

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

Printing date 17.09.2014

Version number 9

Revision: 17.09.2014

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

- **1.1 Product identifier**
- **Product name:** Verification Standard 530 nm / Reference Standard 2,0 mg/l, 0,2 mg/l, 0,5 mg/l, 1 mg/l, 4 mg/l
- **Catalog number:**
215653, 215660-530, 215650-530, (4)275600, (4)215600, (4)205600, 215644, 215646, 215648, 215649, 215659
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation:** Coloured Standard Solution for calibration purposes
- **1.3 Details of the supplier of the safety data sheet**
- **Supplier:**
Tintometer GmbH
Schleefstr. 8-12
DE-44287 Dortmund
Made in Germany
www.lovibond.com
- **Informing department:**
e-mail: produktsicherheit@tintometer.de
Product Safety Department
- **Contact for technical details:**
Technical Department
e-mail: technik@tintometer.de
- **1.4 Emergency telephone number:**
Poison Center Berlin, Germany
phone: 0049-30 30686 790

phone: +49 (0) 231 945100
E-Mail: sales@tintometer.de

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.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Void
- **Information concerning particular hazards for human and environment:**
Vapours of the product are heavier than air and may accumulate on the ground, in mines, drains or cellars with higher concentration.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void

SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** aqueous solution

Dangerous components:

CAS: 67-68-5	dimethyl sulfoxide	substance with a Community workplace exposure limit	2.5-5%
EINECS: 200-664-3			

- **REACH - Pre-registered substances** All components are REACH pre-registered.

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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; consult doctor in case of symptoms.
- **After skin contact** Instantly rinse with water.
- **After eye contact**
Rinse opened eye for several minutes under running water (at least 15 minutes). 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 absorption:
headache
vomiting
general feeling of sickness
CNS disorders
- **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**
Formation of toxic gases is possible during heating or in case of fire.
Sulphur oxides (SO_x)
- **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**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
- **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:**
Dispose of contaminated material as waste according to item 13.
Ensure adequate ventilation.
Absorb with liquid-binding material (sand, diatomite, universal binders).
- **6.4 Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

* SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** No special precautions necessary if used correctly.
- **Information about protection against explosions and fires:**
The product is not flammable
The product can form flammable fumes when heated.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:**
Store only in unopened original containers.
Store in cool location.

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- **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:**
 - Protect from heat and direct sunlight.
 - Protect from frost.
 - Protect from the effects of light.
 - Store in the dark.
 - Protect from humidity and keep away from water.
 - **Recommended storage temperature:** 20 °C +/- 5 °C
 - **Storage class** 12
 - **7.3 Specific end use(s)** No further relevant information available.
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* SECTION 8: Exposure controls/personal protection

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

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

67-68-5 dimethyl sulfoxide (2.5-5%)

OEL (Sweden)	Short-term value: 500 mg/m ³ , 150 ppm Long-term value: 150 mg/m ³ , 50 ppm H
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- **Additional information:** The lists that were valid during the compilation were used as basis.
 - **8.2 Exposure controls**
 - **Personal protective equipment**
 - **General protective and hygienic measures**
 - Avoid contact with the skin.
 - Take off immediately all contaminated clothing
 - 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 A
 - **Protection of hands:**
 - Avoid direct contact with the product/ the mixture by corresponding measures.
 - Wear gloves in case of breakage / leakage.
 - **Material of gloves**
 - Chloroprene rubber, CR
 - Recommended thickness of the material: ≥ 0.5 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.
 - **As protection from splashes gloves made of the following materials are suitable:**
 - Natural rubber, NR
 - Recommended thickness of the material: ≥ 0.11 mm
 - Value for the permeation: Level = 1 (< 10 min)
 - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
 - **Eye protection:** Wear safety glasses in case of breakage / leakage.
 - **Body protection:** Protective work clothing.
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SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **Appearance:**
 - Form:** Fluid
 - Colour:** Pink
 - **Odour:** Odourless
 - **Odour threshold:** Not determined.
 - **pH-value at 20 °C:** 6
 - **Melting point/Melting range:** Not determined
 - **Boiling point/Boiling range:** 100 °C
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· Flash point:	Not determined
· Inflammability (solid, gaseous)	Not applicable.
· Danger of explosion:	Product is not explosive. However, formation of explosive air mixtures is possible.
· Critical values for explosion:	
Lower:	Not determined.
Upper:	Not determined.
· Density at 20 °C	1 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Fully miscible
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
dynamic:	Not determined.
kinematic:	Not determined.
· Solvent content:	
Organic solvents:	< 5 %
Water:	> 95 %
Solids content:	< 1 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **Reactivity**
- **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** metals
- **Hazardous decomposition products:** see chapter 5

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:** Quantitative data on the toxicity of the preparation are not available.
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** irritating effect possible
- **Sensitisation:** No sensitizing effect known.
- **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.
The usual precautionary measures should be adhered to general rules for handling chemicals.
DMSO readily penetrates skin and may carry other dissolved chemicals into the body.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)** no data available

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **Other information:**
Quantitative data on the ecological effect of this product are not available.
The following statements refer to the individual components.
CAS 67-68-5: 3.1 % / 14 d

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- **12.3 Bioaccumulative potential** No further relevant information available.
 - **Behaviour in environmental systems:**
 - **12.4 Mobility in soil** No further relevant information available.
 - **Additional ecological information:**
 - **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment acc. VwVwS Annex 4): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
 - **12.5 Results of PBT and vPvB assessment** no data available
 - **vPvB assessments:** no data available
 - **12.6 Other adverse effects** No further relevant information available.
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* SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Disposal must be made according to official regulations.
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.
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* SECTION 14: Transport information

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|---|--|
| · 14.1 UN-Number | |
| · ADR, ADN, IMDG, IATA | Void |
| · 14.2 UN proper shipping name | |
| · ADR, ADN, IMDG, IATA | Void |
| · 14.3 Transport hazard class(es) | |
| · ADR, ADN, IMDG, IATA | |
| · Class | Void |
| · 14.4 Packing group | |
| · ADR, IMDG, IATA | Void |
| · 14.5 Environmental hazards: | |
| · Marine pollutant: | No |
| · 14.6 Special precautions for user | Not applicable. |
| · 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · Transport/Additional information: | Not dangerous according to the above specifications. |
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SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
 - **Information about limitation of use:** Not required.
 - **VOC-value EC:** 1037.8 g/l
 - **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.
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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.

• **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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

ICAO: International Civil Aviation Organisation

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

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)

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)

• **Sources** Data arise from reference works and literature.

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