

SAFETY DATA SHEET



DNA Dye

Section 1. Identification

Product identifier : DNA Dye
Product code : Not applicable
Other means of identification : Not available.
Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Product use : Fluorescent labeling of DNA Dye
Area of application : Professional applications.

Uses advised against	Reason
This product is not intended for use in humans or animals.	-

Supplier's details : Bruker Spatial Biology, Inc.
4340 Duncan Avenue, Suite 220
Saint Louis, Missouri 63110
United States

e-mail address of person responsible for this SDS : Info.canopy@bruker.com

Emergency telephone number (with hours of operation) : +1 866-963-4342 (US) or +49 6221-1873170 (EMEA/HDL) | 24/7

Section 2. Hazard(s) identification

Classification of the substance or mixture : H320 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2B

GHS label elements

Signal word : **WARNING**
Hazard statements : **H320 - Causes eye irritation.**

Precautionary statements

Prevention : Not applicable.
Response : P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical advice or attention.
Storage : Not applicable.
Disposal : Not applicable.
Supplemental label elements : Not applicable.

Other hazards which do not result in classification : None known.

Date of issue/Date of revision : 13/05/2026 **Date of previous issue** : No previous validation **Version** : 1 1/13

LBL-11456-01

Section 3. Composition and ingredient information

Substance/mixture : Mixture
Other means of identification : Not available.

Ingredient name	% (w/w)	Identifiers
dimethyl sulfoxide	≥90	CAS: 67-68-5

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

The total concentration of ingredients in this product, reported or not in this section, is 100%.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Section 4. First aid measures

- Eye contact** : Adverse symptoms may include the following:
irritation
watering
redness
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

- Unsuitable extinguishing media** : Do not use water jet.

- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
sulfur oxides
Thermal decomposition can lead to release of irritating and toxic gases and vapors.

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Keep container tightly closed and store at recommended temperature. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
dimethyl sulfoxide	DFG MAC-values list (Germany, 7/2025) Develop B. Absorbed through skin. PEAK 15 minutes: 320 mg/m ³ 4 times per shift [Interval: 1 hour]. TWA 8 hours: 160 mg/m ³ . PEAK 15 minutes: 100 ppm 4 times per shift [Interval: 1 hour]. TWA 8 hours: 50 ppm.

Section 8. Exposure controls and personal protection

Biological exposure indices

None known.

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Liquid.
- Colour** : Clear.
- Odour** : Odourless.

Section 9. Physical and chemical properties and safety characteristics

Odour threshold : Not available.

pH : Not available.

Melting point/freezing point : Not available.

Boiling point or initial boiling point and boiling range : Not applicable.

Flash point : Not applicable.

Flammability : Not available.

Lower and upper explosion limit/flammability limit : Not available.

Vapour pressure	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	Ingredient name	mm Hg	kPa	Method	mm Hg	kPa
	dimethyl sulfoxide	0.42	0.056	EU A.4		

Relative vapour density : Not available.

Relative density : Not available.

Solubility(ies)	Media	Result
	water	Easily soluble

Miscible with water : Yes.

Partition coefficient: n-octanol/water : Not applicable.

Auto-ignition temperature	Ingredient name	°C	°F	Method
	dimethyl sulfoxide	300 to 302	572 to 575.6	

Decomposition temperature : Not available.

Viscosity : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): Not available.

Particle characteristics

Median particle size : Not applicable.

Other information

Physical/chemical properties comments : No additional information.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.
Under normal conditions of storage and use, hazardous polymerisation will not occur.

Section 10. Stability and reactivity

Conditions to avoid : No specific data.

Incompatible materials : Reactive or incompatible with the following materials: oxidising materials.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name

dimethyl sulfoxide

Result

Rat - Oral - LD50
14500 mg/kg
Rat - Dermal - LD50
40000 mg/kg

Toxic effects: Eye - Hemorrhage Eye -
Conjunctive irritation

Conclusion/Summary[Product] : Not available.

