Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 17.09.2018 Version number 2 Revision: 17.09.2018

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

· **1.1 Product identifier**

· **Product name: Cl2-4 TP**

· _SDS valid from Batch: S02A

· **Catalog number:** 251415

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

· **Application of the substance / the preparation:** Reagent for water analysis

· **1.3 Details of the supplier of the safety data sheet**

· **Supplier:**
Xylem Analytics Germany GmbH
WTW
Dr.-Karl-Slevogt-Straße 1
82362 Weilheim
Germany
Tel. +49 881 183-0

· **Informing department:** E-Mail: Info.WTW@Xyleminc.com

· **1.4 Emergency telephone number:** Chemtrec (USA & Canada) 800-424-9300 (INTERNATIONAL) 001 703-527-3887

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**
The product is not classified as hazardous according to the CLP regulation.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008** Void
· **Hazard pictograms** Void
· **Signal word** Void
· **Hazard statements** Void
· **Additional information:**
EUH210 Safety data sheet available on request.

· **2.3 Other hazards** No further relevant information available.
· **Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture of organic and inorganic compounds

· **Dangerous components:**		
CAS: 6283-63-2 EINECS: 228-500-6	N,N-diethylbenzene-1,4-diammonium sulphate (1:1) Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	0.1-≤2.5%
CAS: 139-33-3 EINECS: 205-358-3	disodium dihydrogenethylenediaminetetraacetate Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	0.1-≤2.5%

· **Additional information** For the wording of the listed hazard phrases refer to section 16.

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SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information** Instantly remove any clothing soiled by the product.
· **After inhalation** Supply fresh air.
· **After skin contact** Instantly wash with water and soap and rinse thoroughly.
· **After eye contact**
Rinse opened eye for several minutes under running water (at least 15 min). If symptoms persist, consult doctor.
· **After swallowing**
Rinse out mouth and then drink 1-2 glasses of water.
In case of persistent symptoms consult doctor.
· **4.2 Most important symptoms and effects, both acute and delayed:**
after swallowing of large amounts:
headache
thirst
methaemoglobinaemia
allergic reactions
sickness
vomiting
gastric pain
irritations
drop in blood pressure
after absorption:
absorption
weakness
disorder of electrolyte balance
· **4.3 Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents** Use fire fighting measures that suit the environment.
· **5.2 Special hazards arising from the substance or mixture**
The product is not combustible.
Formation of toxic gases is possible during heating or in case of fire.
Can be released in case of fire:
Sulphur oxides (SOx)
Nitrogen oxides (NOx)
Phosporus oxides (PxOx)
Dipotassium oxide
Hydrogen iodide (HI)
Carbon monoxide (CO) and carbon dioxide (CO_2)
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.
· **Additional information**
Collect contaminated fire fighting water separately. It must not enter drains.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Ambient fire may liberate hazardous vapours.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
· **Advice for non-emergency personnel:** No special measures required.
· **Advice for emergency responders:** Protective equipment: see section 8
· **6.2 Environmental precautions:** Do not allow product to reach sewage system or water bodies.
· **6.3 Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Collect mechanically.
Dispose of contaminated material as waste according to item 13.
· **6.4 Reference to other sections**
See Section 8 for information on personal protection equipment.

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See Section 13 for information on disposal.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
· **Advice on safe handling:**
Prevent formation of dust.
Thorough dedusting.
· **Hygiene measures:**
The usual precautionary measures should be adhered to general rules for handling chemicals.
Wash hands during breaks and at the end of the work.
Do not eat, drink or smoke when using this product.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage**
· **Requirements to be met by storerooms and containers:** Store in cool location.
· **Information about storage in one common storage facility:** Store away from oxidising agents.
· **Further information about storage conditions:**
Store in cool, dry conditions in well sealed containers.
Protect from heat and direct sunlight.
Protect from the effects of light.
Protect from humidity and keep away from water.
· **Recommended storage temperature:** 20°C +/- 5°C
· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **DNELs**
Derived No Effect Level (DNEL)

CAS: 139-33-3 disodium dihydrogenethylenediaminetetraacetate		
Oral	DNEL	25 mg/kg (Consumer / long-term / systemic effects)
Inhalative	DNEL	2.5 mg/m³ (Worker / acute / local effects)
		2.5 mg/m³ (Worker / acute / systemic effects)
		2.5 mg/m³ (Worker / long-term / local effects)
		2.5 mg/m³ (Worker / long-term /systemic effects)
		1.5 mg/m³ (Consumer / acute / local effects)
		1.5 mg/m³ (Consumer / acute / systemic effects)
		1.5 mg/m³ (Consumer / long-term / local effects)
		1.5 mg/m³ (Consumer / long-term / systemic effects)

· **Additional information:** The lists that were valid during the compilation were used as basis.

· **8.2 Exposure controls**

· **Engineering measures:**
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.
See item 7.

· **Personal protective equipment**
· **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.
· **Protection of hands:**
Preventive skin protection by use of skin-protecting agents is recommended.
After use of gloves apply skin-cleaning agents and skin cosmetics.
· **Material of gloves**
nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.11 mm
· **Penetration time of glove material**
Value for the permeation: Level = 1 (< 10 min)
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· **Eye protection:**
Safety glasses
use against the effects of fumes / dust
· **Body protection:** Protective work clothing.

· **Limitation and supervision of exposure into the environment:**
Do not allow product to reach sewage system or water bodies.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **Appearance:**	
Form / Physical state:	Powder
Colour:	White
· **Odour:**	Odourless
· **Odour threshold:**	Not applicable
· **pH-value (10 g/l) at 20°C:**	6.3
· **Melting point/Freezing point:**	Not determined
· **Initial boiling point and boiling range:**	Not determined
· **Flash point:**	Not applicable
· **Flammability (solid, gas):**	The product is not combustible.
· **Decomposition temperature:**	Not determined.
· **Auto-ignition temperature:**	Product is not self-igniting.
· **Explosive properties:**	Product is not explosive.
· **Flammability or explosive limits:**	
Lower:	Not applicable
Upper:	Not applicable
· **Oxidising properties:**	none
· **Vapour pressure:**	Not applicable.
· **Density:**	Not determined
· **Relative density:**	Not determined.
· **Vapour density:**	Not applicable.
· **Evaporation rate:**	Not applicable.
· **Solubility(ies):**	
Water:	Soluble
· **Partition coefficient: n-octanol/water:**	Not applicable.
· **Viscosity:**	Not applicable.
· **Solvent content:**	
Organic solvents:	0.0 %
Solids content:	100 %
· **9.2 Other information**	No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** see section 10.3
· **10.2 Chemical stability** Stable at ambient temperature (room temperature).
· **10.3 Possibility of hazardous reactions**
Reacts with acids, alkalis and oxidizing agents
Reacts with alkaline metals
Reacts with peroxides
Reacts with halogenated compounds
Reacts with oxidizing agents
--> forms heat
· **10.4 Conditions to avoid** No further relevant information available.

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· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:** see section 5

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values that are relevant for classification:**		
CAS: 6283-63-2 N,N-diethylbenzene-1,4-diammonium sulphate (1:1)		
Oral	LD50	497 mg/kg (rat) (MERCK)
Dermal	LD50	1100 mg/kg (ATE)
CAS: 139-33-3 disodium dihydrogenethylenediaminetetraacetate		
Oral	LD50	2000 mg/kg (rat) (GESTIS)

· **Primary irritant effect:**
· **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.
· **Information on components:**
CAS 6283-63-2: DPD may cause allergic skin reaction

CAS: 139-33-3 disodium dihydrogenethylenediaminetetraacetate		
Irritation of skin	OECD 404	(rabbit: no irritation)
Irritation of eyes	OECD 405	(rabbit: no irritation)

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **Information on components:**
CAS 6283-63-2: Sensitization possible in predisposed persons.
The following applies to iodides in general: Sensitation possible at predisposed persons.

CAS: 139-33-3 disodium dihydrogenethylenediaminetetraacetate		
Sensitisation	OECD 406	(guinea pig: negative) (EPA OPP 81-6: Guinea pig maximisation test)

· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)** The following statements refer to the mixture:
· **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 (specific target organ toxicity) -single exposure** Based on available data, the classification criteria are not met.
· **STOT (specific target organ toxicity) -repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

· **Additional toxicological information:**
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
iodide: chronic hypothyroidism
Iodine salts can cause birth defects, illness and death of a fetus. (GESTIS)

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
CAS: 139-33-3 disodium dihydrogenethylenediaminetetraacetate	
EC50 (static)	>100 mg/l/48h (Daphnia magna) (DIN 38412 Teil 11) (BASF)
NOEC	≥36.9 mg/l (zebrafish) (35d, OECD 210) (BASF; read across)
EC50	>100 mg/l/72 h (Scenedesmus subspicatus) (88/302/EWG, part C) (BASF; read across)
LC50 (static)	>100 mg/l/96h (bluegill) (BASF, read across)

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· **Bacterial toxicity:** sulphates toxic > 2.5 g/l
· **Other information:**
Toxic for fish:
sulphates > 7 g/l
· **12.2 Persistence and degradability** No further relevant information available.

· **12.3 Bioaccumulative potential**	
CAS: 6283-63-2 N,N-diethylbenzene-1,4-diammonium sulphate (1:1)	
log Pow	2.24 (.) (calculated)
CAS: 139-33-3 disodium dihydrogenethylenediaminetetraacetate	
log Pow	-4.3 (.) (BASF)
BCF	1.8 (bluegill) (conc. 0.08 mg/l, 28d) (ECHA, registrant: read across CAS 13235-36-4)

· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.
· **12.6 Other adverse effects**
Depending on the concentration, phosphorus and/or nitrogen compounds may contribute to the eutrophication of water supplies.
Avoid transfer into the environment.
· **Water hazard:**
Do not allow product to reach ground water, water bodies or sewage system.
Danger to drinking water if even small quantities leak into soil.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Disposal must be made according to official regulations.

· **European waste catalogue**	
16 05 09	discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

· **14.1 UN-Number** · **ADR, IMDG, IATA**	Void
· **14.2 UN proper shipping name** · **ADR, IMDG, IATA**	Void
· **14.3 Transport hazard class(es)** · **ADR, IMDG, IATA** · **Class**	Void
· **14.4 Packing group** · **ADR, IMDG, IATA**	Void
· **14.5 Environmental hazards:**	Not applicable.
· **14.6 Special precautions for user**	Not applicable.
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.

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· **Transport/Additional information:** Not dangerous according to the above specifications.

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:**
None of the ingredients is listed.

· **Directive 2012/18/EU (SEVESO III):**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **Information about limitation of use:** Not required.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

*
SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

· **Training hints** Provide adequate information, instruction and training for operators.

· **Abbreviations and acronyms:**
OECD: Organisation for Economic Co-operation and Development
STOT: specific target organ toxicity
SE: single exposure
RE: repeated exposure
EC50: half maximal effective concentration
IC50: hallf maximal inhibitory concentration
NOEL or NOEC: No Observed Effect Level or Concentration
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

· **Sources** Data arise from safety data sheets, reference works and literature.

· *** Data compared to the previous version altered.**