

SAFETY DATA SHEET

Safety Data Sheet according to (EC) No. 1907/2006.

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

1.1. Product identifier:**Solution 10**

P/N: 910-3010

UFI: Not relevant

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

Aqueous preparation for research and analysis. Restricted to professional users.

1.3. Details of the supplier of the safety data sheet:

ChemoMetec A/S

Gydevang 43

Phone: (+45) - 48 13 10 20

DK - 3450 Alleroed

Fax: (+45) - 48 13 10 21

Denmark

e-mail: contact@chemometec.comResponsible person for the safety data sheet (e-mail): contact@chemometec.com**1.4. Emergency telephone number:**

Emergency Telephone +44 1235 239670 - Europe - Multi lingual response

Austria Poison Information Centre (AT): +43-(0)1-406 43 43

Belgium Poison Centre (BE): +32 70 245 245

Croatia Poison Control (CR): +385 1 2348 342

Czech Republic Poison Control (CS): +420 224 919 293, +420 224 915 402

Denmark Poison Control Hotline (DK): +45 82 12 12 12

Estonia Poison Control (ET): 16662, (+372) 626 93 90

Finland Poison Information Centre (FI): +358 9 471 977

France ORFILA (FR): + 01 45 42 59 59

Germany Poison Centre Berlin (DE): +49 030 30686 790 (24 h service, Advice in German and English)

Greece Poison Information Center (EL): (0030) 2107793777

Hungary Poison Information Service (HU): (+ 36-80) 201-199

Ireland National Poisons Information Centre: +353 1 8379964

Iceland Poison Information Center: 543 2222

Italy Poison Centre, Milan (IT): +39 02 6610 1029

Latvia Poison Information Center (LV): +371 67042473

Lithuania Poison Information Office (LT): +370 5236 20 52 or +370 687 53 378

Luxembourg Belgian Poison Center: (+352) 8002-5500

Malta: Mater Dei Hospital: + 356 21450000

Netherlands National Poisons Information Center (NVIC): 030-274 8888

Norway Poison Center: 22 59 13 00

Poland Poison Control and Information Centre, Warsaw: +48 22 619 66 54, +48 22 619 08 97

Portugal Poison Information Centre (PT): +351 21 330 3284

România: Spitalul de Urgenta Floreasca: +40 21 230 8000

Slovensko: National Toxicological Information Centre: +421 2 54 77 4 166

Slovenija: Poison Centre: + 386 41 650 500

Spain Poison Information Service (ES): +34 91 562 04 20

Swiss Toxicological Information Centre: +41 44 251 51 51

Sweden Giftinformationscentralen, Stockholm: +46 8 33 12 31

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture:

Environmentally hazardous liquid.

CLP (1272/2008): Aquatic Chronic 3;H412

2.2. Label elements:

Contains: Octylphenol ethoxylate

H412: Harmful to aquatic life with long lasting effects.

P273: Avoid release to the environment.

P391: Collect spillage.

2.3. Other hazards: None known.

PBT/vPvB: No ingredients are PBT/vPvB, according to the criteria in REACH Annex XIII.

Endocrine disrupting properties: Octylphenol ethoxylate is included on the Candidate list (SVHC) as an environmental endocrine disrupter, because it degrades to the well-known endocrine disrupter 4-tert-octylphenol.

SECTION 3: Composition/information on ingredients

3.2. Mixtures:

% w/w	Substance name	CAS-no.	EC-no.	Index-no.	REACH reg.no.	Classification	SCL, M-factor, ATE	Note
<2.5	Citric acid monohydrate	5949-29-1	201-069-1	-	-	Eye Irrit. 2;H319 STOT SE 3; H335		1
<1	Octylphenol ethoxylate (Triton X-100)	9036-19-5	-	-	-	Acute Tox. 4;H302 Skin Irrit. 2; H315 Eye Dam.1;H318 Aquatic Acute 1;H400 Aquatic Chronic 1;H410	ATE=1800 mg/kg M (Acute) = 10 M (Chronic) = 1	2
<0.2	Trinsodium citrate dihydrate	6132-04-3	200-675-3	-	-	Not classified	-	1

1) EC-no (EINECS) corresponds to the CAS-no for the anhydrous compound.

2) The substance is included on the Candidate list (SVHC) and the Authorization list (Annex XIV) (REACH)

Wording of hazard statements - see section 16.

SECTION 4: First-aid measures

4.1. Description of first aid measures:

Inhalation: Move the affected person to fresh air. Keep at rest. If needed: Get medical attention.

Skin contact: Remove contaminated clothing and wash skin with water and mild soap. If irritation persists: Seek medical advice.

Eye contact: Immediately flush with water or physiological salt water for at least 5 minutes, holding eyelids open, remember to remove contact lenses, if any. If irritation persists: Seek medical advice.

Ingestion: Rinse mouth and drink plenty of water. In case of discomfort: Seek medical advice.

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

May cause serious eye irritation. May cause slight irritation of skin, lungs and gastrointestinal tract.

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

Show this safety data sheet to a physician or emergency ward.

SECTION 5: Firefighting measures

5.1. Extinguishing media:

Not flammable.

