SAFETY DATA SHEET
Metallic Bronze


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

1.1. Product identifier
Product name: Metallic Bronze
Product number: 433.0004400.076.05022015

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Paint.
Uses advised against: No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet
Supplier: PlastiKote Ltd.
675 Eskdale Road,
Winnersh,
Wokingham, Berkshire,
RG41 5TS
UK
T: +44 (0) 844 736 2235
sds@plasti-kote.co.uk

1.4. Emergency telephone number
Emergency telephone: +44(0) 844 736 2235
08:00 - 17:00 h (UK)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification
Physical hazards: Aerosol 1 - H222, H229
Health hazards: Eye Irrit. 2 - H319 STOT SE 3 - H336
Environmental hazards: Not Classified


2.2. Label elements
Pictogram

Signal word: Danger
Metallic Bronze

**Hazard statements**
- H222 Extremely flammable aerosol.
- H229 Pressurised container: may burst if heated
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.

**Precautionary statements**
- P102 Keep out of reach of children.
- 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.
- P271 Use only outdoors or in a well-ventilated area.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P312 Call a POISON CENTER/doctor if you feel unwell.
- P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
- P501 Dispose of contents/container in accordance with national regulations.

**Supplemental label information**
- EUH066 Repeated exposure may cause skin dryness or cracking.
- Contains Acetone

**Supplementary precautionary statements**
- P261 Avoid breathing vapour/spray.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P337+P313 If eye irritation persists: Get medical advice/attention.

**2.3. Other hazards**
This product does not contain any substances classified as PBT or vPvB.

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

### 3.2. Mixtures

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS number</th>
<th>EC number</th>
<th>Weight (%)</th>
<th>Classification (67/548/EEC or 1999/45/EC)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acetone</strong></td>
<td>67-64-1</td>
<td>200-662-2</td>
<td>30-60%</td>
<td>Flam. Liq. 2 - H225; Eye Irrit. 2 - H319; STOT SE 3 - H336</td>
</tr>
<tr>
<td><strong>isobutyl acetate</strong></td>
<td>110-19-0</td>
<td>203-745-1</td>
<td>10-30%</td>
<td>Flam. Liq. 2 - H225</td>
</tr>
</tbody>
</table>

**Classification**
- Acetone: Fl. Liq. 2 - H225; Eye Irrit. 2 - H319; STOT SE 3 - H336
- isobutyl acetate: Flam. Liq. 2 - H225
# Metallic Bronze

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
<th>CAS number</th>
<th>EC number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butane</td>
<td>5-10%</td>
<td>106-97-8</td>
<td>203-448-7</td>
</tr>
<tr>
<td>Mica</td>
<td>1-5%</td>
<td>12001-26-2</td>
<td></td>
</tr>
<tr>
<td>Iron oxide</td>
<td>&lt;1%</td>
<td>1309-37-1</td>
<td>215-168-2</td>
</tr>
<tr>
<td>Butan-1-ol</td>
<td>&lt;1%</td>
<td>71-36-3</td>
<td>200-751-6</td>
</tr>
</tbody>
</table>

**Classification**

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Classification (67/548/EEC or 1999/45/EC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butane</td>
<td>Flam. Gas 1 - H220</td>
<td>F+; R12</td>
</tr>
<tr>
<td></td>
<td>Press. Gas, Liquefied - H280</td>
<td></td>
</tr>
<tr>
<td>Mica</td>
<td>Not Classified</td>
<td></td>
</tr>
<tr>
<td>Iron oxide</td>
<td>Flam. Liq. 3 - H226</td>
<td>Xn; R22. Xi; R41, R37/38, R10, R67</td>
</tr>
<tr>
<td></td>
<td>Acute Tox. 4 - H302</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Skin Irrit. 2 - H315</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Eye Dam. 1 - H318</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STOT SE 3 - H335, H336</td>
<td></td>
</tr>
</tbody>
</table>

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

**Inhalation**

Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Keep affected person warm and at rest. If in doubt, get medical attention promptly.

