

Safety data sheet

according to 1907/2006/EC, Article 31

Date Printed 17.02.2022

Version number 1

Revision Date 17.02.2022

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

- **1.1 Product identifier**
- **Trade name: CFM-1 plus AF solution**
- **Article number:** AGR1330A
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
A buffered aqueous-glycerol amine solution for use in fluorescence microscopy.
- **Application of the substance / the preparation:** No further relevant information.
- **1.3 Details of the supplier of the safety data sheet**
- **Supplier.**
Agar Scientific Ltd
Parsonage Lane
Stansted CM24 8GF
United Kingdom
sales@agarscientific.com
Tel: +44 (0) 1279 813 519
- **Further information obtainable from:** Technical Support
- **1.4 Emergency telephone number:** 24 hours: +44 (0)1856 407333

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.



Acute Tox. 4 H332 Harmful if inhaled.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS05 GHS07

- **Signal word** Danger
- **Hazard-determining components of labelling:**
pyridine 1-oxide
triethylenediamine
- **Hazard statements**
H332 Harmful if inhaled.
H314 Causes severe skin burns and eye damage.
- **Precautionary statements**
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read carefully and follow all instructions.

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- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a POISON CENTER/doctor.
- P321 Specific treatment (see on this label).
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 56-81-5	glycerol	50.0%
EINECS: 200-289-5	substance with a Community workplace exposure limit	
CAS: 694-59-7	pyridine 1-oxide	40.0%
EINECS: 211-774-6	⚠ Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	
CAS: 280-57-9	triethylenediamine	5.0%
EINECS: 205-999-9	⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302	

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
No adverse effects are anticipated from inhalation.
Move the exposed person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.
- **After skin contact:**
Wash with water and soap and rinse thoroughly.
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.
- **After eye contact:**
Rinse opened eye for several minutes under running water. Then consult a doctor.
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.
- **After swallowing:**
Drink plenty of water and provide fresh air. Call for a doctor immediately.
NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Rinse mouth thoroughly. Get medical attention if any discomfort continues.
- **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.

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- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
Use fire extinguishing methods suitable to surrounding conditions.
This product is not flammable. Use fire-extinguishing media appropriate for surrounding materials.
- **For safety reasons unsuitable extinguishing agents:**
Do not use water jet as an extinguisher, as this will spread the fire.
- **5.2 Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
During fire, toxic gases (CO, CO₂, NO_x) are formed.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Positive pressure self-contained breathing apparatus.
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**
Wear gloves.
Wear protective gloves and glasses.
Eye contact MUST be prevented by means of suitable personal protection equipment.
- **6.2 Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
Do not allow ANY environmental contamination.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Stop leak if possible without risk. Absorb in vermiculite, sand, diatomaceous earth or other inert absorbent material. Place into clearly labelled container for recovery or disposal (see section 13).
Rinse site with copious amounts of water, which should not be allowed into drains, sewers or water courses.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Avoid spilling, skin and eye contact. Wash thoroughly after handling.
- **Information about fire - and explosion protection:**
Extinguishing media: Water fog - dried resin only.

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- **7.2 Conditions for safe storage, including any incompatibilities**
Store in tightly closed original container in a dry, cool and well-ventilated place. Keep away from food, drink and animal feeding stuffs.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Additional information about design of technical facilities:**
Provide adequate general and local exhaust ventilation.

· Ingredients with limit values that require monitoring at the workplace:
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56-81-5 glycerol

WEL Long-term value: 10 mg/m ³

- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
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.
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
If ventilation is insufficient suitable respiratory protection must be provided. Seek advice and recommendations of the manufacturer or supplier of equipment
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

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· 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:


Tightly sealed goggles

Wear tightly fitting safety goggles conforming to EN 166.

