# MATERIAL SAFETY DATA SHEET

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

### 1.1 Product identifiers

Product name: Cryo-freeze Spray Aerosol
Brand: Solmedia Ltd

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Instant Ice for Histology – for Laboratory use only

### 1.3 Details of the supplier of the safety data sheet

- Name of Supplier: Solmedia Ltd.
- Address of Supplier: Unit 2, Vernon Drive
  Battlefield Enterprise Park
  Shrewsbury
  SY1 3TF
  UK
- Telephone: 0844 80 80 900
- Email: labsupplies@solmedialtd.com

### 1.4 Emergency telephone number

Emergency Phone # +44 (0)844 80 80 900

## SECTION 2: Hazards identification

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2015/830. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

| | |
|---|---|
| Aerosol, category 1 | H222 Extremely flammable aerosol. |
| | H229 Pressurised container: may burst if heated |

### 2.2 Label elements

**Hazard statements:** H222 Extremely flammable aerosol.
H229 Pressurised container: may burst if heated.
**Signal words:** Danger
**Hazard pictograms:** GHS02: Flame

**Precautionary statements:** P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P410+P412 Protect from sunlight. Do no expose to temperatures exceeding 50°C / 122°F.

**2.3 Other hazards**

**PBT**: On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

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**SECTION 3: Composition/information on ingredients**

**3.2 Mixtures**

Identification x = Conc. % Classification 1272/2008 (CLP)

Butane

| EINECS | CAS | CHIP Classification | CLP Classification | Percent |
|---|---|---|---|---|
| 203-448-7 INDEX 601-004-00-0 | 106-97-8 | - | Flam. Gas 1 H220, Press. Gas (Liq.) H280, Classification note according to Annex VI to the CLP Regulation: C U | 50 ≤ x < 100 |

Propane

| | | | | |
|---|---|---|---|---|
| 200-827-9 INDEX 601-003-00-5 | 74-98-6 | | Flam. Gas 1 H220, Press. Gas (Liq.) H280, Classification note according to Annex VI to the CLP Regulation: U | 9 ≤ x < 30 |

The full wording of hazard (H) phrases is given in section 16 of the sheet. The product is an aerosol containing propellants. For the purposes of calculation of the health hazards, propellants are not considered (unless they have health hazards). The percentages indicated are inclusive of the propellants. Percentage of propellants: 100,00 %

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

No episodes of harm to the staff authorised to use the product have been reported. The following general measures should be adopted as necessary:

**Skin contact**: Wash with plenty of water. In the event of persistent irritation, get medical advice/attention.

**Eye contact**: Wash with plenty of water. In the event of persistent irritation, get medical advice/attention.

**Ingestion**: Get medical advice/attention. Induce vomiting only if indicated by the doctor. Do not give anything by mouth to an unconscious person

**Inhalation:** Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention.

### 4.2 Most important symptoms and effects, both acute and delayed

Specific information on symptoms and effects caused by the product are unknown.

### 4.3 Indication of any immediate medical attention and special treatment needed

Information not available.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT None in particular

### 5.2 Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE If overheated, aerosol cans can deform, explode and be propelled considerable distances. Put a protective helmet on before approaching the fire. Do not breathe combustion products.

### 5.3 Advice for firefighters

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS Normal firefighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO

specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site. Send away individuals who are not suitably equipped. Wear protective gloves / protective clothing / eye protection / face protection.

### 6.2 Environmental precautions

Do not disperse in the environment.

### 6.3 Methods and materials for containment and cleaning up

Use inert absorbent material to soak up leaked product. Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

### 6.4 Reference to other sections

Refer to section 8 and 13 of SDS

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

**Handling requirements**: Avoid bunching of electrostatic charges. Do not spray on flames or incandescent bodies. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Do not eat, drink or smoke during use. Do not breathe spray.

### 7.2 Conditions for safe storage, including any incompatibilities

**Storage conditions**: Store in a place where adequate ventilation is ensured, away from direct sunlight at a temperature below 50°C / 122°F, away from any combustion sources.

### 7.3 Specific end use(s)

No data available

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

**Regulatory References:**

| | | |
|---|---|---|
| ESP | España | INSHT - Límites de exposición profesional para agentes químicos en España 2017 |
| GBR | United Kingdom | EH40/2005 Workplace exposure limits |
| GRC | Ελλάδα | ΕΦΗΜΕΡΙΣ ΤΗΣ ΚΥΒΕΡΝΗΣΕΩΣ -ΤΕΥΧΟΣ ΠΡΩΤΟ Αρ. Φύλλου 19 - 9 Φεβρουαρίου 2012 |
| | TLV-ACGIH | ACGIH 2017 |