**Ingestion**

Rinse mouth thoroughly with water. Do not induce vomiting. Get medical attention if any discomfort continues.

**Skin contact**

Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.

**Eye contact**

Remove any contact lenses and open eyelids wide apart. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

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

**General information**

The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Metallic Bronze

**Inhalation**
Vapours may cause headache, fatigue, dizziness and nausea. Overexposure to organic solvents may depress the central nervous system, causing dizziness and intoxication and, at very high concentrations, unconsciousness and death.

**Ingestion**
Due to the physical nature of this product, it is unlikely that ingestion will occur. May cause nausea, headache, dizziness and intoxication.

**Skin contact**
Prolonged or repeated contact with skin may cause irritation, redness and dermatitis.

**Eye contact**
Irritation of eyes and mucous membranes.

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

**Notes for the doctor**
Treat symptomatically.

**Specific treatments**
No specific chemical antidote is known to be required after exposure to this product.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

**Suitable extinguishing media**
Extinguish with foam, carbon dioxide, dry powder or water fog.

**Unsuitable extinguishing media**
Do not use water jet as an extinguisher, as this will spread the fire.

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

**Specific hazards**
Pressurised container: may burst if heated The product is extremely flammable. In use may form flammable/explosive vapour-air mixture.

**Hazardous combustion products**
Thermal decomposition or combustion products may include the following substances: Oxides of carbon.

#### 5.3. Advice for firefighters

**Protective actions during firefighting**
Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Use water spray to reduce vapours.

**Special protective equipment for firefighters**
Wear chemical protective suit. Use air-supplied respirator, gloves and protective goggles.

### SECTION 6: Accidental release measures

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

**Personal precautions**
Avoid heat, flames and other sources of ignition. Provide adequate ventilation. If ventilation is inadequate, suitable respiratory protection must be worn. Avoid inhalation of vapours/spray and contact with skin and eyes.

**Environmental precautions**
Exposure to aquatic environment unlikely. Avoid discharge into drains.

#### 6.3. Methods and material for containment and cleaning up

**Methods for cleaning up**
Provide adequate ventilation. Absorb spillage with oil-absorbing material.

#### 6.4. Reference to other sections

**Reference to other sections**
For personal protection, see Section 8. See Section 11 for additional information on health hazards. For waste disposal, see Section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling
Metallic Bronze

Usage precautions
Read and follow manufacturer's recommendations. During application and drying, solvent vapours will be emitted. Avoid inhalation of vapours and spray/mists. Keep away from heat, sparks and open flame. When sprayed on a naked flame or any incandescent material the aerosol vapours can be ignited.

7.2. Conditions for safe storage, including any incompatibilities
Storage precautions
Avoid exposing aerosol containers to high temperatures or direct sunlight. Keep away from heat, sparks and open flame. Store in a cool and well-ventilated place.

7.3. Specific end use(s)
Specific end use(s)
The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters
Occupational exposure limits

Acetone
Long-term exposure limit (8-hour TWA): WEL 500 ppm 1210 mg/m³
Short-term exposure limit (15-minute): WEL 1500 ppm 3620 mg/m³

isobutyl acetate
Long-term exposure limit (8-hour TWA): WEL 150 ppm 724 mg/m³
Short-term exposure limit (15-minute): WEL 187 ppm 903 mg/m³

Butane
Long-term exposure limit (8-hour TWA): WEL 600 ppm 1450 mg/m³
Short-term exposure limit (15-minute): WEL 750 ppm 1810 mg/m³

Mica
Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ inhalable dust
Long-term exposure limit (8-hour TWA): WEL 0.8 mg/m³ respirable dust

Iron oxide
Long-term exposure limit (8-hour TWA): WEL 5 mg/m³ fume
Short-term exposure limit (15-minute): WEL 10 mg/m³ fume
as Fe
Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ inhalable dust
Long-term exposure limit (8-hour TWA): WEL 4 mg/m³ respirable dust

Butan-1-ol
Short-term exposure limit (15-minute): WEL 50 ppm 154 mg/m³
Sk
WEL = Workplace Exposure Limit
Sk = Can be absorbed through the skin.

