



Simplicity in Water Analysis

## Cover Page for Safety Data Sheet

Thank you for choosing CHEMetrics, Inc. We appreciate your business. In order to best serve your needs for accurate and complete Safety Data, we offer the following information as supplemental to the attached SDS.

**SDS No.:** K1700

**Version No.:** 1.1

**Product Name:** FoalWatch Titrets® Ampoules

**Part Nos.:** K-1700 Ampoules

### Product Descriptions:

*Titrets Ampoules:* Glass ampoules, 13 mm OD, for titrimetric analysis. Each Titret™ ampoule contains approximately 1.1 mL of liquid reagent sealed under vacuum. Test kits contain 20 ampoules.

### Addendum to Section 14 Transport Information:

Shipping container markings and labels for this product, as received, may vary from the contents of section 14 of the SDS for one or both of the following reasons:

- CHEMetrics has packaged this product as Dangerous Goods in Excepted Quantities according to IATA, US DOT, and IMDG regulations.
- CHEMetrics has packaged this product as part of a test kit or reagent set composed of various chemical reagents and elected to ship as UN 3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

In case of reshipment, it is the responsibility of the shipper to determine appropriate labels and markings in accordance with applicable transportation regulations.

### Additional Information:

- “Print Date” = Revision Date (expressed as DD/MM/YYYY)
- Test kits and reagents sets may contain additional chemical reagents. See separate SDS(s).

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## FoalWatch Titrets Ampoules

CHEMetrics, Inc.

Chemwatch Hazard Alert Code: 0

SDS No: **K1700**  
Version No: **1.1**  
Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Issue Date: **22/04/2015**  
Print Date: **22/04/2015**

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

#### Product Identifier

Product name	FoalWatch Titrets Ampoules
Synonyms	Part No.: K-1700 Ampoules
Proper shipping name	Not Applicable
Chemical formula	Not Applicable
Other means of identification	Not Available
CAS number	Not Applicable

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

Relevant identified uses	Component of FoalWatch test kit K-1700
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#### Details of the manufacturer/importer

Registered company name	CHEMetrics, Inc.
Address	4295 Catlett Road, Midland, VA. 22728 United States
Telephone	1-540-788-9026
Fax	1-540-788-4856
Website	www.chemetrics.com
Email	technical@chemetrics.com

**Emergency telephone number - For chemical exposure emergencies only. Direct all other inquiries to CHEMetrics, Inc.**

Association / Organisation	ChemTel Inc.
Emergency telephone numbers	1-800-255-3924
Other emergency telephone numbers	+01-813-248-0585

### SECTION 2 HAZARDS IDENTIFICATION

#### Classification of the substance or mixture

GHS Classification	Chronic Aquatic Hazard Category 3
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#### Label elements

GHS label elements	Not Applicable
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SIGNAL WORD	<b>NOT APPLICABLE</b>
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#### Hazard statement(s)

H412	Harmful to aquatic life with long lasting effects
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#### Precautionary statement(s) Prevention

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
P273	Avoid release to the environment.

#### Precautionary statement(s) Response

Continued...

## FoalWatch Titrets Ampoules

Not Applicable

**Precautionary statement(s) Storage**

Not Applicable

**Precautionary statement(s) Disposal**

P501	Dispose of contents/container to authorised chemical landfill or if organic to high temperature incineration
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**SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS****Substances**

See section below for composition of Mixtures

**Mixtures**

CAS No	%[weight]	Name
1310-73-2	1	<a href="#">sodium hydroxide</a>
12125-02-9	<1	<a href="#">ammonium chloride</a>
67-42-5	<1	<a href="#">EGTA</a>
7446-20-0	<1	<a href="#">zinc sulfate heptahydrate</a>
1303-96-4	3	<a href="#">sodium borate, decahydrate</a>
7732-18-5	>93	<a href="#">water</a>

**SECTION 4 FIRST AID MEASURES****Description of first aid measures**

<b>Eye Contact</b>	<p>If this product comes in contact with eyes:</p> <ul style="list-style-type: none"> <li>▶ Wash out immediately with water.</li> <li>▶ If irritation continues, seek medical attention.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
<b>Skin Contact</b>	<p>If skin or hair contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul>
<b>Inhalation</b>	<ul style="list-style-type: none"> <li>▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area.</li> <li>▶ Other measures are usually unnecessary.</li> </ul>
<b>Ingestion</b>	<ul style="list-style-type: none"> <li>▶ Immediately give a glass of water.</li> <li>▶ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.</li> </ul>

**Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**SECTION 5 FIREFIGHTING MEASURES****Extinguishing media**

	<ul style="list-style-type: none"> <li>▶ There is no restriction on the type of extinguisher which may be used.</li> <li>▶ Use extinguishing media suitable for surrounding area.</li> </ul>
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**Special hazards arising from the substrate or mixture**

<b>Fire Incompatibility</b>	None known.
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**Advice for firefighters**

<b>Fire Fighting</b>	<ul style="list-style-type: none"> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear breathing apparatus plus protective gloves in the event of a fire.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water courses.</li> <li>▶ Use fire fighting procedures suitable for surrounding area.</li> <li>▶ <b>DO NOT</b> approach containers suspected to be hot.</li> </ul>
<b>Fire/Explosion Hazard</b>	<ul style="list-style-type: none"> <li>▶ Non combustible.</li> <li>▶ Not considered a significant fire risk, however containers may burn.</li> </ul>

**SECTION 6 ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

<b>Minor Spills</b>	<ul style="list-style-type: none"> <li>▶ Clean up all spills immediately.</li> <li>▶ Avoid breathing vapours and contact with skin and eyes.</li> <li>▶ Control personal contact with the substance, by using protective equipment.</li> <li>▶ Contain and absorb spill with sand, earth, inert material or vermiculite.</li> <li>▶ Wipe up.</li> </ul>
<b>Major Spills</b>	<p>Minor hazard.</p> <ul style="list-style-type: none"> <li>▶ Clear area of personnel.</li> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Control personal contact with the substance, by using protective equipment as required.</li> <li>▶ Prevent spillage from entering drains or water ways.</li> </ul>

Continued...

## FoalWatch Titrets Ampoules

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

## SECTION 7 HANDLING AND STORAGE

## Precautions for safe handling

<b>Safe handling</b>	<ul style="list-style-type: none"> <li>▶ Limit all unnecessary personal contact.</li> <li>▶ Wear protective clothing when risk of exposure occurs.</li> <li>▶ Use in a well-ventilated area.</li> <li>▶ Avoid contact with incompatible materials.</li> <li>▶ When handling, <b>DO NOT eat, drink or smoke.</b></li> </ul> <p><b>Wear impact- and splash-resistant eyewear. Breaking the ampoule tip in air when a valve assembly is not attached may cause the glass ampoule to shatter.</b></p>
<b>Other information</b>	<b>For optimum analytical performance, store in the dark and at room temperature.</b>

## Conditions for safe storage, including any incompatibilities

<b>Suitable container</b>	<ul style="list-style-type: none"> <li>▶ Polyethylene or polypropylene container.</li> <li>▶ Packing as recommended by manufacturer.</li> <li>▶ Check all containers are clearly labelled and free from leaks.</li> </ul>
<b>Storage incompatibility</b>	None known

## PACKAGE MATERIAL INCOMPATIBILITIES

Not Available

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

## Control parameters

## OCCUPATIONAL EXPOSURE LIMITS (OEL)

## INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US OSHA Permissible Exposure Levels (PELs) - Table Z1	sodium hydroxide	Sodium hydroxide	2 mg/m <sup>3</sup>	Not Available	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	sodium hydroxide	Sodium hydroxide	Not Available	Not Available	2 mg/m <sup>3</sup>	TLV® Basis: URT, eye, & skin irr
US NIOSH Recommended Exposure Limits (RELs)	sodium hydroxide	Caustic soda, Lye, Soda lye, Sodium hydrate	Not Available	Not Available	2 mg/m <sup>3</sup>	Not Available
US ACGIH Threshold Limit Values (TLV)	ammonium chloride	Ammonium chloride, fume	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	Not Available	TLV® Basis: Eye & URT irr
US NIOSH Recommended Exposure Limits (RELs)	ammonium chloride	Ammonium chloride, Ammonium muriate fume, Sal ammoniac fume	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	sodium borate, decahydrate	Borate compounds, inorganic	2 mg/m <sup>3</sup>	6 mg/m <sup>3</sup>	Not Available	TLV® Basis: URT irr
US NIOSH Recommended Exposure Limits (RELs)	sodium borate, decahydrate	Borax, Borax decahydrate, Sodium borate decahydrate, Sodium tetraborate decahydrate	5 mg/m <sup>3</sup>	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	sodium borate, decahydrate	Anhydrous borax, Borax dehydrated, Disodium salt of boric acid, Disodium tetraborate, Fused borax, Sodium borate (anhydrous), Sodium tetraborate	1 mg/m <sup>3</sup>	Not Available	Not Available	Not Available

