



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 as amended by Regulation (EU) No. 2020/878, and
Regulation (EC) No. 1272/2008

Supersedes date 17-Aug-2023

Revision date 11-Dec-2025

Revision Number 1.01

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

1.1. Product identifier

Product Code(s) DES**** / RU-DES**** / CE-DES****
DSS**** / RU-DSS****
DFS**** / RU-DFS****

Product Name DAPI Antifade ES Counterstain Solution
DAPI Antifade SS Counterstain Solution
DAPI Antifade FS Counterstain Solution

Synonyms None

Pure substance/mixture Mixture

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

Recommended use Laboratory chemicals
For professional use only

Uses advised against None known

1.3. Details of the supplier of the safety data sheet

Manufacturer	Supplier
CytoCell Ltd., Oxford Gene Technology 418 Cambridge Science Park, Milton Road, Cambridge CB4 0PZ, United Kingdom T: +44 (0)1223 294048 F: +44 (0)1223 294986 probes@cytoCell.com http://www.ogt.com	Sysmex Europe SE Deelböge 19D 22297 Hamburg Germany T: +49 (40) 527 26 0

For further information, please contact

E-mail address probes@cytoCell.com

1.4. Emergency telephone number

Emergency telephone +44 (0) 1223 294048 (Monday - Friday, 9am - 5pm)

Emergency telephone - §45 - (EC)1272/2008

Europe 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP].

2.2. Label elements

80 % of the mixture consists of ingredient(s) of unknown acute toxicity.

2.3. Other hazards

Other hazards The product does not contain any substance(s) classified as PBT or vPvB.

PBT or vPvB properties None known.

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical name	Weight-%	REACH registration number	EC No. (Index No.)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)	Notes
Glycerol 56-81-5	65 - 85	No data available	200-289-5	[C]	-	-	-	-

Classification according to Regulation (EC) No. 1272/2008 [CLP] - Notes

[C] - Components with occupational exposure limits and/or biological occupational exposure limits requiring monitoring

Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Glycerol 56-81-5	27200	10010	5.8558	No data available	No data available

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No.

1907/2006 (REACH), Article 59).

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice	Get medical attention if irritation or other symptoms occur. Show this safety data sheet to the doctor in attendance.
Inhalation	Remove person to fresh air and keep comfortable for breathing.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids.
Skin contact	Wash with plenty of water.
Ingestion	Rinse mouth. Do not induce vomiting without medical advice.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms	None known.
Effects of Exposure	None known.

4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Dry chemical, CO2, alcohol-resistant foam or water spray.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	None known based on information supplied.
Hazardous combustion products	Carbon oxides.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protective equipment.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation. Use personal protective equipment as required. See section 8
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for more information. Avoid contact with skin, eyes or clothing. Avoid breathing vapours or mists. Do not touch or walk through spilled material. Wear personal protective clothing (see section 8).

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Cover liquid spill with sand, earth or other noncombustible absorbent material. Pick up and transfer to properly labelled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Avoid breathing vapours or mists. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Wear personal protective clothing (see section 8). Wash hands thoroughly after handling.

General hygiene considerations Wash hands before breaks and after work. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture.

Storage class (TRGS 510) LGK 10.

7.3. Specific end use(s)

Specific use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	Austria	Belgium	Bulgaria	Croatia
Glycerol 56-81-5	-	TWA: 10 mg/m ³ ; mist	-	TWA-GVI: 10 mg/m ³ ;
Chemical name	Cyprus	Czech Republic	Denmark	Estonia

Glycerol 56-81-5	-	TWA: 10 mg/m ³ ; Ceiling: 15 mg/m ³ ;	-	TWA: 10 mg/m ³ ;
Chemical name	Finland	France	Germany TRGS	Germany DFG
Glycerol 56-81-5	TWA: 20 mg/m ³ ;	TWA-VME: 10 mg/m ³ ; aerosol	TWA-AGW; 200 mg/m ³ (2(I)); inhalable fraction	TWA-MAK: 200 mg/m ³ ; I(2); inhalable fraction
Chemical name	Greece	Hungary	Italy MDLPS	Italy AIDII
Glycerol 56-81-5	TWA: 10 mg/m ³ ;	-	-	-
Chemical name	Malta	Netherlands	Norway	Poland
Glycerol 56-81-5	-	-	-	TWA-NDS: 10 mg/m ³ ; inhalable fraction
Chemical name	Portugal	Romania	Slovakia	Slovenia
Glycerol 56-81-5	TWA (VLE-MP): 10 mg/m ³ ; mist	-	TWA: 10 mg/m ³ ;	TWA: 200 mg/m ³ ; inhalable fraction STEL: 400 mg/m ³ ; inhalable fraction
Chemical name	Spain	Sweden	Switzerland	United Kingdom
Glycerol 56-81-5	TWA-(VLA-ED): 10 mg/m ³ ; mist	-	TWA-MAK: 50 mg/m ³ ; inhalable dust STEL-KZGW: 100 mg/m ³ ; inhalable dust	TWA: 10 mg/m ³ ; mist STEL: 30 mg/m ³ ; mist

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) - Workers

Notes

- [5] Local health effects.
 [6] Long term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
Glycerol 56-81-5	229 mg/kg bw/day [4] [6]	-	-

Notes

- [4] Systemic health effects.
 [5] Local health effects.
 [6] Long term.

