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

- 1.1 Product identifier
  - Trade name: Citifluor AF200 Antifaden solution

- 1.2 Relevant identified uses of the substance or mixture and uses advised against
  - Application of the substance / the preparation: No further relevant information.

- 1.3 Details of the supplier of the safety data sheet
  - Supplier.
  Agar Scientific
  Elektron Technology UK Ltd
  Parsonage Lane
  Stansted CM24 8GF
  United Kingdom
  sales@agarscientific.com
  Tel: +44 (0) 1279 813 519

- 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

  ! GHS07

  Skin Sens. 1 H317 May cause an allergic skin reaction.

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

  ! GHS07

- Signal word Warning

- Hazard-determining components of labelling:
  propyl gallate

- Hazard statements
  H317 May cause an allergic skin reaction.

- Precautionary statements
  P102 Keep out of reach of children.
P103 Read label before use.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P264 Wash thoroughly after handling.
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P402+P404 Store in a dry place. Store in a closed container.
P501 Dispose of contents/container in accordance with local/regional/national/ international regulations.

- Hazard description:
  The product contains a sensitising substance which may provoke an allergic reaction among sensitive individuals.

(Contd. on page 2)
Trade name: Citifluor AF200 Antifaden solution

- 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:

<table>
<thead>
<tr>
<th>CAS: 56-81-5</th>
<th>glycerol</th>
<th>90.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>EINECS: 200-289-5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS: 121-79-9</td>
<td>propyl gallate</td>
<td>10.0%</td>
</tr>
<tr>
<td>EINECS: 204-498-2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

SECTION 4: First aid measures

- 4.1 Description of first aid measures
  - General information: Remove affected person from source of exposure.
  - After inhalation:
    If unconscious place patient on their side in the recovery position and ensure they are breathing. Clean nose and mouth with water. Artificial respiration may be administered by suitably qualified first-aiders. Get medical attention if symptoms persist.
  - After 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. Launder clothing and clean shoes thoroughly before re-use.
  - After 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.
  - After swallowing:
    If swallowed do NOT induce vomiting. Never give anything by mouth to an unconscious person. If patient vomits keep head low to prevent vomit entering lungs. If conscious give 1 - 2 glasses of water to drink. Rinse mouth thoroughly and seek medical attention immediately. Keep patient at rest.
- 4.2 Most important symptoms and effects, both acute and delayed
  No further relevant information available.
- 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:
    Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.
  - 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 fire, toxic gases (CO, CO2, NOx) are formed.
Trade name: Citifluor AF200 Antifadent solution

5.3 Advice for firefighters
- Protective equipment:
  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 protective gloves.
- 6.2 Environmental precautions:
  Prevent discharge into drains, water courses or onto the ground.
- 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. Do not contaminate water sources or sewer.
- 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
  Avoid spilling, skin and eye contact.
- 7.2 Conditions for safe storage, including any incompatibilities
  Store in tightly closed original container in a dry, cool and well-ventilated place.
- 7.3 Specific end use(s)
  No further relevant information available.

SECTION 8: Exposure controls/personal protection

- Additional information about design of technical facilities:
  Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.
- 8.1 Control parameters
  - Ingredients with limit values that require monitoring at the workplace:
    - **56-81-5 glycerol**
      - WEL: Long-term value: 10 mg/m³
  - Additional information: The lists valid during the making were used as basis.
- 8.2 Exposure controls
  - Personal protective equipment:
    - General protective and hygienic 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 with soap & water if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.
Trade name: Citifluor AF200 Antifadent solution

- Respiratory protection:
  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.
- 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.
- 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: Wear tightly fitting safety goggles conforming to EN 166.
- Body protection:
  Minimise all forms of skin contact. Overalls and footwear with oil and chemical resistant soles should be worn. Launder overalls and undergarments regularly.

SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties
  - General Information
  - Appearance:
    Form: Liquid
    Colour: Colourless
    Odour: Characteristic
    Odour threshold: Not determined.
  - pH-value: Not determined.
- Change in condition
  Melting point/Melting range: Undetermined.
  Boiling point/Boiling range: Undetermined.
- Flash point: Not applicable.
- Flammability (solid, gaseous): Not applicable.
- Ignition temperature:
  Decomposition temperature: Not determined.
- Self-igniting: Product is not selfigniting.
- Danger of explosion: Product does not present an explosion hazard.
- Explosion limits:
  Lower: Not determined.
  Upper: Not determined.
Trade name: Citifluor AF200 Antifadent solution

- Vapour pressure: Not determined.
- Density: Not determined.
  - Relative density Not determined.
  - Vapour density Not determined.
  - Evaporation rate Not determined.
- Solubility in / Miscibility with water: Fully miscible.
- Partition coefficient (n-octanol/water): Not determined.
- Viscosity:
  - Dynamic: Not determined.
  - Kinematic: Not determined.
- 9.2 Other information No further relevant information available.

SECTION 10: Stability and reactivity

- 10.1 Reactivity
- 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 Protect from sunlight, open flames, sources of heat and humidity.
- 10.5 Incompatible materials: Acids, non-oxidising.
- 10.6 Hazardous decomposition products: During fire, toxic gases (CO, CO2, NOx) are formed.

SECTION 11: Toxicological information

- 11.1 Information on toxicological effects
  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).
- Acute toxicity:
  - on the skin: May cause sensitisation by skin contact.
  - on the eye: Spray and vapour in the eyes may cause irritation and smarting.
  - Sensitisation: Sensitisation possible through skin contact.
- Other information (about experimental toxicology):
  In high concentrations, vapours may irritate throat and respiratory system and cause coughing. May cause discomfort if swallowed.
- Additional toxicological information:
  The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
  Irritant

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.
Trade name: Citifluor AF200 Antifade solution

- 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 2 (German Regulation) (Self-assessment): hazardous for water
  Do not allow product to reach ground water, water course or sewage system.
- 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
  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

- 14.1 UN-Number
  ADR, IMDG, IATA: Void
- 14.2 UN proper shipping name
  ADR, IMDG, IATA: Void
- 14.3 Transport hazard class(es)
  ADR, IMDG, IATA: Void
- 14.4 Packing group
  ADR, IMDG, IATA: Void
- 14.5 Environmental hazards:
  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.
- UN "Model Regulation": -

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
  No further relevant information available.
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.
  H317 May cause an allergic skin reaction.

- Department issuing MSDS: Sales department
  - Contact:
    sales@agarscientific.com
    Tel: +44 (0) 1279 813 519

- Abbreviations and acronyms:
  - ADR: Accord européen sur le transport 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)
  - Acute Tox. 4: Acute toxicity, Hazard Category 4
  - Skin Sens. 1: Sensitisation - Skin, Hazard Category 1