

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:**

REAGENT C

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

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DK - 3450 Alleroed

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Denmark

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

NHS (England or Wales): Dial 111 or 0845 4647 NHS 24 (Scotland): Dial 111

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture:**

Eye irritating liquid.

CLP (1272/2008): Eye Irrit. 2;H319

2.2. Label elements:

Contents: Octylphenol ethoxylate

**WARNING**

H319: Causes serious eye irritation.

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

P337+P313: If eye irritation persists: Get medical advice/attention.

2.3. Other hazards: None known.

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

SECTION 3: Composition/information on ingredients**3.2. Mixtures:**

% w/w	Substance name	CAS-no.	EC-no.	Index-no.	REACH reg.no.	Classification
<5	Trisodium citrate dihydrate	6132-04-3	200-675-3*	-	-	Not classified
<2,5	Citric acid monohydrate	5949-29-1	201-069-1*	-	-	Eye Irrit. 2;H319
<2	Octylphenol ethoxylate (Triton X-100)	9002-93-1	Polymer	-	-	Acute Tox. 4;H302 Eye Dam.1;H318 Aquatic Chronic 2;H411

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

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 15 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.

SECTION 4: First-aid measures (continued)

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: Fire-fighting 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.

Required access to water and eye wash fountain.

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.

Store securely and out of reach of unauthorized personnel and separated from food, feed, drugs etc.

7.3. Specific end use(s):

See section 1.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters:

Occupational exposure limits (EH40/2005): 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 (EN166) when there is a risk of splashes.

Environmental exposure controls: None particular.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties:

Appearance: Colourless liquid

Odour: Odourless

Odour threshold: No available data

pH: ~ 4.65

Melting point / freezing point (°C): ~ 0

Initial boiling point and boiling range (°C): ~ 100

Decomposition temperature (°C): No available data

Flash point (°C): No available data

SECTION 9: Physical and chemical properties (continued)

Evaporation rate:	No available data
Flammability (solid, gas):	Not relevant
Upper/lower flammability or explosive limits (vol.-%):	Not relevant
Vapour pressure (mbar, 25°C):	No available data
Vapour density (air=1):	No available data
Relative density (g/ml):	~ 1.0
Solubility:	Miscible
Partition coefficient: n-octanol/water, Log K _{ow} :	No available data
Auto-ignition temperature (°C):	No available data
Viscosity:	No available data
Explosive/Oxidising properties:	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 toxicological effects:**

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 (Trisodiumcitrate 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 (Trisodiumcitrate 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 (Trisodiumcitrate 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 " (Octylphenol ethoxylate)	No info	RTECS
	No Mutagenicity (Citric acid)	OECD 475	ECHA
	No CMR-effects (Trisodiumcitrate 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 serious 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.

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) LC ₅₀ , (Leuciscus idus melanotus, 96h) = 440 mg/ (Citric acid) LC ₅₀ , 24h = >10 mg/ (Trisodiumcitrate dihydrate)	No Info (FW) OECD 203 No Info	EPA Ecotox ECHA ECHA
Daphnia	EC ₅₀ (Daphnia magna, 48h) = 11,2 mg/l (Octylphenol ethoxylate) EC ₅₀ , (Dreissena polymorpha, 48h) = >50 mg/l (Citric acid) EC ₅₀ , 48h = 736 mg/l (Trisodiumcitrate dihydrate)	OECD 202 (FW) OECD 202 No info	EPA Ecotox ECHA 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. 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-no.: None

14.2. UN proper shipping name: None

4.3. Transport hazard class(es): None

14.4. Packing group: None

14.5. Environmental hazards: No

14.6. Special precautions for user: None

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code: 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.

H318: Causes serious eye damage.

H319: Causes serious eye irritation.

H411: Toxic to aquatic life with long lasting effects.

Abbreviations:

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

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.

Other information:

Prepared based on the information available to Alttox A/S as of August 2018.

Changes since the previous edition:

Section 15

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