Predicted No Effect Concentration (PNEC)

8.2. Exposure controls

Engineering controls Showers
 Eyewash stations
 Ventilation systems.

Personal protective equipment

Eye/face protection If splashes are likely to occur, wear safety glasses with side-shields. Eye protection must

conform to standard EN 166. Handling of larger amounts: Wear protective eye glasses for protection against liquid splashes.

Hand protection	Gloves must conform to standard EN 374. Wear suitable gloves. To protect the wearer, gloves must be the correct fit and be used properly. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves.
Skin and body protection	No special protective equipment required.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
Environmental exposure controls	No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	coloured liquid
Physical state	Liquid
Colour	Purple
Odour	Odourless
Odour threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point / freezing point		No data available
Boiling point or initial boiling point and boiling range	290 °C	
Flammability		No data available
Lower and upper explosion limit/flammability limit		
Lower explosion limit		Not applicable
Upper explosion limit		Not applicable
Flash point	176 °C	
Autoignition temperature		No data available
Decomposition temperature		No data available
SADT (°C)		No data available
pH		No data available
pH (as aqueous solution)		No data available
Kinematic viscosity		No data available
Dynamic viscosity		No data available
Water solubility		No data available
Solubility		No data available
Partition coefficient n-octanol/water (log value)		No data available
Vapour pressure		No data available
Density and/or relative density		No data available
Bulk density		No data available
Liquid Density		No data available
Relative vapour density		No data available
Particle characteristics		
Particle Size		No data available
Particle Size Distribution		No data available

9.2. Other information

Molecular weight No information available
VOC content No information available
Softening point No information available

9.2.1. Information with regards to physical hazard classes

Explosives

Explosive properties No information available

Oxidising properties No information available

9.2.2. Other safety characteristics

No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity None under normal use conditions.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Heat. Protect from direct sunlight. Moisture.

10.5. Incompatible materials

Incompatible materials Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Carbon oxides.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available.

Skin contact Non-irritating to the skin.

Ingestion Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms None known.

Acute toxicity Based on available data, the classification criteria are not met.

Numerical measures of toxicity Based on available data, the classification criteria are not met.

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Glycerol	= 27200 mg/kg (Rat)	> 10 g/kg (Rabbit)	> 5.85 mg/L (Rat) 4 h

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

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT - single exposure Based on available data, the classification criteria are not met.

STOT - repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disruption for human health Based on available data, the classification criteria are not met.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity Not considered to be harmful to aquatic life. Low toxicity to aquatic organisms.

Chemical name	Fish	Crustacea	Algae/aquatic plants	Toxicity to microorganisms
Glycerol	LC50: 51 - 57mL/L (96h, Oncorhynchus mykiss)	-	-	-

12.2. Persistence and degradability No information available.

12.3. Bioaccumulative potential There is no data for this product.

Chemical name	Partition coefficient	Bioconcentration factor (BCF)	Trophic magnification factor (TMF)
Glycerol	-1.75	-	-

12.4. Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment No information available.

Chemical name	PBT and vPvB assessment
Glycerol	Not PBT/vPvB

12.6. Endocrine disrupting properties Based on available data, the classification criteria are not met.

12.7. Other adverse effects No information available.

PMT or vPvM properties Based on available data, the classification criteria are not met.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

Waste codes / waste designations according to EWC / AVV According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

IATA Not regulated
14.1 UN number or ID number Not regulated

14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None
IMDG	Not regulated
14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None
14.7 Maritime transport in bulk according to IMO instruments	No information available
RID	Not regulated
14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None
ADR	Not regulated
14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None
ADN	
14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not applicable
14.5 Environmental hazard	Not applicable
14.6 Special precautions for user	
Special Provisions	None

SECTION 15: Regulatory information

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

Water hazard class (WGK) slightly hazardous to water (WGK 1)

Chemical Prohibition Ordinance (ChemVerbotsV)
Not applicable.

