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

- **1.1 Product identifier**
  - **Trade name:** Ceramic spray

- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
  - **Application of the substance / the mixture**
    - Coating
  - **Identified use:** intended for professional use only!

- **1.3 Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**
    - Alexander BINZEL Schweißtechnik GmbH & Co.KG
    - Postfach 10 01 53 / D-35331 Giessen
    - Tel.: +49 (0) 6408 / 59-0
    - Fax: +49 (0) 6408 / 59-191
    - Mail: technischesdokumentation@binzel-abicor.com
  - **Further information obtainable from:**
    - Technical Documentation
  - **1.4 Emergency telephone number:**
    - Giftinformationszentrum der Länder Rheinland-Pfalz und Hessen
      - Langenbeckstraße 1; Gebäude 601; 55131 Mainz
      - Tel. Nr.: +49 (0)6131 / 19 24 0
    - Universitätsmedizin der Johannes Gutenberg-Universität Mainz

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
  - **Classification according to Regulation (EC) No 1272/2008**
    - **Aerosol 1 H222-H229** Extremely flammable aerosol. Pressurised container: May burst if heated.
    - **Eye Irrit. 2 H319** Causes serious eye irritation.
    - **STOT SE 3 H336** May cause drowsiness or dizziness.

- **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

  - **Signal word**
    - Danger

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

  - **Hazard statements**
    - H319 Causes serious eye irritation.
    - H336 May cause drowsiness or dizziness.

  - **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.
    - P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
    - P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
    - 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

- **3.2 Chemical characterisation: Mixtures**
  - **Description:** Mixture: consisting of the following components.

  - **Dangerous components:**
    - **CAS:** 67-64-1
      - **EINECS:** 200-662-2
      - **Index number:** 606-001-00-8
      - **Reg.nr.:** 01-2119471330-49
      - **acetone**
      - Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336
      - **25-50%**

    - **CAS:** 74-98-6
      - **EINECS:** 200-827-9
      - **Index number:** 601-003-00-5
      - **Reg.nr.:** 01-2119486944-21
      - **propane**
      - Flam. Gas 1, H220; Press. Gas (Comp.), H280
      - **25-50%**

    - **CAS:** 106-97-8
      - **EINECS:** 203-448-7
      - **Index number:** 601-004-01-8
      - **Reg.nr.:** 01-2119474691-32
      - **butane**
      - Flam. Gas 1, H220; Press. Gas (Comp.), H280
      - **25-50%**

(Contd. on page 2)
Safety data sheet
according to 1907/2006/EC, Article 31

Trade name: Ceramic spray

SECTION 4: First aid measures

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

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.
Do not leave affected persons unattended.
Personal protection for the First Aider.
Take affected persons out of danger area and lay down.

- After inhalation:
In case of unconsciousness place patient stably in side position for transportation.
Supply fresh air; consult doctor in case of complaints.

- After skin contact:
Immediately wash with water and soap and rinse thoroughly.
Seek medical treatment in case of complaints.

- After eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
Protect unharmed eye.

- After swallowing:
If symptoms persist consult doctor.

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:
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire extinguishing methods suitable to surrounding conditions.

5.2 Special hazards arising from the substance or mixture
Water with full jet
Nitrogen oxides (NOx)
Carbon monoxide (CO)
CO2
Formation of toxic gases is possible during heating or in case of fire.

5.3 Advice for firefighters
Protective equipment:
Do not inhale explosion gases or combustion gases.

Additional information
Collect contaminated fire fighting water separately. It must not enter the sewage system.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Avoid contact with skin and eyes
Keep away from ignition sources.

6.2 Environmental precautions:
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
Prevent from spreading (e.g. by damming-in or oil barriers).

6.3 Methods and material for containment and cleaning up:
Do not flush with water or aqueous cleansing agents
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.

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
Store in cool, dry place in tightly closed receptacles.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.

Information about fire - and explosion protection:
Keep ignition sources away - Do not smoke.
- 7.2 Conditions for safe storage, including any incompatibilities

- Storage:
  - Requirements to be met by storerooms and receptacles:
    - Store only in the original receptacle.
    - Observe official regulations on storing packagings with pressurised containers.
  - Information about storage in one common storage facility:
    - Store away from foodstuffs.
    - Protect from frost.
    - Store in dry conditions.
    - Keep container tightly sealed.
    - Protect from heat and direct sunlight.
    - Recommended storage temperature: 5-30 °C
  - Storage class: 2 B

- 7.3 Specific end use(s)

No further relevant information available.