5.2. Special hazards arising from the substance or mixture:

Not relevant (the product is not combustible).

5.3. Advice for firefighters:

Do not inhale smoke fumes. When extinguishing surrounding fires use breathing apparatus with an independent source of air.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment - see section 8.

6.2. Environmental precautions:

Do not empty into drains – see section 12. Inform appropriate authorities in accordance with local regulations.

6.3. Methods and material for containment and cleaning up:

Absorb spilled liquid with inert material and place in a suitable container for disposal. Clean with water. Further handling of spillage - see section 13.

6.4. Reference to other sections:

See references above.

SECTION 7: Handling and storage

7.1. Precautions for safe handling:

Provide adequate ventilation. Avoid contact with skin, eyes and clothing. After work, wash hands with water and mild soap.

7.2. Conditions for safe storage, including any incompatibilities:

Store in a tightly closed original container at dry cool and well-ventilated area, protected against sunlight.

7.3. Specific end use(s):

See section 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters:

Occupational exposure limits (EH40/2005 with later amendments): None

DNEL/PNEC: No CSR.

8.2. Exposure controls:

Appropriate engineering controls: None particular.

Personal protective equipment:

Inhalation: Normally not necessary

Skin: Wear protective gloves of e.g. nitrile or butyl (EN374). Breakthrough time, approx. 3 hours.

Eyes: Wear tight fitting safety goggles (EN ISO 16321-1) when there is a risk of splashes.

Environmental exposure controls: Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties:

Physical state:	Liquid
Colour:	Clear, colourless
Odour:	Odourless
Melting point/freezing point (°C):	~ 0
Boiling point or initial boiling point and boiling range (°C):	~ 100
Flammability (solid, gas):	Not relevant
Lower and upper explosion limit (vol-%):	Not relevant
Flash point (°C):	> 100
Auto-ignition temperature (°C):	No available data
Decomposition temperature (°C):	No available data
pH:	2.0 – 3.0
Kinematic viscosity:	No available data
Solubility:	Soluble in water
Partition coefficient n-octanol/water (log value):	No available data
Vapour pressure:	No available data
Density and/or relative density:	~ 1.0
Relative vapour density:	No available data
Particle characteristics:	Not relevant

9.2. Other information:

None relevant.

SECTION 10: Stability and reactivity

10.1. Reactivity:

No available data.

10.2. Chemical stability:

Stable under the recommended storage conditions - see section 7.

10.3. Possibility of hazardous reactions:

None known.

10.4. Conditions to avoid:

Excessive heating.

10.5. Incompatible materials:

None known.

10.6. Hazardous decomposition products:

When heated to high temperatures (decomposition) toxic gasses are formed.

SECTION 11: Toxicological information

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

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 sensitization:	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.
STOT-single exposure:	Based on available data, the classification criteria are not met.
STOT-repeated exposure:	Based on available data, the classification criteria are not met.
Aspiration hazard:	Based on available data, the classification criteria are not met.

SECTION 11: Toxicological information (continued)

Hazard class	Data	Test	Data source
Acute toxicity:			
Inhalation	No available/applicable data	-	-
Dermal	LD ₅₀ (rat) = >2000 mg/kg (Citric acid)	OECD 402	ECHA
	LD ₅₀ (rat) = >2000 mg/kg (Trisodium citrate dihydrate)	OECD 402	ECHA
Oral	LD ₅₀ (rat) = 1800 mg/kg (Octylphenol ethoxylate)	OECD 401	RTECS
	LD ₅₀ (mouse) = 5790 mg/kg (Citric acid)	OECD 401	ECHA
	LD ₅₀ (mouse): 5,4 g/kg (Trisodium citrate dihydrate)	OECD 401	ECHA
Corrosion/irritation:	Moderate eye irritation, 10 µl/24h, rabbit. (Octylphenol ethoxylate)	Draize	RTECS
	No irritation, eye and skin, rabbit (Citric acid)	OECD 404, 405	ECHA
	No irritation (Trisodium citrate dihydrate)	OECD 404, 405	ECHA
Sensitization:	No sensitization, Guinea pig (Trisodiumcitrate dihydrate)	OECD 406	ECHA
CMR:	TD _{Lo} (rat) = 5,7 mg/kg (2 weeks after mating): "Effects on newborn "	No info	RTECS
	(Octylphenol ethoxylate)		
	No Mutagenicity (Citric acid)	OECD 475	ECHA
	No CMR-effects (Trisodium citrate dihydrate)	No info	ECHA

Information on likely routes of exposure: Inhalation, skin and ingestion.

Symptoms:

Inhalation: Vapours may cause slight irritation to the airways.

Skin: May cause slight irritation by prolonged contact with skin.

Eyes: May cause eye irritation.

Ingestion: May cause irritation of the gastrointestinal tract, nausea, vomiting and headache.

Chronic effects: Long term or repeated skin contact may degrease and cause red, dry, cracked and thickened skin.

11.2. Information on other hazards:

None known.

SECTION 12: Ecological information**12.1. Toxicity:**

Aquatic	Data	Test (Media)	Data source
Fish	LC ₅₀ (Pimephales promelas, 96h) = 4,5 mg/l (Octylphenol ethoxylate)	No Info (FW)	EPA Ecotox
	LC ₅₀ (Leuciscus idus melanotus, 96h) = 440 mg/l (Citric acid)	OECD 203	ECHA
	LC ₅₀ , 24 h.= >10 mg/l (Trisodium citrate dihydrate)	No info	ECHA
Daphnia	EC ₅₀ (Daphnia magna, 48h) = 11,2 mg/l (Octylphenol ethoxylate)	OECD 202 (FW)	EPA Ecotox
	EC ₅₀ , (Dreissena polymorpha, 48h) = >50 mg/l (Citric acid)	OECD 202	ECHA
	EC ₅₀ , 48h = 736 mg/l (Trisodium citrate dihydrate)	No info	ECHA
Algae	EC ₅₀ , (Scenedesmus quadricauda) = 640 mg/l (Citric acid)	No info	IUCLID

12.2. Persistence and degradability:

Biological degradation of Octylphenol ethoxylate may form Octylphenol, which is toxic and not readily degradable.

Citric acid is easily degradable, 98% (OECD 301B). Trisodiumcitrate dihydrate is easily degradable.

12.3. Bioaccumulative potential:

Octylphenol ethoxylate: Log K_{ow} = 4.86 – possible significant bioaccumulation.

Citric acid: Log K_{ow} = >1 – no bioaccumulation.

12.4. Mobility in soil:

Octylphenol ethoxylate: K_{oc} = 800-1800. Low mobility in soil is expected.

12.5. Results of PBT and vPvB assessment:

No ingredients are PBT/vPvB, according to the criteria in REACH Annex XIII.

12.6. Endocrine disrupting properties:

Octylphenol ethoxylate biodegrades in the environment to a well-known hormone-disrupting substance 4-tert-octylphenol. The substance has an estrogen-like mechanism of action that meets the WHO's definition of hormone-disrupting substances.

Octylphenol in the aquatic environment causes serious and irreversible effects on the sexual development of fish, which results in the entire fish population becoming female.

12.7. Other adverse effects:

Octylphenol ethoxylate is included on the Danish Environmental Agency list of undesirable substances, because of the oestrogenic effect of its degradation compounds.

SECTION 13: Disposal considerations**13.1. Waste treatment methods:**

The mixture is to be considered as hazardous waste. Disposal should be according to local, state or national legislation. Dispose of through authority facilities or pass to chemical disposal company.

EWC-code: 16 05 08 (mixture itself)
15 02 02 (paper towel, inert material etc. contaminated with the mixture)

SECTION 14: Transport information

Not dangerous goods (ADR/RID/IMDG/IATA).

14.1. UN number or ID number: None.

14.2. UN proper shipping name: None.

14.3. Transport hazard class(es): None.

14.4. Packing group: None.

14.5. Environmental hazards: No.

14.6. Special precautions for user: None.

14.7. Maritime transport in bulk according to IMO instruments: Not relevant.

SECTION 15: Regulatory information

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

Octylphenol ethoxylat is listed in COM (1999) 706 (EU): Community Strategy for Endocrine Disrupters a range of substances suspected of interfering with the hormone systems of humans and wildlife.

Octylphenol ethoxylate (4-Nonylphenol, branched and linear, ethoxylated) is included in REACH Annex XIV, substances subject to authorisation, However, R & D substances are exempted from this authorization.

Must not be used by persons under 18 years of age.

The employer shall assess the working conditions and, if there is any risk to the safety or health and any effects on the pregnancy or breastfeeding of workers, take the necessary measures to adjust the working conditions (Directive 92/85/EEC).

15.2. Chemical safety assessment:

No CSR.

SECTION 16: Other information

Hazard statements mentioned in section 2 and 3:

H302: Harmful if swallowed.

H315: Causes skin irritation.

H318: Causes serious eye damage.

H319: Causes serious eye irritation.

H335: May cause respiratory irritation.

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

H412: Harmful to aquatic life with long lasting effects.

Abbreviations:

ATE = Acute Toxicity Estimates

CMR = Carcinogenicity, mutagenicity and reproductive toxicity.

CSR = Chemical Safety Report

DNEL = Derived No-Effect Level

EC₅₀ = Effect Concentration 50%

FW = Fresh Water

LC₅₀ = Lethal Concentration 50%

LD₅₀ = Lethal Dose 50%

PBT = Persistent, Bioaccumulative, Toxic

PNEC = Predicted No-Effect Concentration

SCL = Specific Concentration limits

SVHC = Substances of Very High Concern

vPvB = very Persistent, very Bioaccumulative

Literature:

ECHA = European Chemicals Agency

EPA Ecotox = The US Environmental Protection Agency's database on ecotoxicological effects for chemicals.

IUCLID = International Uniform Chemical Information Database.

RTECS = Register of Toxic Effects of Chemical Substances

Training advice:

No special training is required. However, the user should be well instructed in the execution of his/her task, be familiar with this Safety Data Sheet and have normal training in the use of personal protective equipment.

Changes since the previous edition:

2,3,14,16