**Butane**

Threshold Limit Value

| Type | Country | TWA/8hr mg/m3 | TWA/8hr ppm | STEL/15min mg/m3 | STEL/15 min ppm |
|---|---|---|---|---|---|
| VLA | ESP | - | 1000 | | - |
| WEL | GBR | 1450 | 600 | 1810 | 750 |
| TLV | GRC | 2350 | 1000 | | |
| TLV-ACGIH | | | 1000 | | |

**Propane**

Threshold Limit Value

| Type | Country | TWA/8hr mg/m3 | TWA/8hr ppm | STEL/15min mg/m3 | STEL/15 min ppm |
|---|---|---|---|---|---|
| TLV | GRC | 1800 | 1000 | | |
| TLV-ACGIH | | | 1000 | | |

Legend: (C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

**8.2 Exposure controls**

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

**Respiratory protection**: If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, a mask with a type AX filter combined with a type P filter should be worn (see standard EN 14387). Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

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**Hand protection**: Non required.

**Eye protection**: Wear airtight protective goggles (see standard EN 166).

**Skin protection:** Wear category I professional long-sleeved overalls and safety

footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

**Environmental Exposure Controls**: The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

| | |
|---|---|
| **Appearance** | aerosol |
| **Colour** | colourless |
| **Odour** | odourless |
| **Odour threshold** | Not available |
| **pH** | 7 |
| **Melting point/freezing point** | Not available |
| **Initial boiling point** | Not applicable |
| **Boiling range** | Not available |
| **Flash point** | -104 °C |
| **Evaporation Rate** | Not available |
| **Flammability of solids and gases** | Not available |
| **Lower inflammability limit** | 1,8 % (V/V) |
| **Upper inflammability limit** | 9,5 % (V/V**)** |
| **Lower explosive limit** | Not available |
| **Upper explosive limit** | Not available |
| **Vapour pressure** | 3,2 bar |
| **Vapour density** | Not available |
| **Relative density** | **0**,51 |
| **Solubility** | not applicable |
| **Partition coefficient: n-octanol/water** | Not available |
| **Auto-ignition temperature** | Not available |
| **Decomposition temperature** | Not available |
| **Viscosity** | Not available |

**Explosive properties** Not available

**Oxidising properties** Not available

**9.2 Other safety information**

VOC (Directive 2010/75/EC) : 100,00 % - 506,00 g/litre

VOC (volatile carbon) : 82,35 % - 416,69 g/litr

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**SECTION 10: Stability and reactivity**

**10.1 Reactivity**

Stable under recommended transport or storage conditions.

**10.2 Chemical stability**

Stable under normal conditions.

**10.3 Possibility of hazardous reactions**

Hazardous reactions will not occur under normal transport or storage conditions.

**10.4 Conditions to avoid**

Avoid overheating.

**10.5 Incompatible materials**

Strong reducing or oxidising agents, strong acids or alkalis, hot material.

**10.6 Hazardous decomposition products**

Information not available

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**SECTION 11: Toxicological information**

According to currently available data, this product has not yet produced health damages. Anyway, it must be handled according to good industrial practices

**11.1 Information on toxicological effects**

**Metabolism, toxicokinetics, mechanism of action and other information**

Information not available

**Information on likely routes of exposure**

Information not available

**Delayed and immediate effects as well as chronic effects from short and long-term exposure** Information not available

**Interactive effects**

Information not available

**ACUTE TOXICITY**

LC50 (Inhalation) of the mixture: Not classified (no significant component)
LD50 (Oral) of the mixture: Not classified (no significant component)
LD50 (Dermal) of the mixture: Not classified (no significant component)

**SKIN CORROSION / IRRITATION**

Does not meet the classification criteria for this hazard class

**SERIOUS EYE DAMAGE / IRRITATION**

Does not meet the classification criteria for this hazard class

**RESPIRATORY OR SKIN SENSITISATION**

Does not meet the classification criteria for this hazard class

**GERM CELL MUTAGENICITY**

Does not meet the classification criteria for this hazard class

**CARCINOGENICITY**

Does not meet the classification criteria for this hazard class

**REPRODUCTIVE TOXICITY**

Does not meet the classification criteria for this hazard class

**STOT - SINGLE EXPOSURE**

Does not meet the classification criteria for this hazard class

**STOT - REPEATED EXPOSURE**

Does not meet the classification criteria for this hazard class

**ASPIRATION HAZARD**

Does not meet the classification criteria for this hazard class.

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## SECTION 12: Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

### 12.1 Toxicity

Information not available

### 12.2 Persistence and degradability

BUTANE Solubility in water 0,1 - 100 mg/l
Rapidly degradable

PROPANE Solubility in water 0,1 - 100 mg/l
Rapidly degradable

### 12.3 Bioaccumulative potential

BUTANE Partition coefficient: n-octanol/water 1,09

PROPANE Partition coefficient: n-octanol/water 1,09

### 12.4 Mobility in soil

Information not available

### 12.5 Results of PBT and vPvB assessment

This product is not identified as a PBT/vPvB substance.

