

Safety Data Sheet according to 1907/2006/EC, Article 31

Printing date 26.03.2010 (DD.MM.YYYY)

Revision: 26.03.2010

*** 1 Identification of substance:**

- **Product name:** Vario Chlorine Total - DPD F5, F10, F25 ml
- **Catalog number:** 251397Y, 251414Y, 251415Y
- **Application of the substance / the preparation:** Reagent for water analysis
- **Supplier:**
YSI
1725 Brannum Lane
Yellow Springs, OH 45387
USA
tel: +1 937-767-7241
- **Informing department:**
MSDSinfo@ysi.com
- **Emergency information:**
Chemtrec toll free (USA and Canada): (800) 424-9300
Chemtrec International Telephone Number: 001 703-527-3887 (Collect Calls Accepted)

*** 2 Hazards identification**

- **Hazard designation:** void
- **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" (1999/45/EC) in the latest valid version.
- **GHS label elements**
Safety data sheet available on request.

*** 3 Composition/information on ingredients**

- **Description:** Mixture contains anorganic and organic compounds.

· **Dangerous components:**

CAS: 6283-63-2	N,N-diethylbenzene-1,4-diammonium sulphate	≤ 2.5%
EINECS: 228-500-6	Xn, Xi; R 20/21/22-36	
	Warning: ~ 3.1.O/4, 3.1.D/4, 3.1.I/4, 3.3/2	

- **REACH - Pre-registered substances** All components are REACH pre-registered.
- **Additional information** For the wording of the listed risk phrases refer to section 16.

*** 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 rinse with water.

(Contd. on page 2)

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 26.03.2010

Revision: 26.03.2010

Product name: Vario Chlorine Total - DPD F5, F10, F25 ml

(Contd. of page 1)

- **After eye contact**
Rinse opened eye for several minutes (at least 10 min) under running water.
Seek immediate medical advice.
 - **After swallowing**
Rinse out mouth and then drink 1-2 glasses of water.
Seek immediate medical advice.
 - **The following symptoms may occur:**
after inhalation:
irritations
allergic reactions
After swallowing of large amounts:
sickness
mucous membrane irritation
cramps
general feeling of sickness
gastric pain
-

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)
sodium monoxide
dipotassium oxide
iodine compounds
 - **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.
-

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.
-

* 7 Handling and storage

- **Handling**
- **Information for safe handling:** Thorough dusting.
- **Information about protection against explosions and fires:**
Substance/product is auto-extinguishing, but can burn when combined with flammable material.
- **Storage**
- **Requirements to be met by storerooms and containers:** Store in cool location.

(Contd. on page 3)

- **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.
- **Recommended storage temperature:** 20°C +/- 5°C

* 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:**
 - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **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 rubber, NBR
 - 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 ≥ 1 (>10 min)
- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing.

* 9 Physical and chemical properties:

· Form:	Powder
· Colour:	White
· Odour:	Odourless
· Melting point/Melting range:	Not determined
· Boiling point/Boiling range:	1330°C
· Flash point:	Not applicable
· Danger of explosion:	Product is not explosive.
· Density	Not determined
· Solubility in / Miscibility with Water:	Soluble
· pH-value (10.5 g/l) at 20°C:	6.3
· Solvent content:	
· Organic solvents:	0.0 %

Product name: Vario Chlorine Total - DPD F5, F10, F25 ml

(Contd. of page 3)

Solids content:	100.0 %
------------------------	---------

* 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.
- **Materials to be avoided:** oxidizing agents
- **Dangerous products of decomposition:** see chapter 5

* 11 Toxicological information

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

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

6283-63-2 N,N-diethylbenzene-1,4-diammonium sulphate

Oral	LD50	497 mg/kg (rat) (MERCK)
------	------	----------------------------

- **Primary irritant effect:**
 - **on the skin:** DPD may cause allergic skin reaction
 - **on the eye:** Irritant effect.
- **Sensitization:** Sensitizing effect by skin contact is possible by prolonged/repeated exposure.
- **Additional toxicological information:**
 - After swallowing of large amounts:
disorder of electrolyte balance
 - 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.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)** no data available

* 12 Ecological information:

- **Information about elimination (persistence and degradability):**
- **Other information:**
 - Quantitative data on the ecological effect of this product are not available.
 - The following statements refer to the individual components.
- **Behaviour in environmental systems:**
- **Mobility and bioaccumulation potential:**
 - Depending on the concentration, phosphorus compounds may contribute to the eutrophication of water supplies.
- **Ecotoxicological effects:**

- **Aquatic toxicity:**

6283-63-2 N,N-diethylbenzene-1,4-diammonium sulphate

log P(o/w)	2.24
------------	------

- **Remark:**
 - Toxic for fish:
sulphates > 7 g/l
- **Bacterial toxicity:** sulphates toxic > 2.5 g/l

(Contd. on page 5)

Product name: Vario Chlorine Total - DPD F5, F10, F25 ml

(Contd. of page 4)

- **Additional ecological information:**
- **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.
- **PBT assessments:** no data available
- **vPvB assessments:** no data available

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
----------	--

- **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:** -

- **UN "Model Regulation":** -
- **Transport/Additional information:** Not dangerous according to the above specifications.

* 15 Regulatory information

- **Designation according to EC guidelines:**
The product is not subject to classification according to the calculation methods of the "General Classification Guideline for Preparations of the EC" as issued in the last version.
- **Special designation of certain preparations:**
Safety data sheet available for professional user on request.
- **National regulations**
- **Information about limitation of use:** Not required.

* 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.

(Contd. on page 6)

Product name: Vario Chlorine Total - DPD F5, F10, F25 ml

(Contd. of page 5)

· **Abbreviations and acronyms:**

EC50: effective concentration, 50 percent (in vivo)

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

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

· **Sources**

NTP (National Toxicology Program)

IUCLID (International Uniform Chemical Information Database)

Data arise from reference works and literature.

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