## EMERGENCY LIMITS


Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
sodium hydroxide	Sodium hydroxide	Not Available	Not Available	Not Available
ammonium chloride	Ammonium chloride	20 mg/m <sup>3</sup>	41 mg/m <sup>3</sup>	330 mg/m <sup>3</sup>
zinc sulfate heptahydrate	Zinc sulfate heptahydrate (1:1:7)	18 mg/m <sup>3</sup>	120 mg/m <sup>3</sup>	120 mg/m <sup>3</sup>
zinc sulfate heptahydrate	Zinc sulfate	0.13 mg/m <sup>3</sup>	1.4 mg/m <sup>3</sup>	340 mg/m <sup>3</sup>
sodium borate, decahydrate	Sodium borate decahydrate	6 mg/m <sup>3</sup>	22 mg/m <sup>3</sup>	780 mg/m <sup>3</sup>
sodium borate, decahydrate	Sodium borate; (Disodium tetraborate; Borates, tetrasodium salts)	6 mg/m <sup>3</sup>	6 mg/m <sup>3</sup>	240 mg/m <sup>3</sup>

Ingredient	Original IDLH	Revised IDLH
sodium hydroxide	250 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
ammonium chloride	Not Available	Not Available
EGTA	Not Available	Not Available
zinc sulfate heptahydrate	Not Available	Not Available
sodium borate, decahydrate	Not Available	Not Available
water	Not Available	Not Available

## Exposure controls

Continued...

## FoalWatch Titrets Ampoules

<b>Appropriate engineering controls</b>	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly.
<b>Personal protection</b>	
<b>Eye and face protection</b>	<ul style="list-style-type: none"> <li>▶ Safety glasses with side shields</li> <li>▶ Chemical goggles.</li> <li>▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available.</li> </ul>
<b>Skin protection</b>	See Hand protection below
<b>Hands/feet protection</b>	Wear general protective gloves, eg. light weight rubber gloves. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Suitability and durability of glove type is dependent on usage.
<b>Body protection</b>	See Other protection below
<b>Other protection</b>	No special equipment needed when handling small quantities. <b>OTHERWISE:</b> <ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ Barrier cream.</li> <li>▶ Eyewash unit.</li> </ul>
<b>Thermal hazards</b>	Not Available

**Recommended material(s)****GLOVE SELECTION INDEX**

Glove selection is based on a modified presentation of the:

**"Forsberg Clothing Performance Index".**

The effect(s) of the following substance(s) are taken into account in the **computer-generated** selection:

Calcium Hardness Titrets Ampoules

Material	CPI
BUTYL	A
NEOPRENE	A
NAT+NEOPR+NITRILE	C
NATURAL RUBBER	C
NATURAL+NEOPRENE	C
NEOPRENE/NATURAL	C
NITRILE	C
NITRILE+PVC	C
PE	C
PE/EVAL/PE	C
PVA	C
PVC	C
SARANEX-23	C
SARANEX-23 2-PLY	C
TEFLON	C
VITON	C
VITON/CHLOROBUTYL	C

\* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

**NOTE:** As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

\* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

**Respiratory protection**

Not Applicable

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

Continued...

## FoalWatch Titrets Ampoules

## Information on basic physical and chemical properties

<b>Appearance</b>	Colorless		
<b>Physical state</b>	Liquid	<b>Relative density (Water = 1)</b>	1.0
<b>Odour</b>	Odourless	<b>Partition coefficient n-octanol / water</b>	Not Available
<b>Odour threshold</b>	Not Available	<b>Auto-ignition temperature (°C)</b>	Not Available
<b>pH (as supplied)</b>	10	<b>Decomposition temperature</b>	Not Available
<b>Melting point / freezing point (°C)</b>	0	<b>Viscosity (cSt)</b>	Not Available
<b>Initial boiling point and boiling range (°C)</b>	100	<b>Molecular weight (g/mol)</b>	Not Available
<b>Flash point (°C)</b>	Not Applicable	<b>Taste</b>	Not Available
<b>Evaporation rate</b>	Not Available	<b>Explosive properties</b>	Not Available
<b>Flammability</b>	Not Applicable	<b>Oxidising properties</b>	Not Available
<b>Upper Explosive Limit (%)</b>	Not Available	<b>Surface Tension (dyn/cm or mN/m)</b>	Not Available
<b>Lower Explosive Limit (%)</b>	Not Available	<b>Volatile Component (%vol)</b>	Not Available
<b>Vapour pressure (kPa)</b>	Not Available	<b>Gas group</b>	Not Available
<b>Solubility in water (g/L)</b>	Miscible	<b>pH as a solution</b>	Not Available
<b>Vapour density (Air = 1)</b>	Not Available	<b>VOC g/L</b>	Not Available