8.2. Exposure controls

Protective equipment

Appropriate engineering controls
Provide adequate ventilation. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection
Personal protective equipment for eye and face protection should comply with European Standard EN166. Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible.
Metallic Bronze

Hand protection
To protect hands from chemicals, gloves should comply with European Standard EN374. Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. Wear protective gloves made of the following materials: Butyl rubber, Nitrile rubber. Frequent changes are recommended. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.

Hygiene measures
When using do not eat, drink or smoke. Wash promptly if skin becomes contaminated. Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove non-impervious clothing that becomes contaminated.

Respiratory protection
This product must not be handled in a confined space without adequate ventilation. If ventilation is inadequate, suitable respiratory protection must be worn. Contains low-boiling liquids. Use an air-supplied respirator, if necessary. Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible.

Thermal hazards
Contact with liquid form may cause frostbite.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Aerosol</td>
</tr>
<tr>
<td>Colour</td>
<td>Copper</td>
</tr>
<tr>
<td>Odour</td>
<td>Organic solvents</td>
</tr>
<tr>
<td>pH</td>
<td>Not relevant. The product is insoluble in water.</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not available. Technically not feasible.</td>
</tr>
<tr>
<td>Initial boiling point and range</td>
<td>-42 °C - 0°C @ 760 mm Hg</td>
</tr>
<tr>
<td>Flash point</td>
<td>&lt; -60°C CC (Closed cup)</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available. The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces.</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>Lower flammable/explosive limit: 2 % Upper flammable/explosive limit: 10 %</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>1000 mbar @ 20°C</td>
</tr>
<tr>
<td>Vapour density</td>
<td>&gt; 1 Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back.</td>
</tr>
<tr>
<td>Relative density</td>
<td>~ 0.85</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Immiscible with water. Soluble in the following materials: Organic solvents.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>~450°C</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No information available.</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not considered to be explosive.</td>
</tr>
<tr>
<td>Explosive under the influence of a flame</td>
<td>The product is extremely flammable.</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>Does not meet the criteria for classification as oxidising.</td>
</tr>
</tbody>
</table>

9.2. Other information

Volatility
Highly volatile.
Metallic Bronze

SECTION 10: Stability and reactivity

10.1. Reactivity
Reactivity
There are no known reactivity hazards associated with this product.

10.2. Chemical stability
Stability
Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions
Possibility of hazardous reactions
Not applicable.

10.4. Conditions to avoid
Conditions to avoid
When sprayed on a naked flame or any incandescent material the aerosol vapours can be ignited. Avoid heat, flames and other sources of ignition. Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials
Materials to avoid
Strong oxidising agents.

10.6. Hazardous decomposition products
Hazardous decomposition products
None at ambient temperatures. Thermal decomposition or combustion products may include the following substances: Carbon dioxide (CO2). Carbon monoxide (CO).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral
Notes (oral LD₅₀)
Based on available data the classification criteria are not met.

Acute toxicity - dermal
Notes (dermal LD₅₀)
Based on available data the classification criteria are not met.

Acute toxicity - inhalation
Notes (inhalation LC₅₀)
Based on available data the classification criteria are not met.

Skin corrosion/irritation
Animal data
May cause defatting of the skin but is not an irritant. Repeated exposure may cause skin dryness or cracking.

Extreme pH
Not relevant.

Serious eye damage/irritation

Respiratory sensitisation
Respiratory sensitisation
Based on available data the classification criteria are not met.

Skin sensitisation
Skin sensitisation
Based on available data the classification criteria are not met.

