

**Material Safety Data Sheet**

Printing date 03/13/2013

Reviewed on 12/10/2012

**1 Identification of the substance/mixture and of the company/undertaking**

- **Product identifier**
- **Trade name:** Fluorescein Calibration Dye
- **Catalog or product number:** 1708780, 9703252
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the preparation** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Bio-Rad Laboratories, Life Science Group  
2000 Alfred Nobel Drive  
Hercules, California 94547 (510)741-1000
- **Information department:**  
Technical services, customer support  
lsg\_techserv\_us@bio-rad.com
- **Emergency telephone number:**  
1(800)424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT.  
510-741-1000

**2 Hazards identification**

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** not applicable
- **Information concerning particular hazards for human 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 was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.  
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.
- **Label elements**
- **Labelling according to EU guidelines:**  
Observe the general safety regulations when handling chemicals  
The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (GefStoffV).
- **Safety phrases:**  
60 This material and its container must be disposed of as hazardous waste.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

**3 Composition/information on ingredients**

- **Chemical characterization: Substances**
- **CAS No. Description:**  
67-68-5 dimethyl sulfoxide

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- **Identification number(s):**
  - **EC number:** 200-664-3
  - **Chemical characterization: Mixtures**
  - **Description:** Mixture of the substances listed below with non-hazardous additions.
  - **Listing of dangerous and non-hazardous components:**
- |                            |         |
|----------------------------|---------|
| 67-68-5 dimethyl sulfoxide | 50-100% |
|----------------------------|---------|
- **Additional information** For the wording of the listed risk phrases refer to section 15.

**4 First aid measures**

- **Description of first aid measures**
- **General information** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Generally the product does not irritate the skin.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Induce vomiting and call for medical help.
- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

**5 Firefighting measures**

- **Extinguishing media**
- **Suitable extinguishing agents**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**  
No dangerous substances are released.  
See Section 7 for information on safe handling  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

**7 Handling and storage**

- **Handling**
- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.

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- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** According to product specification
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

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

• **Control parameters**

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

67-68-5 dimethyl sulfoxide

WEEL 250 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.

• **Exposure controls**

- **Personal protective equipment**
- **General protective and hygienic measures** The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:** Protective gloves.
- **Material of gloves:** Synthetic gloves
- **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.
- **Eye protection:** Safety glasses

## 9 Physical and chemical properties

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

• **General Information**• **Appearance:**

Form: Liquid  
Color: Colorless  
Odor: Odorless  
Odour threshold: Not determined.

pH-value: Not determined.

• **Change in condition**

Melting point/Melting range: 18.45 °C  
Boiling point/Boiling range: 189 °C

Flash point: &gt; 55 °C

Flammability (solid, gaseous): Not applicable.

Ignition temperature: 270 °C

Decomposition temperature: Not determined.

Auto igniting: Product is not selfigniting.

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- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
  - Lower: 1.8 Vol %
  - Upper: 63 Vol %
- **Vapor pressure at 20 °C:** 2.5 hPa
- **Density at 20 °C:** 1.1 g/cm<sup>3</sup>
- **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: 99.9 %
- **Solids content:** 0.1 %
- **Other information:** No further relevant information available.

## 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions:** No dangerous reactions known
- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known

## 11 Toxicological information

- **Information on toxicological effects**

• **Acute toxicity:**

- **LD/LC50 values for hazardous components per OSHA criteria:**

67-68-5 dimethyl sulfoxide

Oral LD50 14500 mg/kg (rat)

• **Primary irritant effect:**

- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.
- **Sensitization:** No sensitizing effects known.

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## Additional toxicological information:

The product is not subject to classification according to the calculation method of the General EU 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.

## Carcinogenic categories

## IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

## NTP (National Toxicology Program)

None of the ingredients is listed.

Target organs: Not applicable.

## 12 Ecological information

## Toxicity

Aquatic toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

## Behavior in environmental systems:

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

## Additional ecological information:

## General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

## Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects: No further relevant information available.

## 13 Disposal considerations

## Waste treatment methods

## Recommendation

Hand over to hazardous waste disposers.

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

## Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

## 14 Transport information

## UN-Number

DOT, ADR, ADN, IMDG, IATA Void

## UN proper shipping name

DOT, ADR, ADN, IMDG, IATA Void

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## Transport hazard class(es)

DOT, ADR, ADN, IMDG, IATA

Class Void

## Packing group

DOT, ADR, IMDG, IATA

Void

## Environmental hazards:

Marine pollutant: No

Special precautions for user: Not applicable.

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.

## 15 Regulatory information

## Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)

Section 302/304 (40CFR355.30 / 40CFR355.40):

None of the ingredients is listed.

Section 313 (40CFR372.65):

None of the ingredients is listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

## Carcinogenic categories

EPA (Environmental Protection Agency)

None of the ingredients is listed.

TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

MAK (German Maximum Workplace Concentration)

None of the ingredients is listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

OSHA-Ca (Occupational Safety &amp; Health Administration)

None of the ingredients is listed.

## National regulations

## Technical instructions (air):

Class	Share in %
NK	50-100

Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

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**Trade name: Fluorescein Calibration Dye****Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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**16 Other information**

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

**Department issuing MSDS:** Environmental Health and Safety.

**Contact:**

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

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

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