Skin corrosion/irritation

Product/ingredient name

dimethyl sulfoxide

Result

Rabbit - Skin - Mild irritant
Duration of treatment/exposure: 24
hours
Amount/concentration applied: 500 mg
Rabbit - Skin - Mild irritant
Duration of treatment/exposure: 24
hours
Amount/concentration applied: 10 mg
Rabbit - Skin - Mild irritant
Amount/concentration applied: 100 mg

Conclusion/Summary[Product] : Not available.

Serious eye damage/eye irritation

Product/ingredient name

dimethyl sulfoxide

Result

Rabbit - Eyes - Mild irritant
Duration of treatment/exposure: 24
hours
Amount/concentration applied: 500 mg
Rabbit - Eyes - Mild irritant
Amount/concentration applied: 100 mg
Rabbit - Eyes - Mild irritant
Amount/concentration applied: 0.1 MI

Conclusion/Summary[Product] : Not available.

Section 11. Toxicological information

Respiratory corrosion/irritation

Conclusion/Summary[Product] : Not available.

Respiratory or skin sensitization

Skin

Conclusion/Summary[Product] : Not available.

Respiratory

Conclusion/Summary[Product] : Not available.

Germ cell mutagenicity

Conclusion/Summary[Product] : Not available.

Carcinogenicity

Conclusion/Summary[Product] : Not available.

Reproductive toxicity

Conclusion/Summary[Product] : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact : Causes eye irritation.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Section 11. Toxicological information

- Eye contact** : Adverse symptoms may include the following:
irritation
watering
redness
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

- Conclusion/Summary[Product]** : Not available.

- General** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
dimethyl sulfoxide	14500	40000	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result
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Section 12. Ecological information

dimethyl sulfoxide

Acute - LC50 - Fresh waterEffect: MortalityFish - Fathead minnow - *Pimephales promelas*Age: 31 days; Size: 15.8 mm; Weight:

0.062 g

34 g/l [96 hours]

Acute - LC50 - Fresh waterEffect: MortalityDaphnia - Water flea - *Daphnia magna*

- Neonate

Age: <24 hours

2.5 pph [48 hours]

Acute - EC50 - Marine waterEffect: PopulationAlgae - Diatom - *Nitzschia pungens*

OECD

18.299 mg/l [96 hours]

Chronic - NOEC - Marine waterEffect: PopulationAlgae - Diatom - *Nitzschia pungens*

OECD

3323 µg/l [96 hours]

Chronic - NOEC - Fresh waterEffect: ReproductionDaphnia - Water flea - *Daphnia magna*

OECD

- Juvenile (Fledgling, Hatchling,

Weanling)

Age: 6 days

100 µl/l [21 days]

Conclusion/Summary[Product] : Not available.

Persistence and degradability

Product/ingredient name**Result**

dimethyl sulfoxide

Aerobic

31% [28 days] - Not readily

OECD [Ready Biodegradability - Closed Bottle Test]

Conclusion/Summary[Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
dimethyl sulfoxide	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
dimethyl sulfoxide	-1.35	3.16	Low

Mobility in soil

Soil/water partition coefficient

: Not available.

Other adverse effects

No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	ADG	ADR/RID	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

Standard for the Uniform Scheduling of Medicines and Poisons

6

Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

Australia inventory (AIC) : All components are listed or exempted.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Section 15. Regulatory information

Not listed.

[Stockholm Convention on Persistent Organic Pollutants](#)

Not listed.

[Rotterdam Convention on Prior Informed Consent \(PIC\)](#)

Not listed.

[UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

Section 16. Any other relevant information

[History](#)

Date of issue/Date of revision : 13/05/2026

Date of previous issue : No previous validation

Version : 1

Sphera Solutions

Key to abbreviations :

- ADG = Australian Dangerous Goods
- ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- N/A = Not available
- RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
- SGG = Segregation Group
- SUSMP = Standard Uniform Schedule of Medicine and Poisons
- UN = United Nations

[Procedure used to derive the classification](#)

Classification	Justification
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2B	Calculation method

References :

- Work Health and Safety Regulations 2011, as ammended
- Preparation of Safety Data Sheets for Hazardous Chemicals, Code of Practice, Safe Work Australia
- Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG), National Transport Commission

Indicates information that has changed from previously issued version.

[Notice to reader](#)

Section 16. Any other relevant information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.