Germ cell mutagenicity
Genotoxicity - in vitro
Based on available data the classification criteria are not met.

Genotoxicity - in vivo
Based on available data the classification criteria are not met.

Carcinogenicity
Metallic Bronze

Carcinogenicity  
Based on available data the classification criteria are not met.

Reproductive toxicity  
Reproductive toxicity - fertility  
Based on available data the classification criteria are not met.
Reproductive toxicity - development  
Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure  
STOT - single exposure  
Central nervous system depression. Vapours may cause drowsiness and dizziness.
Target organs  
No specific target organs known.

Specific target organ toxicity - repeated exposure  
STOT - repeated exposure  
Based on available data the classification criteria are not met.

Aspiration hazard  
Not relevant.

Inhalation  
Vapours may cause headache, fatigue, dizziness and nausea. Overexposure to organic solvents may depress the central nervous system, causing dizziness and intoxication and, at very high concentrations, unconsciousness and death.

Ingestion  
Due to the physical nature of this product, it is unlikely that ingestion will occur. May cause nausea, headache, dizziness and intoxication.

Skin contact  
Prolonged or repeated contact with skin may cause irritation, redness and dermatitis.

Eye contact  
Irritation of eyes and mucous membranes.

Acute and chronic health hazards  
A single exposure may cause the following adverse effects: Drowsiness.

Route of entry  
Inhalation Dermal

Target organs  
No specific target organs known.

Medical symptoms  

Medical considerations  
Skin disorders and allergies.

Toxicological information on ingredients.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Acute toxicity - oral</th>
<th>Acute toxicity dermal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>5,800.0</td>
<td>15,800.0</td>
</tr>
<tr>
<td></td>
<td><strong>Species</strong></td>
<td><strong>Rabbit</strong></td>
</tr>
</tbody>
</table>

Acute toxicity oral (LD₅₀ mg/kg)  
5,800.0

Species  
Rat

Notes (oral LD₅₀)  
REACH dossier information.

ATE oral (mg/kg)  
5,800.0
Metallic Bronze

**Notes (dermal LD₅₀)**
REACH dossier information.

**ATE dermal (mg/kg)**
15,800.0

**Acute toxicity - inhalation**

**Acute toxicity inhalation (LC₅₀ vapours mg/l)**
132.0

**Species**
Rat

**Notes (inhalation LC₅₀)**
REACH dossier information.

**ATE inhalation (vapours mg/l)**
132.0

**Skin corrosion/irritation**

**Animal data**
Dose: 0.01mL, 3 days, Rat Based on available data the classification criteria are not met.

**Serious eye damage/irritation**

**Serious eye damage/irritation**
Slightly irritating.

**Respiratory sensitisation**

**Respiratory sensitisation**
Based on available data the classification criteria are not met.

**Skin sensitisation**

**Skin sensitisation**
Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising. Based on available data the classification criteria are not met.

**Germ cell mutagenicity**

**Genotoxicity - in vitro**
Chromosome aberration: Negative. Based on available data the classification criteria are not met.

**Genotoxicity - in vivo**
Chromosome aberration: Negative. Based on available data the classification criteria are not met.

**Carcinogenicity**

**Carcinogenicity**
NOEL 79 mg/mouse/application, Dermal, Mouse Based on available data the classification criteria are not met.

**Target organ for carcinogenicity**
Not relevant.

**Reproductive toxicity**

**Reproductive toxicity - fertility**
One-generation study - NOEL 4858 mg/kg/day, Oral, Mouse P Based on available data the classification criteria are not met.

**Reproductive toxicity - development**
Maternal toxicity: - NOAEC: 2200 ppm, Inhalation, Rat Based on available data the classification criteria are not met.

**Specific target organ toxicity - single exposure**

**STOT - single exposure**
A single exposure may cause the following adverse effects: Drowsiness, dizziness, disorientation, vertigo.

