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according to 1907/2006/EC, Article 31

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

· **1.1 Product identifier** Agar Low Viscosity Accelerator, BDMA

· **Trade name: BDMA**

· **Article number:** AGR1030B
· **CAS Number:**
103-83-3
· **EC number:**
203-149-1
· **Index number:**
612-074-00-7
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
Laboratory chemical, Manufacture of substances.
· **Application of the substance / the preparation:** Accelerator used in epoxy resins for microscopy.

· **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

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SECTION 2: Hazards identification

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


GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.


GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.


GHS07

Acute Tox. 4 H302 Harmful if swallowed.
Acute Tox. 4 H312 Harmful in contact with skin.
Acute Tox. 4 H332 Harmful if inhaled.

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


GHS02 GHS05 GHS07

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· **Signal word** Danger
· **Hazard statements**
H226 Flammable liquid and vapour.
H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.
H314 Causes severe skin burns and eye damage.
· **Precautionary statements**
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).
P362+P364 Take off contaminated clothing and wash it before reuse.
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

· **3.1 Chemical characterisation: Substances**
· **CAS No. Description**
103-83-3 BDMA
· **Identification number(s)**
· **EC number:** 203-149-1
· **Index number:** 612-074-00-7

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.
Remove to fresh air. If not breathing give artificial respiration or give oxygen by trained personal. Seek immediate medical attention.
· **After skin contact:**
Wash with water and soap and rinse thoroughly.
Immediately flush eyes withy plenty of water for at least 15 minutes. Use soap if available. Remove contaminated clothing or shoes after flushing has began. Get prompt medical attention. Thoroughly was contaminated clothing and shoes or discard in a manner.
· **After eye contact:**
Rinse opened eye for several minutes under running water. Then consult a doctor.
Immediately flush eyes withy plenty of water for at least 15 minutes, holding eyelids apart. Get medical attention if irritation or other symptoms occur.
· **After swallowing:**
Call for a doctor immediately.
Drink plenty of water and provide fresh air. Call for a doctor immediately.
Dilute with milk or water. Get immediate medical attention. Never give anything by mouth to an unconscious person.

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· **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** Flash Point: 57.2º C. Open cup.
· **Suitable extinguishing agents:** CO_2, dry chemical, alcohol foam, water spray.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **5.2 Special hazards arising from the substance or mixture**
Vapors may travel a considerable distance and flashback to the source.
Emits toxic fumes under fire conditions.
· **5.3 Advice for firefighters**
Evacuate area and fight from safe distance. Wear self contained breathing apparatus pressure demand (MSHA/NIOSH approved or equivalent) and full protective gear. Can burn in fire releasing toxic vapors.
· **Protective equipment:** Positive pressure self-contained breathing apparatus.

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SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective gloves and glasses.
· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **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.
This material should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Prevent skin and eye contact.
For small spills: Absorb spill with inert material (e.g., dry sand or vermiculite) then place in a chemical storage container for disposal.
For large spill: Shut of leak, if safe to do so. Clean up spills immediately, observing precautions in protective equipment section. Contain spilled liquid with sand, vermiculite or earth. Retain all contaminated water for removal and treatment.
· **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.
Use with adequate ventilation. Wash thoroughly after handling. Follow all MSDS/label precautions even after container is emptied because they may contain residues. Avoid contact with eyes and skin. Avoid breathing vapors. Keep away from ignition sources. Store in accordance with OSHA regulations and NEPA guidelines. Keep container closed when not in use.
Storage temperature: Room temperature.
· **Information about fire - and explosion protection:**
The dried resin is combustible, similar to wood. Burning dry resin emits dense, black smoke. As latex, material is not combustible.
Protect against electrostatic charges.

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· **7.2 Conditions for safe storage, including any incompatibilities**
· **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

· **Additional information about design of technical facilities:**
Ventilation required: Use fume hood. Use process enclosures, local exhaust ventilation, or other engineering controls to control sources of dust, mist or vapor.