· Body protection: Wear appropriate clothing to prevent any possibility of skin contact.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties
· General Information
· Appearance:

Form:	Liquid
Colour:	Colourless

· Odour:	Odourless
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· Odour threshold:	Not determined.
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· pH-value:	Not determined.
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· Change in condition

Melting point/freezing point:	Undetermined.
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Initial boiling point and boiling range:	Undetermined.
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· Flash point:	Not applicable.
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· Flammability (solid, gas):	Not applicable.
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· Decomposition temperature:	Not determined.
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· Auto-ignition temperature:	Product is not selfigniting.
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· Explosive properties:	Product does not present an explosion hazard.
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· Explosion limits:

Lower:	Not determined.
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Upper:	Not determined.
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· Vapour pressure:	Not determined.
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· Density:	Not determined.
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· Relative density	Not determined.
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· Vapour density	Not determined.
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· Evaporation rate	Not determined.
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· Solubility in / Miscibility with water:

Fully miscible.

· Partition coefficient: n-octanol/water:	Not determined.
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· Viscosity:

Dynamic:	Not determined.
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Kinematic:	Not determined.
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· Solvent content:

Organic solvents:	50.0 %
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VOC (EC)	0.00 %
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Solids content:	0.0 %
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· 9.2 Other information

Refractive Index 1.5160 ± 0.005 @ 20°C

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability** Stable under normal conditions of storage and use.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** Avoid exposure to high temperatures or direct sunlight.
- **10.5 Incompatible materials:** Acids, non-oxidising.
- **10.6 Hazardous decomposition products:**
Decomposition can lead to the formation of toxic gases or fumes, including carbon monoxide (CO) and carbon dioxide (CO₂). Nitrous gases (NO_x).

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
 - **Acute toxicity**
Harmful if inhaled.
- | | | |
|--|------|-------------------|
| · LD/LC50 values relevant for classification: | | |
| 280-57-9 triethylenediamine | | |
| Oral | LD50 | 1,700 mg/kg (rat) |
- **Specific symptoms in biological assay:**
 - **Skin corrosion/irritation**
Causes severe skin burns and eye damage.
May cause defatting of the skin, but is not an irritant. Not a skin sensitiser.
 - **Serious eye damage/irritation**
Causes serious eye damage.
Irritating and may cause redness and pain.
 - **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
 - **Other information (about experimental toxicology):**
Inhalation: Not relevant at normal room temperatures. When heated, irritating vapours may be formed.
Ingestion: May cause discomfort if swallowed.
 - **Additional toxicological information:**
 - **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
 - **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.

SECTION 12: Ecological information

- **12.1 Toxicity**
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.
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** The product is expected to be biodegradable.

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- **12.3 Bioaccumulative potential**
The product does not contain any substances expected to be bioaccumulating.
- **12.4 Mobility in soil**
The product contains substances, which are water soluble and may spread in water systems.
- **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.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Product is hazardous waste. Do not allow into drains, sewers or water courses. Disposal must be by means of a licensed waste contractor.
- **Recommendation:**
Small amounts may be flushed with water to sewer. Larger volumes must be sent to approved plant for destruction.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

<ul style="list-style-type: none"> · 14.1 UN-Number · ADR, ADN, IMDG, IATA 	Void
<ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR, ADN, IMDG, IATA 	Void
<ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA · Class 	Void
<ul style="list-style-type: none"> · 14.4 Packing group · ADR, IMDG, IATA 	Void
<ul style="list-style-type: none"> · 14.5 Environmental hazards: · Marine pollutant: 	No
<ul style="list-style-type: none"> · 14.6 Special precautions for user 	Not applicable.
<ul style="list-style-type: none"> · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code 	Not applicable.
<ul style="list-style-type: none"> · UN "Model Regulation": 	Void

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SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge and should assist the user with the safe handling of this material when properly applied. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

H302 Harmful if swallowed.
 H312 Harmful in contact with skin.
 H314 Causes severe skin burns and eye damage.
 H319 Causes serious eye irritation.
 H332 Harmful if inhaled.

- **Department issuing SDS:** Sales department

- **Contact:**

sales@agarscientific.com
 Tel: +44 (0) 1279 813 519

- **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 VOC: Volatile Organic Compounds (USA, EU)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Acute Tox. 4: Acute toxicity – Category 4
 Skin Corr. 1B: Skin corrosion/irritation – Category 1B
 Eye Dam. 1: Serious eye damage/eye irritation – Category 1
 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

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