**Target organs**
Central nervous system
**Metallic Bronze**

**Specific target organ toxicity - repeated exposure**

STOT - repeated exposure  Not classified as a specific target organ toxicant after repeated exposure.

Target organs  Not relevant.

Aspiration hazard  Not anticipated to present an aspiration hazard, based on chemical structure.

---

**Propane**

**Acute toxicity - oral**

Notes (oral LD₅₀)  Technically not feasible.

**Acute toxicity - dermal**

Notes (dermal LD₅₀)  Technically not feasible.

**Acute toxicity - inhalation**

Acute toxicity inhalation (LC₅₀ gases ppmV)  800,000.0

Species  Rat

Notes (inhalation LC₅₀)  REACH dossier information.

ATE inhalation (gases ppm)  800,000.0

**Skin corrosion/irritation**

Animal data  Based on available data the classification criteria are not met.

**Serious eye damage/irritation**

Serious eye damage/irritation  Based on available data the classification criteria are not met.

**Respiratory sensitisation**

Respiratory sensitisation  Based on available data the classification criteria are not met.

**Skin sensitisation**

Skin sensitisation  Based on available data the classification criteria are not met.

**Germ cell mutagenicity**

Genotoxicity - in vitro  Chromosome aberration: Negative. Based on available data the classification criteria are not met.

Genotoxicity - in vivo  Chromosome aberration: Negative. Based on available data the classification criteria are not met.

**Carcinogenicity**

Carcinogenicity  Based on available data the classification criteria are not met.

**Reproductive toxicity**

Reproductive toxicity - fertility  Screening - NOAEC 9000 ppm, Inhalation, Rat P Based on available data the classification criteria are not met.
## Metallic Bronze

**Reproductive toxicity - development**
Maternal toxicity: - NOAEC: 12000 ppm, Inhalation, Rat Based on available data the classification criteria are not met.

**Specific target organ toxicity - single exposure**
STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

**Specific target organ toxicity - repeated exposure**
STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

**Aspiration hazard**
Aspiration hazard Not anticipated to present an aspiration hazard, based on chemical structure.

### isobutyl acetate

<table>
<thead>
<tr>
<th><strong>Acute toxicity - oral</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity oral (LD₅₀ mg/kg)</td>
<td>13,413.0</td>
</tr>
<tr>
<td>Species</td>
<td>Rat</td>
</tr>
<tr>
<td>Notes (oral LD₅₀)</td>
<td>REACH dossier information. Conclusive data but not sufficient for classification.</td>
</tr>
<tr>
<td>ATE oral (mg/kg)</td>
<td>13,413.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Acute toxicity - dermal</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity dermal (LD₅₀ mg/kg)</td>
<td>17,400.0</td>
</tr>
<tr>
<td>Species</td>
<td>Rabbit</td>
</tr>
<tr>
<td>Notes (dermal LD₅₀)</td>
<td>REACH dossier information. Conclusive data but not sufficient for classification.</td>
</tr>
<tr>
<td>ATE dermal (mg/kg)</td>
<td>17,400.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Acute toxicity - inhalation</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity inhalation (LC₅₀ vapours mg/l)</td>
<td>30.0</td>
</tr>
<tr>
<td>Species</td>
<td>Rat</td>
</tr>
<tr>
<td>Notes (inhalation LC₅₀)</td>
<td>REACH dossier information. Conclusive data but not sufficient for classification.</td>
</tr>
<tr>
<td>ATE inhalation (vapours mg/l)</td>
<td>30.0</td>
</tr>
</tbody>
</table>

**Skin corrosion/irritation**
Animal data Dose: 0.5 ml, 4 hours, Rabbit Erythema/eschar score: No erythema (0). Oedema score: No oedema (0). REACH dossier information. Based on available data the classification criteria are not met.