· **8.1 Control parameters**
· **Ingredients with limit values that require monitoring at the workplace:** Not required.
· **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 and skin.
· **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.
Use a NIOSH/MSHA approved air purifying respirator as needed to control exposure. Consult with respirator manufacturer to determine respirator selection, use and limitations. Use a positive pressure air supplied respirator for uncontrolled releases or when air purifying respirator limitations may be exceeded. Follow respiratory protection program requirements (OSHA 1910.134 and ANSI Z88.2) for all respirator use.
· **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
· **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.
· **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 splash-proof chemical goggles and a face shield.
Additional clothing and/or equipment: Eyewash stations or shower.

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· **Body protection:**
Wear chemical protective clothing, overalls, aprons or boots as need to prevent contact with skin.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Colour:	Not determined.
· **Odour:**	Amine-like
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/freezing point:	-75 °C
Initial boiling point and boiling range:	176 °C
· **Flash point:**	54 °C
· **Flammability (solid, gas):**	Not applicable.
· **Decomposition temperature:**	Not determined.
· **Auto-ignition temperature:**	Not determined.
· **Explosive properties:**	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapour pressure at 20 °C:**	2.8 hPa
· **Density at 20 °C:**	0.915 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with water:**	Not miscible or difficult to mix.
· **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** No further relevant information available.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** Not prone to hazardous polymerization.
· **10.4 Conditions to avoid** Exposure to oxidizing agents and acids. Prolong exposure to heat.
· **10.5 Incompatible materials:** Strong oxidising agents, acids, acid anhydrides, acid chlorides.

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· **10.6 Hazardous decomposition products:** Carbon dioxide, carbon monoxide and nitrogen oxides.

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity**
Harmful if swallowed, in contact with skin or if inhaled.

· **LD/LC50 values relevant for classification:**		
Oral	LD50	265 mg/kg (rat)
Dermal	LD50	1,660 mg/kg (rabbit)
Inhalative	LC50/4 h	2.06 mg/l (rat)

· **Skin corrosion/irritation**
Causes severe skin burns and eye damage.
· **Serious eye damage/irritation**
Causes severe skin burns and eye damage.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **CMR effects (carcinogenity, 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.

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SECTION 12: Ecological information

· **12.1 Toxicity**
LC50 Fish (Pimephales promelas or Fathead minnow): 35.8-39.90 mg /L – 96 hr
LC50 (Leuciscus idus): 10-22 mg/L – 96 hr
· **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) (Assessment by list): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
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**
· **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
· **Recommendation:** Disposal must be made according to official regulations.

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SECTION 14: Transport information

· **14.1 UN-Number**
· **ADR, IMDG, IATA** UN2619

· **14.2 UN proper shipping name**
· **ADR** 2619 BENZYLDIMETHYLAMINE
· **IMDG, IATA** BENZYLDIMETHYLAMINE

· **14.3 Transport hazard class(es)**

· **ADR**

· **Class** 8 Corrosive substances.
· **Label** 8+3

· **IMDG**

· **Class** 8 Corrosive substances.
· **Label** 8/3

· **IATA**

· **Class** 8 Corrosive substances.
· **Label** 8 (3)

· **14.4 Packing group**
· **ADR, IMDG, IATA** II

· **14.5 Environmental hazards:**
· **Marine pollutant:** Yes (PP)

· **14.6 Special precautions for user** Warning: Corrosive substances.
· **Danger code (Kemler):** 83
· **EMS Number:** F-E,S-C
· **Stowage Category** A
· **Stowage Code** SW1 Protected from sources of heat.
SW2 Clear of living quarters.
· **Segregation Code** SG35 Stow "separated from" SGG1-acids

· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **ADR**
· **Limited quantities (LQ)** 1L
· **Excepted quantities (EQ)** Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml
· **Transport category** 2
· **Tunnel restriction code** D/E

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· **IMDG**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **UN "Model Regulation":**	UN 2619 BENZYLDIMETHYLAMINE, 8 (3), II

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** Substance is not listed.
· **Seveso category** P5c FLAMMABLE LIQUIDS
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 40
· **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:**
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
PP: Severe Marine Pollutant
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
· *** Data compared to the previous version altered.**