SECTION 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:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>WEL Short-term value</th>
<th>Long-term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-64-1 acetone</td>
<td>3620 mg/m³, 1500 ppm</td>
<td>1210 mg/m³, 500 ppm</td>
</tr>
<tr>
<td>106-97-8 butane</td>
<td>1810 mg/m³, 750 ppm</td>
<td>1450 mg/m³, 600 ppm</td>
</tr>
<tr>
<td>78-93-3 butanone</td>
<td>899 mg/m³, 300 ppm</td>
<td>600 mg/m³, 200 ppm</td>
</tr>
</tbody>
</table>

- Regulatory information

WEL: EH40/2018

- Ingredients with biological limit values:

78-93-3 butanone

BMGV: 10 µmol/L

Medium: urine

Sampling time: post shift

Parameter: butan-2-one

- Additional information:
  - The lists valid during the making were used as basis.

- 8.2 Exposure controls

- Personal protective equipment:
  - General protective and hygienic measures:
    - The usual precautionary measures are to be adhered to when handling chemicals.
    - Keep away from foodstuffs, beverages and feed.
    - Immediately 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:
    - When used properly and under normal conditions, breathing protection is not required.
    - Use suitable respiratory protective device in case of insufficient ventilation.
    - Filter A/P2
    - Respiratory protection - Gas filters and combination filters according to EN 141
  - Protection of hands:
    - Protective gloves
      - Check protective gloves prior to each use for their proper condition.
      - Only use chemical-protective gloves with CE-labelling of category III.
      - 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
      - After use of gloves apply skin-cleaning agents and skin cosmetics.
    - Material of gloves
      - Recommended materials:
        - Butyl rubber, BR
      - Recommended thickness of the material: ≥ 0.5 mm
      - Penetration time (min.): < 480
      - 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.
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- Penetration time of glove material

The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

- As protection from splashes gloves made of the following materials are suitable:

Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.1 mm
Penetration time (min.): < 10

- Eye protection:

Tightly sealed goggles

- Body protection:

Protective goggles and facial protection - Classification according to EN 166
protective clothing (EN 13034)

SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties
- General Information
  - Appearance:
    Form: Aerosol
    Colour: White
    Odour: Characteristic
    Odour threshold: Not determined.
  - pH-value: Not determined.
  - Change in condition
    Melting point/freezing point: Undetermined.
    Initial boiling point and boiling range: Not applicable, as aerosol.
  - Flash point: Not applicable, as aerosol.
  - Flammability (solid, gas): Not applicable.
  - Ignition temperature: Not determined.
  - Auto-ignition temperature: Product is not selfigniting.
  - Explosive properties: Not determined.
  - Explosion limits:
    Lower: 1.5 Vol %
    Upper: 13.0 Vol %
  - Density at 20 °C: 0.73 g/cm³
    Relative density Not determined.
    Vapour density Not determined.
    Evaporation rate Not applicable.
  - 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
  No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions
  No dangerous reactions known.
- 10.4 Conditions to avoid
  No further relevant information available.
- 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

- Acute toxicity
  Based on available data, the classification criteria are not met.

- LD/LC50 values relevant for classification:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Oral</th>
<th>Dermal</th>
<th>Inhalative</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-64-1 acetone</td>
<td>LD50 5,800 mg/kg (rat)</td>
<td>LD50 20,000 mg/kg (rabbit)</td>
<td>LC50/4 h 76 mg/l (rat)</td>
</tr>
<tr>
<td>78-93-3 butanone</td>
<td>LD50 2,193 mg/kg (rat) (OECD 423)</td>
<td>LD50 &gt;5,000 mg/kg (rabbit) (OECD 402)</td>
<td>LC50/4 h 34 mg/l (rat)</td>
</tr>
</tbody>
</table>

- Primary irritant effect:
  - Skin corrosion/irritation
    Based on available data, the classification criteria are not met.
  - Respiratory or skin sensitisation
  - 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.
    - Respiratory or skin sensitisation
    - STOT-single exposure
    - 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:

<table>
<thead>
<tr>
<th>Substance</th>
<th>IC50 20,000 mg/l (rabbit)</th>
<th>LC50/96 h 7,500 mg/l (Leuciscus idus (Aland))</th>
<th>LC50 5,540 mg/l (Oncorhynchus mykiss (Regenbogenforelle))</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-64-1 acetone</td>
<td></td>
<td>EC50 6,300 mg/l (LEPOMUS MACROCHIRUS) (96h)</td>
<td>EC50 7,500 mg/l (Selenastrum capricornutum) (96h)</td>
</tr>
<tr>
<td>74-98-6 propane</td>
<td></td>
<td>EC50 &gt;100 mg/l (daphnia) (48h)</td>
<td>LC 50 20,000 mg/l (rabbit)</td>
</tr>
<tr>
<td>806-97-8 butane</td>
<td></td>
<td>LC50 12,600 mg/l (daphnia)</td>
<td>NOEC 1,700 mg/l (Pseudomonas putida)</td>
</tr>
<tr>
<td>78-33-3 butanone</td>
<td></td>
<td>NOEC 4,740 mg/l (Pseudokirchneriella subcapitata)</td>
<td>NOEC</td>
</tr>
</tbody>
</table>

- 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 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.

- 12.5 Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
### 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. Disposal according to official regulations.

**- European waste catalogue**
- **15 01 04** metallic packaging
- **16 05 04** gases in pressure containers (including halons) containing hazardous substances
- **15 01 10** packaging containing residues of or contaminated by hazardous substances

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

### SECTION 14: Transport information

**- 14.1 UN-Number**
- ADR, IMDG, IATA: UN1950

**- 14.2 UN proper shipping name**
- ADR: 1950 AEROSOLS
- IMDG: AEROSOLS
- IATA: AEROSOLS, flammable

**- 14.3 Transport hazard class(es)**
- **ADR**
  - **Class:** 2.5F Gases.
  - **Label:** 2.1

**- IMDG, IATA**
  - **Class:** 2.1
  - **Label:** 2.1

**- 14.4 Packing group**
- ADR, IMDG, IATA: Void

**- 14.5 Environmental hazards:**
  Not applicable.

**- 14.6 Special precautions for user**
- **Warning:** Gases.
- **November 34:**
  - **EMS Number:** F-D,S-U
  - **Stowage Code:** SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters. SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.

**- 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: E0 Not permitted as Excepted Quantity
  - **Transport category:** 2
  - **Tunnel restriction code:** D
Safety data sheet
according to 1907/2006/EC, Article 31

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- IMDG
- Limited quantities (LQ): 1L
- Excepted quantities (EQ): Code: E0
  Not permitted as Excepted Quantity
- UN "Model Regulation": UN 1950 AEROSOLS, 2.1

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: P3a FLAMMABLE AEROSOLS
  - Qualifying quantity (tonnes) for the application of lower-tier requirements: 150 t
  - Qualifying quantity (tonnes) for the application of upper-tier requirements: 500 t
  - REGULATION (EC) No 1907/2006 ANNEX XVII: Conditions of restriction: 3
  - National regulations:
  - Information about limitation of use: Employment restrictions concerning juveniles must be observed.
  - Employment restrictions concerning pregnant and lactating women must be observed.
  - Employment restrictions concerning women of child-bearing age must be observed.

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

SECTION 16: Other information

- 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.

- Department issuing SDS: Technical Documentation
- Contact: Technical Documentation
- 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 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)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvE: very Persistent and very Bioaccumulative
  - Flam. Gas 1: Flammable gases – Category 1
  - Aerosol 1: Aerosols – Category 1
  - Press. Gas (Comp.): Gases under pressure – Compressed gas
  - Flam. Liq. 2: Flammable liquids – Category 2
  - Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
  - STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

- Sources
  - Internet:
    - www.echa.europa.eu
    - www.bau.de
  - IFA: Institute für Occupational Safety and Health of the German Social Accident Insurance:
    - www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index.jsp
    - www.dguv.de/ifa/gestis/gestis-dnel-liste
  - Data compared to the previous version altered.