**Extreme pH**
Moderate pH ( > 2 and < 11.5).

**Serious eye damage/irritation**
Based on available data the classification criteria are not met.

**Respiratory sensitisation**
## Metallic Bronze

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory sensitisation</td>
<td>No information available.</td>
</tr>
<tr>
<td>Skin sensitisation</td>
<td>Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising. REACH dossier information. Based on available data the classification criteria are not met.</td>
</tr>
<tr>
<td>Skin sensitisation</td>
<td>Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising. REACH dossier information. Based on available data the classification criteria are not met.</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Chromosome aberration: Negative. REACH dossier information. Based on available data the classification criteria are not met.</td>
</tr>
<tr>
<td>Genotoxicity - in vitro</td>
<td>Chromosome aberration: Negative. REACH dossier information. Based on available data the classification criteria are not met.</td>
</tr>
<tr>
<td>Genotoxicity - in vivo</td>
<td>Chromosome aberration: Negative. REACH dossier information. Based on available data the classification criteria are not met.</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>No information available.</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Two-generation study - NOAEC 2500 ppm, Inhalation, Rat REACH dossier information. Based on available data the classification criteria are not met.</td>
</tr>
<tr>
<td>Reproductive toxicity - fertility</td>
<td>Maternal toxicity: - NOAEL: 10 mg/l, Inhalation, REACH dossier information. Based on available data the classification criteria are not met.</td>
</tr>
<tr>
<td>Reproductive toxicity - development</td>
<td>Maternal toxicity: - NOAEL: 10 mg/l, Inhalation, REACH dossier information. Based on available data the classification criteria are not met.</td>
</tr>
<tr>
<td>Specific target organ toxicity - single exposure</td>
<td>Not classified as a specific target organ toxicant after a single exposure.</td>
</tr>
<tr>
<td>Specific target organ toxicity - repeated exposure</td>
<td>NOEL 316 mg/kg, Oral, Rat REACH dossier information. Not classified as a specific target organ toxicant after repeated exposure.</td>
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<td>Aspiration hazard</td>
<td>Not anticipated to present an aspiration hazard, based on chemical structure.</td>
</tr>
<tr>
<td>Acute toxicity - oral</td>
<td>Technically not feasible.</td>
</tr>
<tr>
<td>Notes (oral LD₅₀)</td>
<td>Technically not feasible.</td>
</tr>
<tr>
<td>Acute toxicity - dermal</td>
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<tr>
<td>Notes (dermal LD₅₀)</td>
<td>REACH dossier information. Based on available data the classification criteria are not met.</td>
</tr>
<tr>
<td>Acute toxicity - Inhalation</td>
<td>539,600.0</td>
</tr>
<tr>
<td>Species</td>
<td>Mouse</td>
</tr>
<tr>
<td>Notes (Inhalation LC₅₀)</td>
<td>REACH dossier information. Based on available data the classification criteria are not met.</td>
</tr>
<tr>
<td>ATE inhalation (gases ppm)</td>
<td>539,600.0</td>
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<tr>
<td>Skin corrosion/irritation</td>
<td>12/19</td>
</tr>
</tbody>
</table>

---

## Butane

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Notes (oral LD₅₀)</td>
<td>Technically not feasible.</td>
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<tr>
<td>Acute toxicity - dermal</td>
<td>Technically not feasible.</td>
</tr>
<tr>
<td>Acute toxicity - Inhalation</td>
<td>539,600.0</td>
</tr>
<tr>
<td>Species</td>
<td>Mouse</td>
</tr>
<tr>
<td>Notes (Inhalation LC₅₀)</td>
<td>REACH dossier information. Based on available data the classification criteria are not met.</td>
</tr>
<tr>
<td>ATE inhalation (gases ppm)</td>
<td>539,600.0</td>
</tr>
</tbody>
</table>
Metallic Bronze

Animal data  Based on available data the classification criteria are not met.

Serious eye damage/irritation  Based on available data the classification criteria are not met.

Respiratory sensitisation  Based on available data the classification criteria are not met.

Skin sensitisation  Technically not feasible.

