classified	31.5%
Water	7732-18-5	Not classified	58%

SECTION IV: FIRST AID MEASURES**4.1 Description of first aid measures**

General advice: Show this SDS to the doctor in attendance.
First responder needs to protect himself.
Place affected apparel in a sealed bag for subsequent decontamination.

Inhalation: Negligible or unlikely exposure pathway.
If inhaled, remove to fresh air.
Consult a physician if necessary.

Skin contact:	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists. Wash contaminated clothing before re-use.
Eye contact:	Flush eyes with water at least 15 minutes. Get medical attention if eye irritation develops or persists.
Ingestion:	Do not induce vomiting without medical advice. If victim is conscious, rinse with water, keep at rest, do not give anything to eat or drink, and do not leave victim unattended. Vomiting may occur spontaneously. Seek medical advice.

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

Symptoms after inhalation:	Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis.
Symptoms after skin contact:	Skin contact may aggravate existing skin disease.

4.3 Indication of any immediate medical attention and special treatment needed

Note to physician:	All treatments should be based on observed signs and symptoms of distress to the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.
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Treat symptomatically. There is no specific antidote available.

SECTION V: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:	Dry chemical, CO ₂ , foam, water spray.
Unsuitable extinguishing media:	High volume water jet (frothing possible)

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting:	Under fire conditions, will burn.
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Hazardous decomposition products: Carbon oxides.

5.3 Advice for firefighters

Special protective equipment: Firefighters should wear approved self-contained breathing apparatus and full protective clothing.

Further information: Standard procedure for chemical fires. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION VI: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures.

Wear suitable protective equipment. For further information, see Section VIII "Exposure Controls/Personal Protection".

6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system. Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems. Spills should be reported to local agencies.

6.3 Methods and materials for containment and cleanup

Methods of containment: Stop leak if safe to do so.
Dam up with sand or inert earth (do not use combustible materials).

Recovery: Soak up with inert absorbent materials.
Shovel or sweep up.
Keep in suitable, closed container for disposal.
Never return spills to original containers for re-use.

Decontamination/cleaning: Clean contaminated surface thoroughly.
Wash non-recoverable remainder with large amounts of water.
Recover the cleaning water for subsequent disposal.

Decontaminate tools, equipment and personal protective equipment in a segregated area.

Disposal: Dispose of in accordance with local regulations.

6.4 Reference to other sections

See Section VII for Handling and Storage.

SECTION VII: HANDLING AND STORAGE

7.1 Precautions for safe handling of the substance/mixture.

Technical measures: Ethylene oxide may collect in container headspace. Provide adequate ventilation.

Advice on safe handling and usage: Avoid inhalation of vapor or mist.
Avoid contact with skin and eyes.

Hygiene measures: Personal hygiene is an important workplace practice exposure control measure and the following general measures should be taken when working with or handling this material:

- 1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
- 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
- 3) Wash exposed skin promptly to remove accidental splashes or contact with material.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Recommended: Keep container tightly closed in a dry, well-ventilated place.

To be avoided: Keep away from open flames, hot surfaces and sources of ignition.
Keep away from incompatible materials

Storage stability

Storage temperature: No data available.

7.3 Specific end use(s)

See Section I

SECTION VIII: EXPOSURE CONTROLS/PERSONAL PROTECTION**General comments**

These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Exposure limits: Not established

Protective measures: Ensure that eyewash stations and safety showers are close to workstation. Emergency equipment immediately accessible, with instructions for use. Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the potential hazards, and/or risks that may occur during use.

Respiratory protection: When respirators are required, use approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations.

Hand protection: Gloves. 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:	Eye and face protection will vary dependent upon work, environmental conditions and material handling practices. Appropriate approved equipment should be selected for the particular use intended for this material. Eye contact should be prevented through the use of safety glass with side-shields.
Body protection:	Footwear protecting against chemicals; impervious clothing.
Hygiene measures:	Personal hygiene is an important workplace practice exposure control measure and the following general measures should be taken when working with or handling this material: <ol style="list-style-type: none">1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.3) Wash exposed skin promptly to remove accidental splashes or contact with material.

SECTION IX: CHEMICAL AND PHYSICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state:	Liquid
Form:	Liquid
Color:	Clear to cloudy
Odor:	Slight
Odor threshold:	No data available
pH:	5.0 – 7.5 (5% m/v)
Freezing point:	-4°C
Flashpoint:	> 200°C Pensky-Martens Closed Cup
Evaporation rate:	Not determined
Flammability:	Will burn

Upper explosive limit:	No data available
Lower explosive limit:	No data available
Vapor pressure:	< 0.1 mm Hg
Relative density:	>1.04 g/mL (23°C)
Solubility:	Dispersible in water
Partition n-octanol/water:	No data available
Autoignition temperature:	No data available
Thermal decomposition:	> 300 °C
Viscosity:	No data available
Explosive properties:	No data available
Oxidizing properties:	No data available

9.2 Other information

Volatiles by volume: > 40%

SECTION X: STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4 Conditions to avoid

Keep away from heat and sources of ignition. Keep away from flames and sparks.

10.5 Incompatible materials

Strong bases. Strong oxidizing agents.

10.6 Hazardous decomposition products

Carbon oxides.

SECTION XI: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity: LD50 5,500 mg/kg – Rat
By analogy
Acute inhalation toxicity: No data available
Acute dermal toxicity: No data available
Acute toxicity (other routes of administration): No data available

Skin corrosion/irritation

Skin irritation: Rabbit
Slight irritation
By analogy

Serious eye damage/eye irritation

Eye irritation: Rabbit
Slight irritation
By analogy

Respiratory or skin sensitization

Sensitization: No data available

Mutagenicity

Genotoxicity in vitro: No data available
Genotoxicity in vivo: No data available

Carcinogenicity

Carcinogenicity: No data available

Toxicity for reproduction and development

Toxicity to reproduction/fertility: No data available
Developmental toxicity/teratogenicity: No data available

SECTION XII: ECOLOGICAL INFORMATION**12.1 Toxicity**

Acute aquatic toxicity: According to the data on the components, this product does not have any known adverse effects on the aquatic organisms tested according to the classification criteria for mixtures.

Chronic aquatic toxicity: According to the data on the components, this product does not have any known adverse effects on the aquatic

organisms tested according to the classification criteria for mixtures.

12.2 Persistence and degradability

No data available

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 XIII: DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods**

Advice on disposal: Chemical additions, processing or otherwise altering this material may make the waste management information presented in this SDS incomplete, inaccurate or otherwise inappropriate. Please be advised that local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult local regulations regarding proper disposal of this material.

Contaminated containers: Rinse with appropriate solvent. Dispose of contents/container in accordance with local regulations.

SECTION XIV: TRANSPORT INFORMATION

In accordance with the provisions of ADR/RID/ADNR/IMDG/ICAO/IATA

14.1 UN Number

Not classified as dangerous

14.2 Shipping name UN Model

Not applicable

14.3 Transport hazard class

Not applicable

14.4 Packing group

Not applicable

14.5 Environmental hazards

Other information: No additional information available

14.6 Special precautions for use

No additional information available

14.6.1 Ground transport

No additional information available

14.6.2 Sea transport

No additional information available.

14.6.3 Air transport

No additional information available

14.7 Transport in bulk according to Annex II of Marpol 73/78 and IBC Code

Not applicable.

SECTION XV: REGULATORY INFORMATION**15.1 Safety legislation specific for the substance or mixture****15.1.1 EU-Regulations**

No restrictions according to Annex XVII of REACH. Does not contain REACH candidate substances.

15.1.2 National regulations

No information available

15.2 Chemical safety assessment

No information available

SECTION XVI: OTHER INFORMATION**More information**

Abbreviations

ADR:	European Agreement Concerning the International Carriage of Dangerous Goods by Road
IMDG:	International Maritime Code for Dangerous Goods
LC50:	Lethal Concentration 50%
LD50:	Lethal Dose 50%
EC50:	Effective Dose 50%
CLP:	Classification, Labelling and Packaging
CAS:	Chemical Abstract Service
RID:	Regulations concerning the International Carriage of Dangerous Goods by Rail
IATA-DGR:	International Air Transport Association Dangerous Goods Regulations
GHS:	Globally Harmonized System (GHS) of Labelling Chemical Products
REACH:	Registration, Evaluation, Authorization and Restriction of Chemical Products
Version:	1.0
Previous version:	Not applicable
Reason for revision:	New SDS

The information in this SDS, to our knowledge, is accurate at the data of publication. This information is intended as a guide for safe handling, use, processing, storage, transportation, disposal and release, and is not to be considered a guarantee or indication of quality. The information relates only to the specific material and may not be valid in combination with other products or used in any process, unless specified in the text.