### 12.6 Other adverse effects

Information not available

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations. Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations. Waste transportation may be subject to ADR restrictions.

**CONTAMINATED PACKAGING**

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations

**NB:** The user's attention is drawn to the possible existence of regional or national regulations regarding disposal

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## SECTION 14: Transport information

### 14.1. UN number

ADR / RID, IMDG, IATA: 1950

### 14.2. UN proper shipping name

**ADR / RID:** AEROSOLS

**IMDG:** AEROSOLS

**IATA:** AEROSOLS, FLAMMABLE

### 14.3. Transport hazard class(es)

**ADR / RID:** Class: 2 Label: 2.1

**IMDG:** Class: 2 Label: 2.1

**IATA:** Class: 2 Label: 2.1

### 14.4. Packing group

ADR / RID, IMDG, IATA:

### 14.5. Environmental hazards

**ADR / RID:** NO

**IMDG:** NO

**IATA:** NO

### 14.6. Special precautions for user

| | | | |
|---|---|---|---|
| ADR / RID: | HIN - Kemler: -- | Limited Quantities: 1 L | Tunnel restriction code: (D) |
| | Special Provision: - | | |
| IMDG: | EMS: F-D, S-U | Limited Quantities: 1 L | |
| IATA: | Cargo: | Maximum quantity: 150 Kg | Packaging instructions: 203 |
| | Pass.: | Maximum quantity: 75 Kg | Packaging instructions: 203 |
| | Special Instructions: A145, A167, A802 | | |

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Seveso Category - Directive 2012/18/EC: P3a

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product

Point 40

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage greater than 0,1%.

Substances subject to authorisation (Annex XIV REACH) None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012: None

Substances subject to the Rotterdam Convention: None

Substances subject to the Stockholm Convention: None

Healthcare controls Information not available

### 15.2 Chemical safety assessment

A chemical safety assessment has not been carried out for the substance or the mixture by the supplier

## SECTION 16: Other information

**Text of hazard (H) indications mentioned in section 2-3 of the sheet:**

| | |
|---|---|
| **Flam. Gas 1** | Flammable gas, category 1 |
| **Aerosol 1** | Aerosol, category 1 |
| **Aerosol 3** | Aerosol, category 3 |
| **Press. Gas (Liq.)** | Liquefied gas |
| **H220** | Extremely flammable gas. |
| **H222** | Extremely flammable aerosol**.** |
| **H229** | Pressurised container: may burst if heated. |

| | |
|---|---|
| **H280** | Contains gas under pressure; may burst if heated. |

**LEGEND: -**

ADR: European Agreement concerning the carriage of Dangerous goods by Road –
CAS NUMBER: Chemical Abstract Service Number -
CE50: Effective concentration (required to induce a 50% effect) –
CE NUMBER: Identifier in ESIS (European archive of existing substances) –
CLP: EC Regulation 1272/2008 –
DNEL: Derived No Effect Level –
EmS: Emergency Schedule –
GHS: Globally Harmonized System of classification and labelling of chemicals –
IATA DGR: International Air Transport Association Dangerous Goods Regulation –
IC50: Immobilization Concentration 50% -
IMDG: International Maritime Code for dangerous goods –
IMO: International Maritime Organization –
INDEX NUMBER: Identifier in Annex VI of CLP –
LC50: Lethal Concentration 50% - LD50: Lethal dose 50% -
OEL: Occupational Exposure Level –
PBT: Persistent bioaccumulative and toxic as REACH Regulation -
PEC: Predicted environmental Concentration –
PEL: Predicted exposure level –
PNEC: Predicted no effect concentration –
REACH: EC Regulation 1907/2006 -
RID: Regulation concerning the international transport of dangerous goods by train –
TLV: Threshold Limit Value –
TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
TWA STEL: Short-term exposure limit –
TWA: Time-weighted average exposure limit –
VOC: Volatile organic Compounds –
vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation –
WGK: Water hazard classes (German).

**GENERAL BIBLIOGRAPHY**

**1**. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
4. Regulation (EU) 2015/830 of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
**9**. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)

13. Regulation (EU) 2017/776 (X Atp. CLP) –
The Merck Index. - 10th Edition –
Handling Chemical Safety –
INRS - Fiche Toxicologique (toxicological sheet) –
Patty - Industrial Hygiene and Toxicology –
N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition –
IFA GESTIS website –
ECHA website –
Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) – Italy

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Solmedia Ltd shall not be held liable for any damage resulting from handling or from contact with the above product.