



SAFETY DATA SHEET

Citifluor AF100 Antifadent solution

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

1.1. Product identifier

Product name Citifluor AF100 Antifadent solution

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

Identified uses A buffered amine solution for use in fluorescence microscopy.

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
Tel: 215-412-8400
Fax: 215-412-8450

Contact Person Stacie Kirsch
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	Acute Tox. 4 - H302; Skin Irrit. 2 - H315; Eye Irrit. 2 - H319
Environment	Aquatic Chronic 4 - H413

Classification (1999/45/EEC)

Xn; R22. Xi; R36/38. R53.

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

Human health

May cause temporary irritation on skin or eye contact.

Environment

The product contains a substance which may cause long term adverse effects in the aquatic environment.

2.2. Label elements

Label In Accordance With (EC) No. 1272/2008



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Signal Word	Warning
Hazard Statements	H302 Harmful if swallowed. H315 Causes skin irritation. H319 Causes serious eye irritation. H413 May cause long lasting harmful effects to aquatic life.
Precautionary Statements	P273 Avoid release to the environment. P280 Wear protective clothing. P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P301+330+331+313 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Get medical advice/attention. P404 Store in a closed container. P501 Dispose of contents/container in accordance with local regulations.
Supplementary Precautionary Statements	P270 Do not eat, drink or smoke when using this product. P264 Wash contaminated skin thoroughly after handling.

2.3. Other hazards

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

triethylenediamine	10-30%
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 Eye Irrit. 2 - H319 Aquatic Chronic 4 - H413	Classification (67/548/EEC) Xn;R22. Xi;R36/38. F;R11. R53.

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

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation

If unconscious or breathing is irregular place on their side in the recovery position and ensure their airways are clear. Artificial respiration may be administered by suitably qualified first-aiders if the patient is unconscious or breathing is difficult.

Get immediate medical attention.

Ingestion

If swallowed do NOT induce vomiting. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head low so that stomach contents do not enter lungs.

Rinse mouth thoroughly and seek medical attention immediately. Keep patient at rest.

Skin contact

Remove contaminated clothing and shoes. Wash skin thoroughly with soap and running water. Take especial care to clean folds, crevices, creases and groin.

Get medical attention if irritation persists or develops.

Launder clothing and clean shoes thoroughly before reuse.

Eye contact

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 immediate medical attention.

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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

Extinguishing media

Extinguish with foam, carbon dioxide, dry powder or water fog. Do not use high pressure water jet as this may spread burning material.

5.2. Special hazards arising from the substance or mixture

Unusual Fire & Explosion Hazards

Vapours are heavier than air and may spread near ground to sources of ignition.

5.3. Advice for firefighters

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

Do not smoke, use open fire or other sources of ignition. Ventilate to dispel any residual vapour. Clean-up personnel should use respiratory protection, gloves, goggles and protective clothing and footwear (see section 8). Keep unnecessary people at a safe distance.

6.2. Environmental precautions

Do not allow spilt material to enter drains or water courses. Cover all drains and sewers. Avoid spreading spilled material. Contain spillages with sand, earth or suitable inert absorbent material. Prevent further spillage if safe to do so. In the event of contamination of watercourses or sewers advise the Environment Agency, fire brigade and police.

6.3. Methods and material for containment and cleaning up

Wear necessary protective equipment. Absorb in vermiculite, dry sand or earth and place into containers. Do not contaminate water sources or sewer.

6.4. Reference to other sections

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Use only in well ventilated areas. Avoid spilling, skin and eye contact. Do not breathe vapours or fumes. Keep away from heat and sources of ignition such as sparks or flames. Take precautions against static discharge. Wash thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed original container in a dry, cool and well-ventilated place. To prevent environmental contamination stored containers should be routinely inspected for damage and leakage.

7.3. Specific end use(s)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Ingredient Comments

No exposure limits noted for ingredient(s).

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8.2. Exposure controls

Engineering measures

Provide adequate general and local exhaust ventilation.

Respiratory equipment

If ventilation is insufficient suitable respiratory protection must be provided.

Seek advice and recommendations of the manufacturer or supplier of equipment

Hand protection

Wear suitable protective gloves conforming to EN 374.

The actual level of protection provided by protective gloves can be difficult to assess. Effective breakthrough times should be used with care and a margin of safety should be applied. The UK HSE guidance recommends a safety factor of 75% be applied to times obtained by laboratory tests.

Seek advice from the manufacturer or supplier.

Personal hygiene is a major factor in effective hand care. Gloves should only be worn on clean hands. After using gloves, hands should be washed and thoroughly dried and a non-perfumed moisturiser applied.

Eye protection

Wear tightly fitting safety goggles conforming to EN 166.

Other Protection

Minimise all forms of skin contact. Overalls and footwear with oil and chemical resistant soles should be worn. Launder overalls and undergarments regularly.

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. Promptly remove any clothing that becomes contaminated. Wash promptly with soap & water if skin 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	Odourless.
Solubility	Slightly soluble in water.
Initial boiling point and boiling range (°C)	>100°C
pH-Value, Conc. Solution	ca. 10.5 @ 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 contact with acids and oxidising substances. Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials

Materials To Avoid

Acids, non-oxidising.

10.6. Hazardous decomposition products

During fire, toxic gases (CO, CO₂, NO_x) are formed.

SECTION 11: TOXICOLOGICAL INFORMATION

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11.1. Information on toxicological effects

Toxicological information

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 the individual components then read across to the Classification, Labelling and Packaging of substances and mixtures directive (as amended).

Inhalation

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

Ingestion

Harmful if swallowed.

Skin contact

Irritating to skin. Not a skin sensitiser.

Eye contact

May cause severe irritation to eyes. Visual disturbances including blurred vision

Target Organs

Skin

Eyes

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

The product contains a substance which may cause long term adverse effects in the aquatic environment.

12.1. Toxicity

May decrease the acidity of aquatic systems to pH >10 which is toxic to aquatic organisms.

12.2. Persistence and degradability

Degradability

The product is expected to be biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential

The product does not contain any substances expected to be bioaccumulating.

12.4. Mobility in soil

Mobility:

The product contains substances, which are water soluble and may spread in 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

Product is hazardous waste. Do not allow into drains, sewers or water courses.

Disposal must be by means of a licensed waste contractor.

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).

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14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

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 the 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/l15.pdf>

Guidance Notes

Introduction to Local Exhaust Ventilation HS(G)37.

The storage of flammable liquids in containers HSG51 (HSE 1998).

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

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

EU Legislation

Regulation (EC) No 1907/2006 of the European Parliament and of 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

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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 29-APR-13

Revision 03 replaces 02

Supersedes date 02-APR-04

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.

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.