

according to Regulation (EC) No. 1907/2006

Revision Date 21-Mar-2024 Revision Number 3

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

1.1. Product identifier

Product Description: <u>Tyrode's Solution, without calcium</u>

Cat No. : J67815

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

Recommended Use Laboratory chemicals.
Uses advised against No Information available

1.3. Details of the supplier of the safety data sheet

Company

Thermo Fisher (Kandel) GmbH

Erlenbachweg 2, 76870 Kandel, Germany

Tel: +49 (0) 721 84007 280 Fax: +49 (0) 721 84007 300

**Swiss distributor -** Fisher Scientific AG Neuhofstrasse 11, CH 4153 Reinach

Tel: +41 (0) 56 618 41 11

https://www.fishersci.ch/ch/en/customer-help-

support/forms/email-us.html

E-mail address begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11 Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99 **CHEMTREC** Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

customers in Switzerland:

Tox Info Suisse Emergency Number: 145 (24hr)

Tox Info Suisse: +41-44 251 51 51 (Emergency number from abroad)

Chemtrec (24h) Toll-Free: 0800 564 402 Chemtrec Local: +41-43 508 20 11 (Zurich)

## **SECTION 2: HAZARDS IDENTIFICATION**

#### 2.1. Classification of the substance or mixture

#### CLP Classification - Regulation (EC) No 1272/2008

#### **Physical hazards**

Based on available data, the classification criteria are not met

#### Tyrode's Solution, without calcium

Revision Date 21-Mar-2024

#### **Health hazards**

Based on available data, the classification criteria are not met

#### **Environmental hazards**

Based on available data, the classification criteria are not met

Full text of Hazard Statements: see section 16

#### 2.2. Label elements

None required

## 2.3. Other hazards

This product does not contain any known or suspected endocrine disruptors

## **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

#### 3.2. Mixtures

Component	CAS No	EC No	Weight %	CLP Classification - Regulation (EC) No 1272/2008
Water	7732-18-5	231-791-2	98.52	-
Sodium chloride	7647-14-5	231-598-3	0.818	-
1-Piperazineethanesulfonic acid, 4-(2-hydroxyethyl)-	7365-45-9	EEC No. 230-907-9	0.238	-
Glucose	50-99-7	EEC No. 200-075-1	0.18	-
Propanoic acid, 2-oxo-, sodium salt	113-24-6	EEC No. 204-024-4	0.11	Skin Sens. 1B (H317) Eye Irrit. 2 (H319)
1,2-Bis(2-aminophenoxy)ethane-N,N,N,N-t etraacetic acid	85233-19-8		0.095	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335)
Potassium chloride	7447-40-7	231-211-8	0.037	-

Full text of Hazard Statements: see section 16

## **SECTION 4: FIRST AID MEASURES**

## 4.1. Description of first aid measures

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

medical attention.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Get medical attention

#### Tyrode's Solution, without calcium

Revision Date 21-Mar-2024

immediately if symptoms occur.

**Ingestion** Clean mouth with water and drink afterwards plenty of water. Get medical attention if

symptoms occur.

Inhalation Remove to fresh air. Get medical attention immediately if symptoms occur.

**Self-Protection of the First Aider** No special precautions required.

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

None reasonably foreseeable.

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

Notes to Physician Treat symptomatically.

## **SECTION 5: FIREFIGHTING MEASURES**

#### 5.1. Extinguishing media

#### **Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.

#### Extinguishing media which must not be used for safety reasons

No information available.

#### 5.2. Special hazards arising from the substance or mixture

None reasonably foreseeable.

#### **Hazardous Combustion Products**

Nitrogen oxides (NOx), Sulfur oxides, Hydrogen chloride, Potassium oxides, Sodium oxides.

#### 5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

#### 6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment as required.

## 6.2. Environmental precautions

Should not be released into the environment. See Section 12 for additional Ecological Information.

#### 6.3. Methods and material for containment and cleaning up

Sweep up and shovel into suitable containers for disposal.