Germ cell mutagenicity  Bacterial reverse mutation test: Negative. Based on available data the classification criteria are not met.

Carcinogenicity  Not determined. Scientifically unjustified.

Reproductive toxicity  Fertility - NOAEC 9000 ppm, Inhalation, Rat P REACH dossier information. Based on available data the classification criteria are not met.

Reproductive toxicity - development  Maternal toxicity: - NOAEC: 12000 ppm, Inhalation, Rat REACH dossier information. Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure  Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure  NOAEC 9000 ppm, Inhalation, Rat REACH dossier information. Based on available data the classification criteria are not met.

Aspiration hazard  Not anticipated to present an aspiration hazard, based on chemical structure.

SECTION 12: Ecological Information

12.1. Toxicity

Toxicity  Not considered toxic to fish.

Ecological information on ingredients.

Acetone

Toxicity  Not considered toxic to fish.

Acute toxicity - fish  LC₅₀, 96 hours: 5540 mg/l, Onchorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates  EC₅₀, 48 hours: 12700 mg/l, Daphnia magna

Acute toxicity - aquatic plants  NOEC, 192 hours: 530 mg/l, Microcystis aeruginosa
Metallic Bronze

Chronic toxicity - aquatic invertebrates
NOEC, 28 days: 2212 mg/l, Daphnia magna

Propane

Acute toxicity - fish
LC₅₀, 96 hours: 27.98 mg/l, Estimated value.

Acute toxicity - aquatic invertebrates
LC₅₀, 48 hours: 14.22 mg/l, Estimated value.

Acute toxicity - aquatic plants
EC₅₀, 96 hours: 7.71 mg/l, Estimated value.

Chronic toxicity - fish early life stage
No information available.

isobutyl acetate

Acute toxicity - fish
LC₅₀, 96 hours: 17 mg/l, Oryzias latipes (Red killifish)
REACH dossier information.

Acute toxicity - aquatic invertebrates
EC₅₀, 48 hours: 25 mg/l, Daphnia magna
REACH dossier information.

Acute toxicity - aquatic plants
EC₅₀, 72 hours: 370 mg/l, Selenastrum capricornutum
REACH dossier information.

Chronic toxicity - aquatic invertebrates
NOEC, 21 days: 23 mg/l, Daphnia magna
REACH dossier information.

Butane

Acute toxicity - fish
LC₅₀, 96 hours: 24.1 mg/l, Estimated value.

Acute toxicity - aquatic invertebrates
EC₅₀, 48 hours: 14.2 mg/l, Estimated value.

Acute toxicity - aquatic plants
EC₅₀, 96 hours: 7.7 mg/l, Estimated value.

12.2. Persistence and degradability

The degradability of the product is not known. The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces. Volatile substances are degraded in the atmosphere within a few days.

Ecological information on ingredients.

Acetone

Persistence and degradability
The substance is readily biodegradable.

Phototransformation
Air - DT₅₀ : 20-115 days

Stability (hydrolysis)
No significant reaction in water.

Biodegradation
Water and sediment - Degradation 90: 28 days
Metallic Bronze

Propane

Persistence and degradability
Highly volatile.

Phototransformation
Air - DT$_{50}$ : 1906 days

Stability (hydrolysis)
Not applicable.

Biodegradation
Water - 100%: 385.5 hours

isobutyl acetate

Phototransformation
Air - Half-life : ~ 3.5 days
Estimated value.
REACH dossier information.

Stability (hydrolysis)
pH7 - Half-life : ~ 3.3 years @ 25°C
Estimated value.
REACH dossier information.

Biodegradation
Water - Degradation 81: 20 days
REACH dossier information.
The substance is readily biodegradable.

Butane

Phototransformation
Not determined.

Stability (hydrolysis)
No significant reaction in water.

Biodegradation
Water - DT$_{50}$ : 3.5 days
Estimated value.
The substance is readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential
The product does not contain any substances expected to be bioaccumulating.

Ecological information on ingredients.

Acetone

Bioaccumulative potential
BCF: 3, Estimated value.

Partition coefficient
log Pow: -0.24

Propane

Partition coefficient
log Pow: 1.09

isobutyl acetate

Bioaccumulative potential
BCF: 15.3, Estimated value. REACH dossier information. The product is not bioaccumulating.

Partition coefficient
log Pow: 2.3
Metallic Bronze

Butane

Bioaccumulative potential The product is not bioaccumulating.

12.4. Mobility in soil

Mobility The product is immiscible with water and will spread on the water surface. The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces.

Ecological information on ingredients.

Acetone

Mobility Highly volatile. Soluble in water.

Henry’s law constant 2.303 Pa m³/mol @ 15°C

Propane

Mobility Highly volatile.

Isobutyl acetate

Mobility The product is insoluble in water and will spread on the water surface.

Adsorption/desorption coefficient Soil - log Koc: < 3 @ °C Estimated value. REACH dossier information.

Henry’s law constant 41.6 Pa m³/mol @ °C REACH dossier information.

Surface tension 62.5 mN/m @ 20°C REACH dossier information.

Butane

Mobility The product is insoluble in water. Highly volatile.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.

Acetone

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

Propane

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

Isobutyl acetate

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.
Metallic Bronze

Butane

Results of PBT and vPvB assessment
This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects
Other adverse effects
None known.

Ecological information on ingredients.

Acetone
Other adverse effects
None known.

Propane
Other adverse effects
None known.

isobutyl acetate
Other adverse effects
None known.

Butane
Other adverse effects
None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information
When handling waste, the safety precautions applying to handling of the product should be considered. Do not puncture or incinerate, even when empty.

Disposal methods
Dispose of waste product or used containers in accordance with local regulations

SECTION 14: Transport information

14.1. UN number
UN No. (ADR/RID) 1950
UN No. (IMDG) 1950
UN No. (ICAO) 1950
UN No. (ADN) 1950

14.2. UN proper shipping name

Proper shipping name (ADR/RID) AEROSOLS (IATA: Aerosols, flammable)
Proper shipping name (IMDG) AEROSOLS (IATA: Aerosols, flammable)
Proper shipping name (ICAO) AEROSOLS (IATA: Aerosols, flammable)
Proper shipping name (ADN) AEROSOLS (IATA: Aerosols, flammable)

14.3. Transport hazard class(es)
ADR/RID class 2 (5F)
Metallic Bronze

ADR/RID label 2.1
IMDG class 2.1
ICAO class/division 2.1

Transport labels

14.4. Packing group
Not applicable.

14.5. Environmental hazards
Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user
EmS F-D, S-U

Tunnel restriction code (D)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not relevant.

SECTION 15: Regulatory information

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

National regulations

EU legislation

Health and environmental listings

Authorisations (Title VII Regulation 1907/2006)
No specific authorisations are known for this product.

Restrictions (Title VIII Regulation 1907/2006)
No specific restrictions on use are known for this product.

SEVESO P3a - Lower tier 150 tonnes, Upper tier 500 tonnes.
Metallic Bronze

No chemical safety assessment has been carried out.

SECTION 16: Other information

<table>
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<th></th>
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<tr>
<td>Revision date</td>
<td>05/02/2015</td>
</tr>
<tr>
<td>Revision</td>
<td>2</td>
</tr>
<tr>
<td>Supersedes date</td>
<td>02/11/2012</td>
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<tr>
<td>SDS number</td>
<td>991</td>
</tr>
<tr>
<td>Risk phrases in full</td>
<td>R11 Highly flammable. R12 Extremely flammable. R36 Irritating to eyes. R66 Repeated exposure may cause skin dryness or cracking. R67 Vapours may cause drowsiness and dizziness.</td>
</tr>
</tbody>
</table>

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.