

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 09.08.2013

Revision: 09.08.2013

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

- **Product identifier** Duron Antistatic Spray
- **Trade name:** Duron Anti-static Spray
- **Article number:** AGG3301
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the preparation:** Anti-static spray for electron microscopy.
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Agar Scientific  
Elektron Technology UK Ltd  
Parsonage Lane  
Stansted CM24 8GF  
United Kingdom  
sales@agarscientific.com  
Tel: +44 (0) 1279 813 519



- **Further information obtainable from:** Technical Support
- **Emergency telephone number:** 24 hours: +44 (0)1856 407333

## 2 Hazards identification

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



GHS02 flame

Flam. Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

R67: Vapours may cause drowsiness and dizziness.

- **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Warning! Pressurized container.

- **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

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- **Label elements**

- **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

- **Risk phrases:**

67 Vapours may cause drowsiness and dizziness.

- **Safety phrases:**

2 Keep out of the reach of children.

3/7 Keep container tightly closed in a cool place.

46 If swallowed, seek medical advice immediately and show this container or label.

56 Dispose of this material and its container to hazardous or special waste collection point.

- **Special labelling of certain preparations:**

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

78.0 % by mass of the contents are flammable

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 64-17-5 EINECS: 200-578-6	ethanol F R11 Flam. Liq. 2, H225	25.0%
CAS: 106-97-8 EINECS: 203-448-7	butane F+ R12 Flam. Gas 1, H220; Press. Gas, H280	25.0%
CAS: 67-63-0 EINECS: 200-661-7	propan-2-ol Xi R36; F R11 R67 Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	15.0%
CAS: 74-98-6 EINECS: 200-827-9	propane F+ R12 Flam. Gas 1, H220; Press. Gas, H280	10.0%
CAS: 75-28-5 EINECS: 200-857-2	isobutane F+ R12 Flam. Gas 1, H220; Press. Gas, H280	2.5%

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

### 4 First aid measures

- **Description of first aid measures**

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

- **After skin contact:** Generally the product does not irritate the skin.

- **After eye contact:**

Rinse opened eye for several minutes under running water. Then consult a doctor.

- **After swallowing:** If symptoms persist consult doctor.

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- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb liquid components with liquid-binding material.
- **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.

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:** Keep ignition sources away - Do not smoke.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Observe official regulations on storing packagings with pressurized containers.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

**64-17-5 ethanol**

WEL Long-term value: 1920 mg/m<sup>3</sup>, 1000 ppm

**106-97-8 butane**

WEL Short-term value: 1810 mg/m<sup>3</sup>, 750 ppm  
Long-term value: 1450 mg/m<sup>3</sup>, 600 ppm  
Carc (if more than 0.1% of buta-1.3-diene)

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**67-63-0 propan-2-ol**

WEL	Short-term value: 1250 mg/m <sup>3</sup> , 500 ppm Long-term value: 999 mg/m <sup>3</sup> , 400 ppm
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- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:** Wash hands before breaks and at the end of work.
- **Respiratory protection:** Use suitable respiratory protective device in case of insufficient ventilation.
- **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.

- **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:** Safety glasses

## 9 Physical and chemical properties

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

- **General Information**

- **Appearance:**

<b>Form:</b>	Aerosol
<b>Colour:</b>	Colourless
• <b>Odour:</b>	Alcohol-like
• <b>Odour threshold:</b>	Not determined.

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

- **Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	-44 °C

- **Flash point:** Not applicable, as aerosol.

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

- **Ignition temperature:** 365 °C

- **Decomposition temperature:** Not determined.

- **Self-igniting:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**

<b>Lower:</b>	1.5 Vol %
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<b>Upper:</b>	15.0 Vol %
· <b>Vapour pressure at 20 °C:</b>	8300 hPa
· <b>Density:</b>	Not determined.
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with water:</b>	Not miscible or difficult to mix.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	75.5 %
<b>VOC (EC)</b>	75.50 %
· <b>Solids content:</b>	22.0 %
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

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Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**

- **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packaging:**

- **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

- **UN-Number**

- **ADR, IMDG, IATA**

UN1950

- **UN proper shipping name**

- **ADR**

1950 AEROSOLS

- **IMDG**

AEROSOLS

- **IATA**

AEROSOLS, flammable

- **Transport hazard class(es)**

- **ADR**



- **Class**

2 5F Gases.

- **Label**

2.1

- **IMDG, IATA**



- **Class**

2.1

- **Label**

2.1

- **Packing group**

- **ADR, IMDG, IATA**

Void

- **Environmental hazards:**

- **Marine pollutant:**

No

- **Special precautions for user**

Warning: Gases.

- **Danger code (Kemler):**

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- **EMS Number:**

F-D,S-U

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

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**· Transport/Additional information:****· ADR**

· Limited quantities (LQ)	1L
· Transport category	2
· Tunnel restriction code	D

**· UN "Model Regulation":** UN1950, AEROSOLS, 2.1

## 15 Regulatory information

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 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**

- H220 Extremely flammable gas.
- H225 Highly flammable liquid and vapour.
- H280 Contains gas under pressure; may explode if heated.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.
- R11 Highly flammable.
- R12 Extremely flammable.
- R36 Irritating to eyes.
- R67 Vapours may cause drowsiness and dizziness.

- **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 Harmonized 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)

GB