#### 6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

#### Tyrode's Solution, without calcium

Revision Date 21-Mar-2024

## **SECTION 7: HANDLING AND STORAGE**

#### 7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation.

#### **Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

## 7.2. Conditions for safe storage, including any incompatibilities

Keep refrigerated.

Technical Rules for Hazardous Substances (TRGS) 510 Storage Class (LGK) (Germany)

Storage Class/LGK 12

Storage class - SC 10/12

Switzerland - Storage of hazardous substances

https://www.kvu.ch/de/themen/stoffe-und-produkte https://www.kvu.ch/fr/themes/substances-et-produits https://www.kvu.ch/it/temi/sostanze-e-prodotti

#### 7.3. Specific end use(s)

Use in laboratories

## **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

## 8.1. Control parameters

## **Exposure limits**

List source(s):

Component	Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
Potassium chloride	TWA: 5.0 mg/m <sup>3</sup>				

Component	Latvia	Lithuania	Luxembourg	Malta	Romania
Sodium chloride	TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m³ IPRD			
Potassium chloride	TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m³ IPRD			

Component	Russia	Slovak Republic	Slovenia	Sweden	Turkey
Sodium chloride	MAC: 5 mg/m <sup>3</sup>				
Glucose	MAC: 10 mg/m <sup>3</sup>				
Potassium chloride	MAC: 5 mg/m <sup>3</sup>				

#### **Biological limit values**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

## **Monitoring methods**

#### Tyrode's Solution, without calcium

Revision Date 21-Mar-2024

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

## Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

Component	Acute effects local	Acute effects	Chronic effects local	Chronic effects
	(Dermal)	systemic (Dermal)	(Dermal)	systemic (Dermal)
Sodium chloride		DNEL = 295.52mg/kg		DNEL = 295.52mg/kg
7647-14-5 ( 0.818 )		bw/day		bw/day
1-Piperazineethanesulfonic				DNEL = 3.33mg/kg
acid, 4-(2-hydroxyethyl)-				bw/day
7365-45-9 ( 0.238 )				·
Potassium chloride		DNEL = 910mg/kg		DNEL = 303mg/kg
7447-40-7 ( 0.037 )		bw/day		bw/day

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Sodium chloride 7647-14-5 ( 0.818 )		DNEL = 2068.62mg/m <sup>3</sup>		DNEL = 2068.62mg/m <sup>3</sup>
1-Piperazineethanesulfonic acid, 4-(2-hydroxyethyl)- 7365-45-9 ( 0.238 )				DNEL = 23.5mg/m <sup>3</sup>
Potassium chloride 7447-40-7 ( 0.037 )		DNEL = 5320mg/m <sup>3</sup>		DNEL = 1064mg/m <sup>3</sup>

## **Predicted No Effect Concentration (PNEC)**

See values below.

Component	Fresh water	Fresh water	<b>Water Intermittent</b>	Microorganisms in	Soil (Agriculture)
		sediment		sewage treatment	
Sodium chloride 7647-14-5 ( 0.818 )	PNEC = 5mg/L			PNEC = 500mg/L	PNEC = 4.86mg/kg soil dw
Potassium chloride 7447-40-7 ( 0.037 )	PNEC = 0.1mg/L		PNEC = 1mg/L	PNEC = 10mg/L	

Component	Marine water	Marine water sediment	Marine water Intermittent	Food chain	Air
Potassium chloride	PNEC = 0.1mg/L				
7447-40-7 ( 0.037 )					

## 8.2. Exposure controls

## **Engineering Measures**

None under normal use conditions.

#### Personal protective equipment

**Eye Protection** Wear safety glasses with side shields (or goggles) (European standard - EN 166)

**Hand Protection** Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Natural rubber	See manufacturers		EN 374	(minimum requirement)
Nitrile rubber	recommendations			
Neoprene				

#### Tyrode's Solution, without calcium

Revision Date 21-Mar-2024

PVC -

Skin and body protection Long sleeved clothing.

