01. Identification of the substance / mixture and of the company / undertaking

Trade name
ES100 METACOOL COLDSPRAY

Article Number (REF)
ES100

Application of the substance / the mixture
Cooling spray

Manufacturer / Supplier
Primotec e.K.

Street / PO Box
Tannenwaldallee 4

National indicator / code / city
D – 61348 Bad Homburg

Contact for technical information
Phone +49/6172/99770-0

Telephone / Telefax / E-Mail
Phone +49/6172/99770-0  FAX: 06172/99770-99 /E-Mail: primotec@primogroup.de

Emergency Information
Phone +49/6172/99770-0

02. Hazards Identification

Classification of the substance or mixture

R-Phrases
R 12: Extremely flammable

Classification according to Regulation (EC) No. 1272/2008

GHS02 flame

Flam. Aerosol 1

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! Pressurised container.

Classification system
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
Label elements
Labelling according to Regulation (EC) No. 1272/2008
The product is classified and labelled according to the CLP regulation.

Hazard pictograms

![GHS02](Image)

Signal word
Danger

Hazard statements
H 222-H 229 Extremely flammable aerosol. Pressurised container: May burst if heated.

Precautionary statements
P 102 Keep out of reach of children.
P 210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
   No smoking.
P 211 Do not spray on an open flame or other ignition source.
P 251 Do not pierce or burn, even after use.
P 410 + P 412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C / 122 °F.

Additional information
Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50 °C.
Do not pierce or burn, even after use.
Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition –
No smoking.
Buildup of explosive mixtures possible without sufficient ventilation.

Other hazards

Results of PBT and vPvB assessment

PBT
Not applicable.

vPvB
Not applicable.

03. Composition / information on ingredients

Chemical characterization
Mixtures

Description
Mixture of substances listed below with nonhazardous additions.
Dangerous components

<table>
<thead>
<tr>
<th>Description</th>
<th>CAS-No.</th>
<th>EINECS-No.</th>
<th>Content</th>
<th>Symbol R- and H Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butane</td>
<td>106-97-8</td>
<td>203-448-7</td>
<td>50 – 70 %</td>
<td>F+ R 12 Flam. Gas 1, H 220; Press. Gas, H 280</td>
</tr>
<tr>
<td>Propan-2-ol</td>
<td>67-63-0</td>
<td>200-661-7</td>
<td>1 - 10 %</td>
<td>Xi R 36, R 67 Flam. Liq. 2, H 225 Eye Irrit. 2, H 319; STOT SE 3, H 336</td>
</tr>
</tbody>
</table>

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

04. 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.

After swallowing
If symptoms persist consult doctor.

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.

05. Firefighting measures

Suitable extinguishing media
CO2, 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.

Additional information
Collect contaminated fire fighting water separately. It must not enter the sewage system.

06. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.

Environmental precautions
No special measures required.

Methods and material for containment and cleaning up
Ensure adequate ventilation.

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.

07. Handling and storage

Precautions for safe handling
Ensure good ventilation / exhaustion at the workplace.
Open and handle receptacle with care.

Information about fire- and explosion protection
Keep ignition sources away – Do not smoke.
Protect against electrostatic charges.
Pressurised container. Protect from sunlight and do not expose to temperatures exceeding 50 °C, i. e. electric lights.
Do not pierce or burn, even after use.
Do not spray onto a naked flame or any incandescent material.

Conditions for safe storage, including any incompatibilities

Storage
Requirements to be met by storerooms and receptacles
Store in a cool location.
Observe official regulations on storing packagings with pressurised containers.

Information about storage in common storage facility
Not required.
Further information about storage conditions
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
Pressurised container. Protect from sunlight and do not expose to temperatures exceeding 50 °C,
i.e. electric lights.
Do not pierce or burn, even after use.

Storage class
2 B

Specific en use(s)
No further relevant information available.

08. Exposure controls / personal protection

Additional information about design of technical facilities
No further data; see item 7.

Control parameters

<table>
<thead>
<tr>
<th>Ingredients with limit values that require monitoring at the workplace</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
</tr>
<tr>
<td>Isobutane</td>
</tr>
<tr>
<td>Propan-2-ol</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredients with occupational exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
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<tr>
<td>Propan-2-ol</td>
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</tbody>
</table>

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.
Do not inhale gases / fumes / aerosols.

Respiratory protection
Not necessary if room is well-ventilated.
Protection of hands
The glove material has to be impermeable and resistant to the product / the substance / the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material of gloves
The selection of 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
Tightly sealed goggles.
09. Physical and chemical properties

Information on basic physical and chemical properties

General Information
Appearance
Form: Aerosol Colour: Colourless
Odour: Characteristic
Odour threshold: Not determined
pH-value: Not applicable

Change in condition
Melting point / Melting range: Undetermined.
Boiling point / Boiling range: Not applicable, as aerosol.
Flashpoint: -60 °C
Flammability: Not applicable (solid, gaseous)
Ignition temperature: 365 °C
Decomposition temperature: Not determined.
Self-igniting: Product is not selfigniting.

Danger of explosion: Product is not explosive. However, formation of explosive air / vapour mixtures are possible.
Lower Explosion limit: 1.5 Vol.%
Upper Explosion limit: 10.9 Vol.%
Vapour pressure: 4600 hPa at 20 °C
Density: 0.56 g/cm³ at 20 °C
Relative density: Not determined.
Vapour density: Not determined.
Evaporation rate: Not applicable.
Solubility in/Miscibility with water: Fully miscible.
Partition coefficient (n-octanol/water): Not determined.
Viscosity dynamic: Not determined.
Viscosity kinematic: Not determined.
Solvent content VOC (EC): 99.89 %
Other information: 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.

Sensitisation
No sensitising effects known.

12. Ecological information

Toxicity
Aquatic toxicity
No further relevant information available.

Persistence and degradability
No further relevant information available.

Behaviour in environmental
Bioaccumulative potential
No further relevant information available.

Mobility in soil
No further relevant information available.

Additional ecological information
General notes
Generally not hazardous for water.

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.

**European waste catalogue**

150104 Metallic packaging
150110 Packaging containing residues of or contaminated by dangerous substances.

**Uncleaned packaging**

**Recommendation**

Disposal must be made according to official regulations.

**Recommended cleansing agents**

Water, if necessary together with cleansing agents.

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)

-  

EMS Number
F-D, S-U

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.

Transport / Additional information
ADR
Limited quantities (LQ): 1L
Excepted quantities (EQ): Code: E0
Transport category: 2
Tunnel restriction code: D

UN "Model Regulation"
UN1950, AEROSOLS, 2.1

15. Regulatory information

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

R-Phrases
R 12: Extremely flammable

Classification according to Regulation (EC) No. 1272/2008

GHS02 flame
Flam. Aerosol 1

Signal word
Danger

Hazard statements
H 222-H 229 Extremely flammable aerosol. Pressurised container: May burst if heated.

Precautionary statements
P 102 Keep out of reach of children.
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   No smoking.
P 211 Do not spray on an open flame or other ignition source.
P 251 Do not pierce or burn, even after use.
P 410 + P 412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C / 122 °F.
National regulations

Technical Instructions on Air Quality
Class: NK
Content in %: 99.9

Water hazard class
Generally not hazardous for water.

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

16. Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases
H 220 Extremely flammable gas.
H 225 Highly flammable liquid and vapour.
H 280 Contains gas under pressure; may explode if heated.
H 319 Causes serious eye irritation.
H 336 May cause drowsiness or dizziness.

R-phrases referred to in Sections 2 and 3
R 11 Highly flammable.
R 12 Extremely flammable.
R 36 Irritating to eyes.
R 67 Vapours may cause drowsiness and dizziness.

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).
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).
Press. Gas: Gases under pressure: Compressed gas.
Eye Irrit. 2: Serious eye damage / eye irritation, Hazard Category 2.

Department issuing MSDS
Product Development / Quality Management
Source of the most important information
Safety Data Sheet of the manufacturer.

GENERAL HINTS
The information contained herein is based on the present state of our knowledge and on our experiences with the product. The material safety data sheet is strictly intended for risk minimizing when handling the product. The informations characterize it exclusively with regard to safety aspects and does not represent a guarantee of the properties of the product within the meaning of our general terms and conditions. The information does not dispense the user from his duties of care with respect to the observance of present laws, regulations, and terms.