TRGS 905 Not applicable

Ordinance on the Incentive Tax on Volatile Organic Compounds (OVOC) SR 814.018 Not applicable
Storage of Hazardous Material Not applicable
WPO (GSchV) SR 814.201; WPA (GSchG) SR 814.20 Not applicable
Major Accidents Ordinance SR 814.012 Not applicable

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 2024/590

Not applicable.

Explosives Precursors Marketing and Use (2019/1148)

Not applicable.

International Inventories

Contact supplier for inventory compliance status

15.2. Chemical safety assessment

Chemical Safety Report

No information available.

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

List may include phrases which are not applicable to this product

ACGIH	American Conference of Governmental Industrial Hygienists
AIDII	Italian Association of Industrial Hygienists
ADN	Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe)
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)
AIIC	Australian Inventory of Industrial Chemicals
ATE	Acute Toxicity Estimate
ASTM	American Society for the Testing of Materials
bar	Biological Reference Values for Chemical Compounds in the Work Area

BAT	Biological tolerance values for occupational exposure
BEL	Biological exposure limits
bw	Body weight
Ceiling	Maximum limit value
CLP	Classification, Labelling and Packaging Regulation; Regulation (EC) No 1272/2008
CMR	Carcinogen, Mutagen or Reproductive Toxicant
DFG	German Research Foundation
DOT	Department of Transportation (United States)
DSL	Domestic Substances List (Canada)
ECHA	European Chemicals Agency
EC Number	European Community number
EmS	Emergency Schedule
ENCS	Existing and New Chemical Substances (Japan)
EPA	U.S. Environmental Protection Agency
EWC	European Waste Codes
GHS	Globally Harmonized System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO	International Civil Aviation Organisation
IECSC	Inventory of Existing Chemical Substances in China
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISO	International Organisation for Standardisation
KECI	Korean Existing Chemicals Inventory
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
MAK	Maximum Concentration at the Workplace
MAL	Measuring Technical Hygienic Air Needs
MARPOL	International Convention for the Prevention of Pollution from Ships
MDLPS	Ministry of Labour and Social Policy
n.o.s.	Not Otherwise Specified
NOAEC	No Observed Adverse Effect Concentration
NOAEL	No Observed Adverse Effect Level
NOELR	No Observable Effect Loading Rate
NZIoC	New Zealand Inventory of Chemicals
OECD	Organization for Economic Cooperation and Development
OEL	Occupational exposure limits
PBT	Persistent, Bioaccumulative and Toxic substance
PICCS	Philippines Inventory of Chemicals and Chemical Substances
PMT	Persistent, Mobile and Toxic
PPE	Personal protective equipment
QSAR	Quantitative Structure Activity Relationship
REACH	Registration, Evaluation, Authorisation, and Restriction of Chemicals (REACH) Regulation (EC 1907/2006)
RID	Agreement concerning the International Carriage of Dangerous Goods by Rail (Europe)
SADT	Self-Accelerating Decomposition Temperature
SAR	Structure-activity relationship
SDS	Safety Data Sheet
SL	Surface Limit
STEL	Short Term Exposure Limit
STOT RE	Specific target organ toxicity - Repeated exposure
STOT SE	Specific target organ toxicity - Single exposure
SVHC	Substance of very high concern

TCSI	Taiwan Chemical Substance Inventory
TDG	Transport of Dangerous Goods (Canada)
TRGS	Technical Rule for Hazardous Substances
TSCA	Toxic Substances Control Act (United States)
TWA	Time-Weighted Average
UN	United Nations
VOC	Volatile organic compounds
vPvB	Very Persistent and Very Bioaccumulative
vPvM	Very Persistent and Very Mobile
As	Allergenic substance
C	Carcinogen
DS	Dermal Sensitizer
Ot	Ototoxicant
pOt	Ototoxicant - potential to cause hearing disorders
PS	Photosensitiser
RS	Respiratory Sensitiser
S	Sensitizer
poS	Sensitizer - capable of causing occupational asthma
Sa	Simple asphyxiant
Sd	Skin designation
pSd	Skin designation - potential for cutaneous absorption
Sdv	Skin designation - vacated
Sk	Skin notation
dSk	Skin notation - danger of cutaneous absorption
pSk	Skin notation - potential for cutaneous absorption

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS

U.S. Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
 European Chemicals Agency (ECHA) (ECHA_API)
 U.S. Environmental Protection Agency
 Acute Exposure Guideline Level(s) (AELG(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
International Organization for Economic Co-operation and Development (OECD) Environment, Health, and Safety Publications
International Organization for Economic Co-operation and Development (OECD) High Production Volume Chemicals Program
International Organization for Economic Co-operation and Development (OECD) Screening Information Data Set
United Nations World Health Organization (WHO)

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Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet