



## SAFETY DATA SHEET

Citifluor AF2 Antifadent Solution

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1 Product identifier

Product name Citifluor AF2 Antifadent Solution

#### 1.2 Relevant identified uses of the substance of mixture and uses advised against

Identified uses: A glycerol-amine solution for use in fluorescence microscopy  
Uses advised against: Any use other than those identified.

#### 1.3 Details of the supplier of the safety data sheet

Supplier: Citifluor, A Division of Electron Microscopy Sciences  
1560 Industry Road  
P.O. Box 550  
Hatfield, PA 19440 USA

Contact Person: Tel: 215-412-8400  
Fax: 215-412-8450  
Stacie Kirsch  
Email: sgkcck@aol.com

#### 1.4 Emergency telephone number

215-412-8400  
Note: office hours only

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and chemical Hazards	not classified
Human health	not classified
Environment	not classified

Classification ( 1999/45/EEC)

The Full Text for all R-Phrases and Hazard Statements are displayed in Section 16.

Human Health

May cause irritation on eye contact.

Environment

The product is not expected to be hazardous to the environment

#### 2.2 Label elements

Label in Accordance with (EC) No. 1272/2008

No Pictogram required

Precautionary Statements

P280	Wear protective clothing
P302+352	IF ON SKIN: Wash with plenty of water.
P351	Rinse cautiously with water for several minutes.
P337+313	If eye irritation persists: Get medical advice/attention
P404	Store in a closed container
P501	Dispose of contents/container in accordance with local regulations.

Supplementary Precautionary Statements

P101	If medical advice is needed, have product container or label at hand
------	--

#### 2.3 Other hazards

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2 Mixtures

Glycerol 95-99%  
CAS-No: 56-81-5 EC No: 200-289-5

Classification (EC 1272/2008) Not classified  
Classification (67/548/EEC) Not classified

Triethylenediamine 1-3%  
CAS-No: 280-57-9 EC No: 205-999-9

**Classification (EC 1272/2008)**

Flam. Sol. 1 –H228  
Acute Tox. 4- H302  
Skin Irrit. 2-H315  
Aquatic Chronic 4 –H413

**Classification (EC 1272/2008)**

Xn;R22  
Xi;R36/38  
F;R11, R53

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of first aid measures

Inhalation

Move the exposed person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.

Ingestion

NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Rinse mouth thoroughly. Get medical attention if any discomfort continues.

Skin contact

Remove affected person from source of contamination. Remove contaminated clothing. Wash the skin immediately with soap and water. Get medical attention if any discomfort continues.

Eye contact

Check for contact lenses which must be removed from the eyes before rinsing.

Promptly rinse eyes with plenty of clean water while lifting the eyelids.

Continue to rinse for at least 15 minutes. Continue until the eyes are free of all traces of contamination.

Get medical attention if any discomfort or irritation persists.

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

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

## SECTION 5: FIREFIGHTING MEASURES

### 5.1 Extinguishing media

Extinguish with foam, carbon dioxide, dry powder or water fog

Unsuitable extinguishing media

Do not use a water jet as this may spread the fire

### 5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

If heated, vapours/gases hazardous to health (e.g. CO, NOx, isocyanates) may be formed.

Unusual Fire & Explosion Hazards

No unusual fire or explosion hazards noted.

Specific Hazards

In case of fire, toxic and corrosive gases may form.

### 5.3 Advice for fire-fighters

Protective equipment for fire-fighters.

Wear self contained breathing apparatus and full protective clothing. Keep all unnecessary people away. fire water run-off must not be allowed to contaminate ground or enter drains, sewers or water courses. Provide bunding against fire water run-off.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

In case of spills, beware of slippery floors and surfaces.

## 6.2 Environmental precautions

Cover all drains and sewers. Avoid spreading spilled material.

## 6.3 Methods and material for containment and cleaning up

Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers. Flush with plenty of water to clean spillage area. Flushings must not be allowed to contaminate ground or enter drains, sewers or water courses.

## 6.4 Reference to other sections

# SECTION 7: HANDLING AND STORAGE

## 7.1 Precautions for safe handling

Avoid spilling, skin and eye contact. Wash thoroughly after handling.

## 7.2 Conditions for safe storage, including any incompatibilities

Store in tightly closed container in a dry and cool place. Keep away from food, drink and animal feeding stuffs. Do not store with strong acids.

## 7.3 Specific end use(s)

# SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

## 8.1 Control parameters

Name	STD	TWA -8hrs	STEL – 15min
glycerol	WEL	10mg/m <sup>3</sup>	

WEL = Workplace Exposure Limit

## 8.2 Exposure controls

### Engineering measures

Provide adequate ventilation. Observe occupational exposure limits and minimise the risk of inhalation of vapours.

### Respiratory equipment

In case of inadequate ventilation or when the product is heated use suitable respiratory equipment with gas filter (type A2).

### Hand protection

Wear suitable protective gloves conforming to EN 374. Seek recommendation from manufacturer or supplier. After using gloves the hands should be washed and dried thoroughly and a suitable moisturiser applied.

### Eye protection

Use approved safety goggles or face shield.

### Other protection

Wear appropriate clothing to prevent any possibility of skin contact.

### Hygiene measures

DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet.

Wash promptly if skin becomes wet or contaminated. Promptly remove any clothing that becomes contaminated.

Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

# SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

## 9.1 Information on basic physical and chemical properties

Appearance                      Clear colourless liquid  
Odour                                Slight musty (mouldy) odour  
Solubility                          Fully miscible with water  
Initial boiling point and boiling range (°C) >100°C  
pH –value – aqueous solution; 10 for a 10% solution  
Refractive index: 1.4628 +/- 0.001 @ 20°C

## 9.2 Other information

# SECTION 10: STABILITY AND REACTIVITY

## 10.1 Reactivity

## 10.2 Chemical stability

Stable under normal conditions of storage and use. See Section 7

### 10.3 Possibility of hazardous reactions

Not known

### 10.4 Conditions to avoid

Avoid exposure to heat in any form including sunlight

### 10.5 Incompatible materials

Strong oxidising agents and acids

### 10.6 Hazardous decomposition products

Decomposition can lead to vapours/gases hazardous to health (e.g. CO, NO<sub>x</sub>, isocyanates) being formed.

---

## SECTION 11: TOXICOLOGICAL INFORMATION

---

### 11.1 Information on toxicological effects

Oral toxicity LD<sub>50</sub> oral-rat >2000 mg/kg

Except for the above, no data are available for this product. It has been classified according to the calculation procedure of the EC Dangerous Preparations Directive using known information and calculated data about individual components then read across to the Classification, Labelling and Packaging substances and mixtures directive (as amended).

#### Inhalation

Not relevant at normal temperatures. When heated irritating vapours may be formed.

#### Ingestion

No harmful effects expected in amounts likely to be ingested by accident.

#### Skin Contact

Liquid may irritate the skin

#### Eye contact

May cause temporary eye irritation

---

## SECTION 12: ECOLOGICAL INFORMATION

---

### Ecotoxicity

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

### 12.1 Toxicity

### 12.2 Persistence and degradability

#### Degradability

This product is expected to be biodegradable

### 12.3 Bioaccumulative potential

#### Bio-accumulative potential

This product does not contain any substances expected to be bioaccumulating

### 12.4 Mobility in soil

#### Mobility:

This product is completely water soluble and therefore may spread into water systems

### 12.5 results of PBT and vPvB assessment

This product does not contain any PBT or vPvB substances

### 12.6 Other adverse effects

---

## SECTION 13: DISPOSAL CONSIDERATIONS

---

### General information

Do not dispose to landfill or water courses.

### 13.1 Waste treatment methods

Small amounts may be flushed with water to sewer. Larger volumes must be sent to approved plant for destruction.

## SECTION 14: TRANSPORT INFORMATION

General: The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

### 14.1 UN number

Not applicable.

### 14.2 UN proper shipping name

Not applicable.

### 14.3 Transport hazard class(es)

Transport labels: No transport warning sign required.

### 14.4 Packing group

Not applicable.

### 14.5 Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant: No

### 14.6 Special precautions for user

Not applicable.

### 14.7 transport in bulk according to Annex II of MARPOL73/78 and IBC Code

Not applicable.

## SECTION 15: REGULATORY INFORMATION

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

#### Statutory instruments

Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 SI No 716 (CHIP4).

Control of Substances Hazardous to Health Regulations (as amended) (COSHH).

Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2007 (CDG 2009).

Management of Health & Safety at Work Regulations 1999.

#### Approved Code of Practice

The Control of Substances Hazardous to Health Regulations 2002 (as amended). Approved code of practice and guidance.

Fifth Edition 2005. HSE Books or download at: <http://www.hse.gov.uk/pubns/priced/15.pdf>

#### Guidance notes

COSHH essentials. 'Easy steps to control chemicals'. Only available on HSE's website and regularly updated at

<http://www.hse.gov.uk/pubns/guidance/inex.htm>

CHIP for everyone HSG(108).

#### EU legislation

Regulation (EC) No 1907/2006 of the European Parliament and the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC and amending Regulation (EC) No 1907/2006 with amendments.

ADR (L'Accord Européen Relative au transport international des marchandises dangereuses par route.)

### 15.2 Chemical Safety Assessment

No chemical safety assessment has been carried out.

## SECTION 16: OTHER INFORMATION

#### Revision Comments

Comprehensive revision.

New format SDS, including classification to CLP (EC 1272/2008) and translated into the language of this document as of the date below.

Revision date 22-July-16

Revision	04 replaces 03
Supersedes date	22-Aug-13
Risk phrases in full	
R22	Harmful if swallowed
R11	Highly flammable
R36/38	Irritating to eyes and skin
R53	May cause long term adverse effects in the aquatic environment
NC	Not classified

Hazard statements in full

H319	Causes serious eye irritation
H315	Causes skin irritation
H228	Flammable solid
H302	Harmful if swallowed
H413	May cause long lasting harmful effects to aquatic life

Disclaimer

This 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. Such information is, to the best of the Company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.