## SECTION 10 STABILITY AND REACTIVITY

<b>Reactivity</b>	See section 7
<b>Chemical stability</b>	Product is considered stable and hazardous polymerisation will not occur.
<b>Possibility of hazardous reactions</b>	See section 7
<b>Conditions to avoid</b>	See section 7
<b>Incompatible materials</b>	See section 7
<b>Hazardous decomposition products</b>	See section 5

## SECTION 11 TOXICOLOGICAL INFORMATION

## Information on toxicological effects

<b>Inhaled</b>	The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. Not normally a hazard due to non-volatile nature of product
<b>Ingestion</b>	The material has <b>NOT</b> been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.
<b>Skin Contact</b>	The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.
<b>Eye</b>	Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).
<b>Chronic</b>	Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.

<b>FoalWatch Titrets Ampoules</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
<b>FoalWatch Titrets Ampoules</b>	<b>TOXICITY</b>	<b>IRRITATION</b>

<b>SODIUM HYDROXIDE</b>	<p>The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p> <p>The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Repeated exposures may produce severe ulceration.</p> <p>Asthma-like symptoms may continue for months or even years after exposure to the material ceases.</p>
<b>AMMONIUM CHLORIDE</b>	The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
<b>ZINC SULFATE HEPTAHYDRATE</b>	Unreported (man) LDLo: 221 mg/kg Oral (rat) LD50: 1260 mg/kg Intraperitoneal (rat) LD50: 200 mg/kg Oral (mouse) LD50: 200 mg/kg Intraperitoneal (mouse) LD50: 75 mg/kg

Continued...

## FoalWatch Titrets Ampoules

	Exposure may produce irreversible effects*. <b>NOTE:</b> Substance has been shown to be mutagenic in at least one assay, or belongs to a family of chemicals producing damage or change to cellular DNA. Oral (human) TDLo: 45 mg/kg/7d-C Eye (rabbit): 0.42 mg moderate Oral (man) TDLo: 180 mg/kg/6w-I Equivocal tumorigenic agent by RTECS criteria. for zinc sulfate heptahydrate Sleep, ataxia, respiratory stimulation, somnolence, coma, diarrhoea, changes in endocrine pancreas recorded.
<b>SODIUM BORATE, DECAHYDRATE</b>	Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Oral (rat) LD50: 4500-5000 mg/kg Eyes (rabbit) (-) Mild [Orica BORAX-Europe] Reproductive effector in rats Mutagenic towards bacteria
<b>WATER</b>	No significant acute toxicological data identified in literature search.

<b>Acute Toxicity</b>	☉	<b>Carcinogenicity</b>	☉
<b>Skin Irritation/Corrosion</b>	☉	<b>Reproductivity</b>	☉
<b>Serious Eye Damage/Irritation</b>	☉	<b>STOT - Single Exposure</b>	☉
<b>Respiratory or Skin sensitisation</b>	☉	<b>STOT - Repeated Exposure</b>	☉
<b>Mutagenicity</b>	☉	<b>Aspiration Hazard</b>	☉

**Legend:** ✔ – Data required to make classification available  
✘ – Data available but does not fill the criteria for classification  
☉ – Data Not Available to make classification

## CMR STATUS

<b>EYE</b>	sodium hydroxide	US - California OEHHA/ARB - Acute Reference Exposure Levels and Target Organs (RELs) - Eye	X SODIUM HYDROXIDE
<b>RESPIRATORY</b>	sodium hydroxide	US - California OEHHA/ARB - Acute Reference Exposure Levels and Target Organs (RELs) - Respiratory	X
	zinc sulfate heptahydrate	US - California OEHHA/ARB - Acute Reference Exposure Levels and Target Organs (RELs) - Respiratory	X
<b>SKIN</b>	sodium hydroxide	US - California OEHHA/ARB - Acute Reference Exposure Levels and Target Organs (RELs) - Skin	X

