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

- **1.1 Product identifier**
  - Trade name: **Nuclear Emulsion G5, K2, K5, L4**
  - Article number: AGP9282

- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
  - **Photographic Silver Halide Emulsion**
  - **Application of the substance / the preparation:** No data available.

- **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

- **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
  - The product is not classified, according to the CLP regulation.

- **2.2 Label elements**
  - Labelling according to Regulation (EC) No 1272/2008 Void
  - Hazard pictograms Void
  - Signal word Void
  - Hazard statements Void

- **2.3 Other hazards**
  - **Results of PBT and vPvB assessment**
    - Not regarded as a health or environmental hazard under current legislation.
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
  - **Description:**
    - This product is a dispersion of photosensitive silver halide particles in an aqueous gelatin binder. It is not classified as dangerous under current EU regulations.

- **Dangerous components:** Void

- **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:** No special measures required.
  - **After inhalation:** Unlikely route of exposure as the product does not contain volatile substances.
  - **After skin contact:**
    - Remove affected person from source of contamination. Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention promptly if symptoms occur after washing.
Trade name: Nuclear Emulsion G5, K2, K5, L4

· After eye contact:
  Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Seek medical attention and bring along these instructions.

· After swallowing:
  Remove victim immediately from source of exposure. Rinse mouth thoroughly. DO NOT INDUCE VOMITING! Obtain medical attention if symptoms occur.

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
  This product is not flammable.

· Suitable extinguishing agents:
  Use fire extinguishing methods suitable to surrounding conditions.
  Use extinguishing media appropriate for surrounding fire.

· 5.2 Special hazards arising from the substance or mixture
  No unusual fire or explosion hazards noted.

· 5.3 Advice for firefighters
  No special precautions required.

· Protective equipment:
  No special measures required.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures
  Follow precautions for safe handling described in this safety data sheet.

· 6.2 Environmental precautions:
  Dilute with plenty of water.
  Do not allow to enter sewers/ surface or ground water.
  Prevent entry into drains.

· 6.3 Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Wear necessary protective equipment. Do not contaminate water sources or sewer. Spillage should be collected for recycling. Flush with plenty of water to clean spillage area.

· 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
  No special measures required.
  Read and follow manufacturer's recommendations. Avoid contact with skin and eyes.

· Information about fire - and explosion protection:
  No special measures required.

· 7.2 Conditions for safe storage, including any incompatibilities
  Store in tightly closed original container in a dry, cool and well-ventilated place. Store at temperatures not exceeding 4°C. Store above freezing. Only open in darkroom.

· Storage:
  · Requirements to be met by storerooms and receptacles:
    No special precautions required.
  · Information about storage in one common storage facility:
    No further relevant information available.
  · Further information about storage conditions:
    No data available.
  · Storage class:
    Chemical storage.
Trade name: Nuclear Emulsion G5, K2, K5, L4

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.

- 8.1 Control parameters
  - Ingredients with limit values that require monitoring at the workplace:
    The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
  - Additional information: The lists valid during the making were used as basis.

- 8.2 Exposure controls
  - Personal protective equipment:
    - General protective and hygienic measures:
      Wash promptly with soap & water if skin becomes contaminated.
    - Respiratory protection: Not required.
    - 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
Use suitable protective gloves if risk of skin contact.

- 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.
  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.
  The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- Eye protection: Goggles recommended during refilling
- 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: Viscous
      - Colour: Yellow
    - Odour: Odourless
    - Odour threshold: Not determined.
### SECTION 10: Stability and reactivity

<table>
<thead>
<tr>
<th>10.1 Reactivity</th>
<th>No further relevant information available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.2 Chemical stability</td>
<td>Stable under normal temperature conditions.</td>
</tr>
<tr>
<td>Thermal decomposition / conditions to be avoided</td>
<td>No decomposition if used according to specifications.</td>
</tr>
<tr>
<td>10.3 Possibility of hazardous reactions</td>
<td>Will not polymerise.</td>
</tr>
<tr>
<td>10.4 Conditions to avoid</td>
<td>Avoid excessive heat for prolonged periods of time.</td>
</tr>
<tr>
<td>10.5 Incompatible materials</td>
<td>Avoid contact with other photographic solutions and/or cleaning compounds.</td>
</tr>
<tr>
<td>10.6 Hazardous decomposition products</td>
<td>No specific hazardous decomposition products noted.</td>
</tr>
</tbody>
</table>

### SECTION 11: Toxicological information

<table>
<thead>
<tr>
<th>11.1 Information on toxicological effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>This chemical formulation has not been tested for health effects. Exposure effects listed are based on existing health data for the individual components that comprise the mixture.</td>
</tr>
</tbody>
</table>

INHALATION - Unlikely to be hazardous by inhalation because of the low vapour pressure of the
substance at ambient temperature.

INGESTION - Liquid irritates mucous membranes and may cause abdominal pain if swallowed.
SKIN CONTACT - Liquid may irritate skin.
EYE CONTACT - Irritation of eyes and mucous membranes.
HEALTH WARNINGS - May cause discomfort if swallowed.
OTHER HEALTH EFFECTS - This substance has no evidence of carcinogenic properties.

ROUTE OF ENTRY - Ingestion. Skin and/or eye contact.

· Acute toxicity Based on available data, the classification criteria are not met.
· Skin corrosion/irritation Based on available data, the classification criteria are not met.
· Serious eye damage/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.
· 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
  There are no data on the ecotoxicity of this product. The product is not expected to be hazardous to the environment.
  · Aquatic toxicity: No further relevant information available.
· 12.2 Persistence and degradability No further relevant information available.
· 12.3 Bioaccumulative potential No further relevant information available.
· 12.4 Mobility in soil No further relevant information available.
· 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.
    Danger to drinking water if even small quantities leak into the ground.
    · 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 Recover and reclaim or recycle, if practical.
  · Recommendation
    Smaller quantities can be disposed of with household waste.
    Dispose of in accordance with local regulations
  · Recommendation: Disposal must be made according to official regulations.
  · Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· 14.1 UN-Number -
· 14.2 UN proper shipping name -
· 14.3 Transport hazard class(es) -
### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - RISK PHRASES - Not classified.
  - SAFETY PHRASES - Not classified.
  - APPROVED CODE OF PRACTICE - Classification and Labelling of Substances and Preparations Dangerous for Supply.
  - GUIDANCE NOTES - CHIP for everyone HSG(108).
  - NATIONAL REGULATIONS - The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 No 716

- **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.

- **Department issuing SDS:** Sales department
- **Contact:**
  - sales@agarscientific.com
  - Tel: +44 (0) 1279 813 519
- **Abbreviations and acronyms:**
  - 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)
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative