

Material Safety Data Sheet According to 91/155 EEC

Printing date 26.01.2006

Reviewed on 26.01.2006

* 1 Identification of substance:

- **Product details:** Reagent for water analysis
- **Product name:** Chlorine Total - DPD F10, F25
- **Catalogue number:** CW/53.01.20, CW/53.01.23, CW/53.01.30, CW/53.01.33
- **Supplier:**
Camlab Limited
Camlab House, Norman Way, Over, Cambridge CB4 5WE
United Kingdom
Tel: +44 (0)1954 233100
- **Informing department:** Technical Support
- **Emergency information:**
National Poisons Information Service, United kingdom
Tel: 0870 600 6266 (24 hours) • <http://www.npis.org/>

* 2 Composition/Data on components:

- **Chemical characterization**
- **Description:** Preparation contains anorganic and organic compounds.

- **Dangerous components:**

CAS: 1330-43-4 EINECS: 215-540-4	disodium tetraborate, anhydrous		≤ 2.5%
CAS: 6283-63-2 EINECS: 228-500-6	N,N-diethylbenzene-1,4-diammonium sulphate	☒ Xn; R 20/21/22-36	≤ 2.5%

- **Additional information** For the wording of the listed risk phrases refer to section 16.

* 3 Hazards identification

- **Information pertaining to particular dangers for man and environment**
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system**
The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

* 4 First aid measures

- **General information** Instantly remove any clothing soiled by the product.
- **After inhalation** Supply fresh air; consult doctor in case of symptoms.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing**
Drink copious amounts of water, induce vomiting.
In case of persistent symptoms consult doctor.
- **Information for doctor**
- **The following symptoms may occur:**
after inhalation:
irritation

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allergic reactions
After swallowing of large amounts:
coughing
sickness
vomiting
diarrhoea
breathing difficulty
mucous membrane irritation
cramps

* 5 Fire fighting measures

- **Suitable extinguishing agents**
CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
 - **Special hazards caused by the material, its products of combustion or resulting gases:**
Formation of toxic gases is possible during heating or in case of fire.
Nitrogen oxides (NO_x)
Carbon monoxide and carbon dioxide
Phosphorus oxides (P_xO_x)
dipotassium oxide
 - **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.
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* 6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
 - **Measures for environmental protection:** Do not allow product to reach sewage system or water bodies.
 - **Measures for cleaning/collecting:**
Dispose of contaminated material as waste according to item 13.
Collect mechanically.
Ensure adequate ventilation.
 - **Additional information:** No dangerous materials are released.
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* 7 Handling and storage

- **Handling**
 - **Information for safe handling:** Thorough dedusting.
 - **Information about protection against explosions and fires:** The product is not flammable
 - **Storage**
 - **Requirements to be met by storerooms and containers:** Store in cool location.
 - **Information about storage in one common storage facility:** Store away from oxidizing agents.
 - **Further information about storage conditions:**
Protect from heat and direct sunlight.
Store under dry conditions.
Protect from humidity and keep away from water.
Protect from the effects of light.
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* 8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Components with limit values that require monitoring at the workplace:**

1330-43-4 disodium tetraborate, anhydrous
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WEL (Great Britain) Long-term value: 1 mg/m ³
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- **Additional information:** The lists that were valid during the compilation were used as basis.

- **Personal protective equipment**

- **General protective and hygienic measures**

Wash hands during breaks and at the end of the work.

Do not eat, drink or smoke while working.

- **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.

- **Recommended filter device for short term use:** Filter P1

- **Protection of hands:** Preventive skin protection by use of skin-protecting agents is recommended.

- **Material of gloves**

nitrile

Recommended thickness of the material: ≥ 0.11 mm

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Value for the permeation: Level ≥ 6 (480 min)

- **Eye protection:** Safety glasses

- **Body protection:** Protective work clothing.

* 9 Physical and chemical properties:

· Form:	Powder
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· Colour:	White
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· Odour:	Odourless
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· Melting point/Melting range:	Not determined
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· Boiling point/Boiling range:	1330°C
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· Flash point:	Not applicable
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· Danger of explosion:	Product is not explosive.
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· Density	Not determined
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· Solubility in / Miscibility with Water:	Soluble
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· pH-value (12.3 g/l) at 20°C:	6.3
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· Solvent content:	
Organic solvents:	0.0 %

· Solids content:	100.0 %
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* 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.

- **Materials to be avoided:**

alkali metals

oxidizing agents

- **Dangerous reactions** No dangerous reactions known

- **Dangerous products of decomposition:** see chapter 5

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* 11 Toxicological information

- **Acute toxicity:** Quantitative data on the toxicity of the preparation are not available.

- **LD/LC50 values that are relevant for classification:**

7681-11-0 potassium iodide		
Oral	LD50	2779 mg/kg (rat)
1330-43-4 disodium tetraborate, anhydrous		
Oral	LD50	709 mg/kg (human)
		2660 mg/kg (rat)
6283-63-2 N,N-diethylbenzene-1,4-diammonium sulphate		
Oral	LD50	497 mg/kg (rat)

- **Primary irritant effect:**

- **on the skin:** No irritant effect.

- **on the eye:** Irritant effect.

- **Sensitization:** Sensitizing effect by skin contact is possible by prolonged exposure.

- **Additional toxicological information:**

The product is not subject to classification according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version.

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.

The usual precautionary measures should be adhered to general rules for handling chemicals.

* 12 Ecological information:

- **Information about elimination (persistence and degradability):**

- **Other information:** Quantitative data on the ecological effect of this product are not available.

- **Behaviour in environmental systems:**

- **Mobility and bioaccumulation potential:**

Phosphates and/or nitrogen compounds: may contribute to the eutrophication of water supplies

- **Ecotoxicological effects:**

- **Aquatic toxicity:**

7681-11-0 potassium iodide		
Daphnia EC50		2.7 mg/l/24h (Daphnia magna)
1330-43-4 disodium tetraborate, anhydrous		
LC 50		807 mg/l (fish)

- **Remark:**

Toxic for fish:
sulphates > 7 g/l

- **Bacterial toxicity:** sulphates toxic > 2.5 g/l

- **Protozoa:** CAS-No. 7681-11-0: E. sulcatum toxic > 40 mg/l

- **General notes:**

Water hazard class 2 (German Regulation) (Self-assessment acc. VwVwS Annex 4): hazardous for water.

Do not allow product to reach ground water, water bodies or sewage system.

* 13 Disposal considerations

- **Product:**

- **Recommendation** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**

16 05 09	discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08
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- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

* 14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID-GGVS/E Class:** -

- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No

- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -

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

* 15 Regulatory information

- **Designation according to EC guidelines:**
The product is not subject to identification regulations under EC Directives and the Ordinance on Hazardous Materials (GefStoffV).
- **Special designation of certain preparations:**
Safety data sheet available for professional user on request.

* 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 R-phrases**
20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
36 Irritating to eyes.
- **Department issuing data specification sheet:** Technical Department
- *** Data compared to the previous version altered.**