

Safety data sheet

according to 1907/2006/EC, Article 31

Date Printed 02.02.2022

Version number 1

Revision Date 02.02.2022

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

- **1.1 Product identifier**
- **Trade name: Electrodag 1415 (50g)**
- **Article number:** AGG3648,49,92
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation:** No further 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
- **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**



flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



Acute Tox. 4 H332 Harmful if inhaled.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

- **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**



GHS02



GHS07



GHS09

- **Signal word** Danger

- **Hazard-determining components of labelling:**

4-methylpentan-2-one

- **Hazard statements**

H225 Highly flammable liquid and vapour.

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- H332 Harmful if inhaled.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
- 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.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:

- EUH066 Repeated exposure may cause skin dryness or cracking.

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: 108-10-1 EINECS: 203-550-1	4-methylpentan-2-one ⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H332; Eye Irrit. 2, H319; STOT SE 3, H335	25-50%
CAS: 7440-22-4 EINECS: 231-131-3	Silver (Powder <0.0001mm) ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	>25.0%

- **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.

Ways of exposure: Skin contact. The substance may be absorbed into the body by inhalation, ingestion and through the skin. Formation of product mist when applied by spray, which could be inhaled.

Hazards identification: The substance is flammable. The substance is harmful by inhalation and is irritating to eyes and respiratory system. High concentrations will cause narcotic effects. Repeated exposure may cause skin dryness or cracking.

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.

Fresh air. If person feels unwell seek medical advice.

After skin contact:

Immediately rinse with water.

Treat with a suitable cleaner and wash afterwards with water and soap. If irritation persists seek medical advice.

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- **After eye contact:**
Rinse opened eye under running water. If symptoms persist, consult a doctor.
Rinse immediately with water. Eye bath advisable. If irritation persists seek medical advice.
- **After swallowing:**
Wash mouth out with water. Give water to drink. Do not induce vomiting, seek medical advice.
- **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:** Water mist, powder, carbon dioxide or foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Positive pressure self-contained breathing apparatus.
Use chemical protection suit and a self-contained breathing apparatus.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear gloves.
Wear protective gloves and glasses.
Avoid skin, eye contact and inhalation. Ventilate well. No open flames or ignition sources.
- **6.2 Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
Prevent substance entering soil, surface waters, water courses, sewers, basements and workpits.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Absorb in earth, sand or other suitable material, collect in a suitable container and remove to a safe place. Clean well to avoid slippages.
- **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.
Do not breathe vapour and ensure adequate ventilation. Avoid unnecessary contact. Use protective gloves. No open flames, no smoking.
- **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.
Extinguishing media: Water fog - dried resin only.

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Fireproof. Keep at temperatures not exceeding 30°C.

7.2 Conditions for safe storage, including any incompatibilities
Storage:

 · **Requirements to be met by storerooms and receptacles:** Store in a cool location.

 · **Information about storage in one common storage facility:** Not required.

Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

 · **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:** No further data; see item 7.

Ingredients with limit values that require monitoring at the workplace:
108-10-1 4-methylpentan-2-one

WEL	Short-term value: 416 mg/m ³ , 100 ppm Long-term value: 208 mg/m ³ , 50 ppm Sk, BMGV
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Ingredients with biological limit values:
108-10-1 4-methylpentan-2-one

BMGV	20 µmol/L Medium: urine Sampling time: post shift Parameter: 4-methylpentan-2-one
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 · **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.

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.

Do not breathe spray and vapour. Ventilation via local exhaust. In case of insufficient ventilation in closed rooms, wear suitable respiratory 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

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

- **Body protection:** Wear suitable protective clothing.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Fluid
Colour:	Silver-coloured
Odour:	Characteristic
Odour threshold:	Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	116 °C

- **Flash point:** 14 °C

- **Flammability (solid, gas):** Not applicable.

- **Ignition temperature:** 460 °C

- **Decomposition temperature:** Not determined.

- **Auto-ignition temperature:** Product is not selfigniting.

- **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

- **Explosion limits:**

Lower:	1.4 Vol %
Upper:	8 Vol %

- **Vapour pressure at 20 °C:** 21 hPa

Density at 20 °C:	1.63 g/cm ³
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 at 20 °C:	500 mPas
Kinematic:	Not determined.

- **Solvent content:**

Organic solvents:	25-50 %
VOC (EC)	25-50 %

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Solids content:	59.0 %
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· 9.2 Other information	No further relevant information available.
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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** No dangerous reactions known.
- **10.4 Conditions to avoid** Strong oxidants.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
The substance is harmful by inhalation. Irritating to eyes and respiratory tract. Product contains solvent(s). High concentrations will cause narcotic effects.
- **Acute toxicity**
Harmful if inhaled.

· LD/LC50 values relevant for classification:		
108-10-1 4-methylpentan-2-one		
Oral	LD50	2,080 mg/kg (rat)
Dermal	LD50	16,000 mg/kg (rab)
Inhalative	LC50/4 h	8.3-16.6 mg/l (rat)

- **Specific symptoms in biological assay:**
- **Skin corrosion/irritation** Repeated exposure may cause skin dryness or cracking.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** No other information available.
- **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**
May cause respiratory irritation.
- **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**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability**
Prevent contamination of soil, drains and surface waters. Contaminated waste water should be treated in a suitable cleaning plant.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish

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- **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.
 Also poisonous for fish and plankton in water bodies.
 Very toxic for aquatic organisms
- **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.
 Treat as a chemical waste in accordance with legal regulations or common industrial practice.
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- | | |
|---|---|
| <ul style="list-style-type: none"> · 14.1 UN-Number · ADR, IMDG, IATA | UN1245 |
| <ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR · IMDG, IATA | 1245 METHYL ISOBUTYL KETONE solution,
ENVIRONMENTALLY HAZARDOUS
METHYL ISOBUTYL KETONE solution |
| <ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR | <div style="display: flex; align-items: center; gap: 10px;">   </div> |
| <ul style="list-style-type: none"> · Class · Label | 3 Flammable liquids.
3 |
| <ul style="list-style-type: none"> · IMDG, IATA | <div style="display: flex; align-items: center; gap: 10px;">  </div> |
| <ul style="list-style-type: none"> · Class · Label | 3 Flammable liquids.
3 |
| <ul style="list-style-type: none"> · 14.4 Packing group · ADR, IMDG, IATA | II |
| <ul style="list-style-type: none"> · 14.5 Environmental hazards: · Marine pollutant: · Special marking (ADR): | No
No
Symbol (fish and tree) |
| <ul style="list-style-type: none"> · 14.6 Special precautions for user · Hazard identification number (Kemler code): | Warning: Flammable liquids.
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· EMS Number:	F-E,S-D
· Stowage Category	B
· 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
· 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 1245 METHYL ISOBUTYL KETONE SOLUTION, 3, II, ENVIRONMENTALLY HAZARDOUS

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.
- **Seveso category**
E1 Hazardous to the Aquatic Environment
P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **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**
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
- **Department issuing SDS:** Sales department
- **Contact:**
sales@agarscientific.com
Tel: +44 (0) 1279 813 519

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· 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

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

· * Data compared to the previous version altered.

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