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

**Respiratory Protection** No protective equipment is needed under normal use conditions.

Large scale/emergency use Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits

are exceeded or if irritation or other symptoms are experienced

Liquid

Recommended Filter type: Particle filter

Small scale/Laboratory use Maintain adequate ventilation

**Environmental exposure controls** No information available.

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

## 9.1. Information on basic physical and chemical properties

Physical State Liquid

Appearance Colorless

Odor
Odor No information available
No data available
No information available
Flammability (liquid)
No data available

Flammability (solid,gas) Not applicable

Explosion Limits No data available

Flash Point No information available Method - No information available

Autoignition Temperature
Decomposition Temperature
pH
Viscosity
No data available
No data available
No information available
No data available

Water Solubility Miscible

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

**Component** log Pow 1-Piperazineethanesulfonic acid, -3.85

4-(2-hydroxyethyl)-

Vapor Pressure<=1100 hPa @ 50 °C</th>Density / Specific GravityNo data available

Bulk DensityNot applicableLiquidVapor DensityNo data available(Air = 1.0)

Particle characteristics Not applicable (liquid)

#### 9.2. Other information

## **SECTION 10: STABILITY AND REACTIVITY**

#### Tyrode's Solution, without calcium

10.1. Reactivity

None known, based on information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous Polymerization No information available.
Hazardous Reactions None under normal processing.

10.4. Conditions to avoid

Incompatible products. Excess heat.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Nitrogen oxides (NOx). Sulfur oxides. Hydrogen chloride. Potassium oxides. Sodium

oxides.

## **SECTION 11: TOXICOLOGICAL INFORMATION**

#### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### **Product Information**

(a) acute toxicity;

OralBased on available data, the classification criteria are not metDermalBased on available data, the classification criteria are not metInhalationBased on available data, the classification criteria are not met

#### Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	-	-	-
Sodium chloride	LD50 = 3 g/kg (Rat)	LD50 > 10000 mg/kg ( Rabbit )	LC50 > 42 mg/L (Rat) 1 h
1-Piperazineethanesulfonic acid, 4-(2-hydroxyethyl)-	LD50 > 2000 mg/kg (Rat)	LD50 > 2000 mg/kg (Rat)	-
Glucose	25.8 g/kg ( Rat )	-	=
Propanoic acid, 2-oxo-, sodium salt	5600 mg/kg (Rat)	-	-
Potassium chloride	LD50 = 2600 mg/kg ( Rat )	-	-

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;

RespiratoryNo data availableSkinNo data available

(e) germ cell mutagenicity; No data available

ALFAAJ67815

Revision Date 21-Mar-2024

Tyrode's Solution, without calcium

Revision Date 21-Mar-2024

(f) carcinogenicity; No data available

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available

Target Organs No information available.

(j) aspiration hazard; No data available

Symptoms / effects,both acute and No information available.

delayed

11.2. Information on other hazards

Endocrine Disrupting Properties Assess endocrine disrupting properties for human health. This product does not contain any

known or suspected endocrine disruptors.

## **SECTION 12: ECOLOGICAL INFORMATION**

12.1. Toxicity
Ecotoxicity effects

cts Contains no substances known to be hazardous to the environment or that are not

degradable in waste water treatment plants.

Component	Freshwater Fish	Water Flea	Freshwater Algae
Sodium chloride	Pimephals prome: LC50: 7650 mg/L/96h	EC50: 1000 mg/L/48h	
1-Piperazineethanesulfonic acid, 4-(2-hydroxyethyl)-	LC50: > 100 mg/L, 96h static (Danio rerio)		
Potassium chloride	Lepomis macrochirus: LC50: 1060 mg/L /96h Pimephales promelas: LC50: 750 - 1020 mg/L /96h	EC50: 825 mg/L/48h	EC50: 2500 mg/L/72h

12.2. Persistence and degradability

Persistence Miscible with water, Persistence is unlikely, based on information available.

12.3. Bioaccumulative potential Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
1-Piperazineethanesulfonic acid,	-3.85	No data available
4-(2-hvdroxvethvl)-		

12.4. Mobility in soil The product is water soluble, and may spread in water systems Will likely be mobile in the

environment due to its water solubility. Highly mobile in soils

Tyrode's Solution, without calcium

Revision Date 21-Mar-2024

12.5. Results of PBT and vPvB

assessment

No data available for assessment.

12.6. Endocrine disrupting

properties

**Endocrine Disruptor Information** 

This product does not contain any known or suspected endocrine disruptors

12.7. Other adverse effects

Persistent Organic Pollutant Ozone Depletion Potential This product does not contain any known or suspected substance This product does not contain any known or suspected substance

## **SECTION 13: DISPOSAL CONSIDERATIONS**

13.1. Waste treatment methods

Waste from Residues/Unused

**Products** 

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Consult local, regional, and national hazardous waste regulations to

ensure complete and accurate classification.

Contaminated Packaging Empty remaining contents. Dispose of in accordance with local regulations. Do not re-use

empty containers.

European Waste Catalogue (EWC) According to the European Waste Catalog, Waste Codes are not product specific, but

application specific.

Other Information Waste codes should be assigned by the user based on the application for which the product

was used.

Switzerland - Waste Ordinance Disposal should be in accordance with applicable regional, national and local laws and

regulations. Ordinance on the Avoidance and the Disposal of Waste (Waste Ordinance,

ADWO) SR 814.600

https://www.fedlex.admin.ch/eli/cc/2015/891/en

## **SECTION 14: TRANSPORT INFORMATION**

IMDG/IMO Not regulated

14.1. UN number

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

ADR Not regulated

14.1. UN number

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

IATA Not regulated

14.1. UN number

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

Tyrode's Solution, without calcium

Revision Date 21-Mar-2024

14.5. Environmental hazards No hazards identified

**14.6. Special precautions for user** No special precautions required.

14.7. Maritime transport in bulk according to IMO instruments

Not applicable, packaged goods

## **SECTION 15: REGULATORY INFORMATION**

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

#### **International Inventories**

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
Water	7732-18-5	231-791-2	-	-	Х	Χ	KE-35400	Х	-
Sodium chloride	7647-14-5	231-598-3	-	-	Х	Х	KE-31387	Х	Х
1-Piperazineethanesulfonic acid, 4-(2-hydroxyethyl)-	7365-45-9	230-907-9	-	-	Х	Х	-	-	-
Glucose	50-99-7	200-075-1	-	-	Х	Χ	KE-17727	X	Х
Propanoic acid, 2-oxo-, sodium salt	113-24-6	204-024-4	-	-	Х	Х	KE-27653	Х	Х
1,2-Bis(2-aminophenoxy)ethane-N ,N,N,N-tetraacetic acid	85233-19-8	-	-	-	-	Х	-	-	-
Potassium chloride	7447-40-7	231-211-8	-	-	Х	Х	KE-29086	Х	Х

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Water	7732-18-5	X	ACTIVE	X	Ī	Χ	X	X
Sodium chloride	7647-14-5	Х	ACTIVE	X	Ī	X	X	X
1-Piperazineethanesulfonic acid, 4-(2-hydroxyethyl)-	7365-45-9	X	ACTIVE	X	1	X	X	Х
Glucose	50-99-7	X	ACTIVE	X	Ī	Χ	X	X
Propanoic acid, 2-oxo-, sodium salt	113-24-6	X	ACTIVE	X	1	X	Х	Х
1,2-Bis(2-aminophenoxy)ethane-N ,N,N,N-tetraacetic acid	85233-19-8	-	-	1	1	1	1	-
Potassium chloride	7447-40-7	Χ	ACTIVE	Χ	-	Χ	Х	X

**Legend:** X - Listed '-' - Not Listed **KECL** - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

## Authorisation/Restrictions according to EU REACH

Not applicable

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Water	7732-18-5	-	-	-
Sodium chloride	7647-14-5	-	-	-
1-Piperazineethanesulfonic acid, 4-(2-hydroxyethyl)-	7365-45-9	-	-	-
Glucose	50-99-7	-	-	-
Propanoic acid, 2-oxo-, sodium salt	113-24-6	-	-	-
1,2-Bis(2-aminophenoxy)ethane-N, N,N,N-tetraacetic acid	85233-19-8	-	-	-
Potassium chloride	7447-40-7	-	-	-

## Seveso III Directive (2012/18/EC)

#### Tyrode's Solution, without calcium

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
Water	7732-18-5	Not applicable	Not applicable
Sodium chloride	7647-14-5	Not applicable	Not applicable
1-Piperazineethanesulfonic acid, 4-(2-hydroxyethyl)-	7365-45-9	Not applicable	Not applicable
Glucose	50-99-7	Not applicable	Not applicable
Propanoic acid, 2-oxo-, sodium salt	113-24-6	Not applicable	Not applicable
1,2-Bis(2-aminophenoxy)eth ane-N,N,N,N-tetraacetic acid	85233-19-8	Not applicable	Not applicable
Potassium chloride	7447-40-7	Not applicable	Not applicable

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)? Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

#### **National Regulations**

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

#### **WGK Classification**

Water endangering class = non-hazardous to waters (self classification)

Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class
Sodium chloride	WGK1	
1-Piperazineethanesulfonic acid, 4-(2-hydroxyethyl)-	WGK1	
Glucose	WGK1	
Potassium chloride	WGK1	

Component	France - INRS (Tables of occupational diseases)
Sodium chloride	Tableaux des maladies professionnelles (TMP) - RG 78
Potassium chloride	Tableaux des maladies professionnelles (TMP) - RG 67

#### **Swiss Regulations**

Article 4 para. 4 of the Ordinance on the protection of young people in the workplace (SR 822.115) and Article 1 lit. f of the EAER regulation on hazardous work and young people (SR 822.115.2).

Take note on Article 13 Maternity Ordinance (SR 822.111.52) with regards expectant and nursing mothers.

Component	Switzerland - Ordinance on the Reduction of Risk from handling of hazardous substances preparation (SR 814.81)	Switzerland - Ordinance on Incentive Taxes on Volatile Organic Compounds (OVOC)	Switzerland - Ordinance of the Rotterdam Convention on the Prior Informed Consent Procedure
Sodium chloride	Prohibited and Restricted		
7647-14-5 ( 0.818 )	Substances		

## 15.2. Chemical safety assessment

Chemical Safety Assessment/Reports (CSA/CSR) are not required for mixtures

Revision Date 21-Mar-2024

## **SECTION 16: OTHER INFORMATION**

#### Full text of H-Statements referred to under sections 2 and 3

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation

#### Legend

**CAS** - Chemical Abstracts Service

TSCA - United States Toxic Substances Control Act Section 8(b)

EINECS/ELINCS - European Inventory of Existing Commercial Chemical DSL/NDSL - Canadian Domestic Substances List/Non-Domestic

Substances/EU List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances **KECL** - Korean Existing and Evaluated Chemical Substances

Substances List **ENCS** - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit

ACGIH - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

NOEC - No Observed Effect Concentration PBT - Persistent, Bioaccumulative, Toxic

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

Predicted No Effect Concentration (PNEC)

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50% POW - Partition coefficient Octanol:Water vPvB - very Persistent, very Bioaccumulative

ADR - European Agreement Concerning the International Carriage of

Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime

Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

ICAO/IATA - International Civil Aviation Organization/International Air

Transport Association

VOC - (volatile organic compound)

MARPOL - International Convention for the Prevention of Pollution from Ships

ATE - Acute Toxicity Estimate

Key literature references and sources for data https://echa.europa.eu/information-on-chemicals

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Physical hazards On basis of test data **Health Hazards** Calculation method **Environmental hazards** Calculation method

**Training Advice** 

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and

hygiene.

**Prepared By** Health, Safety and Environmental Department

**Revision Date** 21-Mar-2024

**Revision Summary** New emergency telephone response service provider.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006. COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006

For Switzerland - Compiled in accordance with the technical provisions referred to in Annex 2, Number 3, ChemO (SR 813.11 - Ordinance on Protection against Dangerous Substances and Preparations).

#### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information

Tyrode's Solution, without calcium

Revision Date 21-Mar-2024

relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**