## SECTION 12 ECOLOGICAL INFORMATION

## Toxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.  
Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

## Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
sodium hydroxide	LOW	LOW
EGTA	LOW	LOW
zinc sulfate heptahydrate	HIGH	HIGH
water	LOW	LOW

## Bioaccumulative potential

Ingredient	Bioaccumulation
sodium hydroxide	LOW (LogKOW = -3.8796)
EGTA	LOW (LogKOW = -4.4061)
zinc sulfate heptahydrate	LOW (BCF = 112)
water	LOW (LogKOW = -1.38)

## Mobility in soil

Ingredient	Mobility
sodium hydroxide	LOW (KOC = 14.3)
EGTA	LOW (KOC = 121.9)
zinc sulfate heptahydrate	LOW (KOC = 6.124)
water	LOW (KOC = 14.3)

## SECTION 13 DISPOSAL CONSIDERATIONS

## FoilWatch Titrets Ampoules

## Waste treatment methods

Product / Packaging disposal	Dispose of according to federal, state, and local regulations.
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## SECTION 14 TRANSPORT INFORMATION

## Labels Required

Marine Pollutant	NO
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Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

## Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC code

Source	Ingredient	Pollution Category
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk	ammonium chloride	Z

## SECTION 15 REGULATORY INFORMATION

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

sodium hydroxide(1310-73-2) is found on the following regulatory lists	"US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants", "US - Idaho - Limits for Air Contaminants", "US - Hawaii Air Contaminant Limits", "US - California Permissible Exposure Limits for Chemical Contaminants", "US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants", "US - Oregon Permissible Exposure Limits (Z-1)", "US - Michigan Exposure Limits for Air Contaminants", "US - Washington Toxic air pollutants and their ASIL, SQER and de minimis emission values", "US - California OEHHA/ARB - Acute Reference Exposure Levels and Target Organs (RELs)", "US NIOSH Recommended Exposure Limits (RELs)", "US - Alaska Limits for Air Contaminants", "US - Washington Permissible exposure limits of air contaminants", "US - Minnesota Permissible Exposure Limits (PELs)", "US ACGIH Threshold Limit Values (TLV)", "US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants", "US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory", "US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants", "US OSHA Permissible Exposure Levels (PELs) - Table Z1"
ammonium chloride(12125-02-9) is found on the following regulatory lists	"US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants", "US - Hawaii Air Contaminant Limits", "US - California Permissible Exposure Limits for Chemical Contaminants", "US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants", "US - Oregon Permissible Exposure Limits (Z-1)", "US - Michigan Exposure Limits for Air Contaminants", "US NIOSH Recommended Exposure Limits (RELs)", "US - Alaska Limits for Air Contaminants", "US - Washington Permissible exposure limits of air contaminants", "US - Minnesota Permissible Exposure Limits (PELs)", "US ACGIH Threshold Limit Values (TLV)", "US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants", "US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory"
EGTA(67-42-5) is found on the following regulatory lists	"US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory"
zinc sulfate heptahydrate(7446-20-0) is found on the following regulatory lists	"US EPA Carcinogens Listing", "US - California OEHHA/ARB - Acute Reference Exposure Levels and Target Organs (RELs)", "US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory"
sodium borate, decahydrate(1303-96-4) is found on the following regulatory lists	"US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants", "US - Hawaii Air Contaminant Limits", "US - California Permissible Exposure Limits for Chemical Contaminants", "US ACGIH Threshold Limit Values (TLV) - Carcinogens", "US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants", "US - Michigan Exposure Limits for Air Contaminants", "US EPA Carcinogens Listing", "US NIOSH Recommended Exposure Limits (RELs)", "US - Alaska Limits for Air Contaminants", "US - Washington Permissible exposure limits of air contaminants", "US - Minnesota Permissible Exposure Limits (PELs)", "US ACGIH Threshold Limit Values (TLV)", "US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants", "US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory"
water(7732-18-5) is found on the following regulatory lists	"US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory"

## SECTION 16 OTHER INFORMATION

## Other information

## Ingredients with multiple cas numbers

Name	CAS No
Not Available	Not Available
Not Available	Not Available
Not Available	Not Available
Not Available	Not Available

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

[www.chemwatch.net/references](http://www.chemwatch.net/references)

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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