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

1.1 Product identifier
   Trade name : METALURE A-61010 BG

1.2 Relevant identified uses of the substance or mixture and uses advised against
   This information is not available.

1.3 Details of the supplier of the safety data sheet
   Company : ECKART GmbH
             Guentersthal 4
             91235 Hartenstein
   Telephone : +499152770
   Telefax : +499152777008
   E-mail address : msds.eckart@altana.com
   Responsible/issuing person : msds.eckart@altana.com

1.4 Emergency telephone number

   GBK Gefahrgut Büro GmbH, Ingelheim, Germany:
   From outside US : (001) 352-323-3500
   (First call in English, response in your language is possible)
   US & Canada (toll free) : 1-800-5355-053

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)
- Flammable liquids, Category 3
  H226: Flammable liquid and vapour.
- Acute toxicity, Category 4
  H302: Harmful if swallowed.
- Acute toxicity, Category 4
  H332: Harmful if inhaled.
- Acute toxicity, Category 4
  H312: Harmful in contact with skin.
- Skin irritation, Category 2
  H315: Causes skin irritation.
- Eye irritation, Category 2
  H319: Causes serious eye irritation.

Classification (67/548/EEC, 1999/45/EC)
- Flammable
  R10: Flammable.
- Harmful
  R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.
- Irritant
  R36/38: Irritating to eyes and skin.
2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms:

- Flammable liquid and vapour.

Signal word: Warning

Hazard statements:
- H226 Flammable liquid and vapour.
- H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.

Precautionary statements:

Prevention:
- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
- P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
- P312 Call a POISON CENTER or doctor/ physician if you feel unwell.
- P337 + P313 If eye irritation persists: Get medical advice/ attention.
- P370 + P378 In case of fire: Use for extinction: Dry sand.

Storage:
- P403 + P235 Store in a well-ventilated place. Keep cool.

Hazardous components which must be listed on the label:
- 111-76-2 2-butoxyethanol

2.3 Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components
SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Move out of dangerous area. Show this safety data sheet to the doctor in attendance.
                 Move the victim to fresh air. Do not leave the victim unattended.

If inhaled : If unconscious place in recovery position and seek medical advice.
             If symptoms persist, call a physician.

In case of skin contact : If skin irritation persists, call a physician.
                        If on skin, rinse well with water.
                        If on clothes, remove clothes.
                        Wash off immediately with soap and plenty of water.

In case of eye contact : Immediately flush eye(s) with plenty of water.
                        Remove contact lenses.
                        Keep eye wide open while rinsing.
                        If eye irritation persists, consult a specialist.
                        Immediately flush eye(s) with plenty of water.
If swallowed: Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: No information available.

Risks: No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: Dry sand, Special powder against metal fire

Unsuitable extinguishing media: ABC powder, Carbon dioxide (CO2), Water, Foam

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting: Do not allow run-off from fire fighting to enter drains or water courses.

5.3 Advice for firefighters

Special protective equipment for firefighters: Wear self contained breathing apparatus for fire fighting if necessary.

Further information: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
6.2 Environmental precautions

Environmental precautions: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations (see section 13). Do not flush with water. Use mechanical handling equipment. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling: Avoid formation of aerosol. Do not breathe vapours/dust. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion: Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Keep away from open flames, hot surfaces and sources of ignition.
Hygiene measures: When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers: No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

Earthing of containers and apparatuses is essential. Reaction with water liberates extremely flammable gas (hydrogen). Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Store in original container. Keep containers tightly closed in a cool, well-ventilated place. Keep away from sources of ignition - No smoking. Keep container closed when not in use.

Further information on storage conditions: Protect from humidity and water.

Advice on common storage: Do not store near acids. Do not store together with oxidizing and self-igniting products. Keep away from oxidising agents and strongly acid or alkaline materials. Never allow product to get in contact with water during storage. Keep away from oxidising agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

Other data: No decomposition if stored and applied as directed.

7.3 Specific end use(s)

This information is not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-butoxyethanol</td>
<td>111-76-2</td>
<td>TWA</td>
<td>20 ppm 98 mg/m3</td>
<td>2000-06-16</td>
<td>2000/39/EC</td>
</tr>
</tbody>
</table>
### Further information

<table>
<thead>
<tr>
<th>Component</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium</td>
<td>TWA (Inhalable)</td>
<td>10 mg/m³</td>
<td>2011-12-01</td>
<td>GB EH40</td>
</tr>
<tr>
<td>aluminium</td>
<td>TWA (Respirable)</td>
<td>4 mg/m³</td>
<td>2011-12-01</td>
<td>GB EH40</td>
</tr>
</tbody>
</table>

### Further information

- **2-butoxyethanol** (111-76-2 TWA) 25 ppm 2005-04-06 GB EH40
- **2-butoxyethanol** (111-76-2 STEL) 50 ppm 2000-06-16 2000/39/EC

Further information on dust levels and exposure limits:

- The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m⁻³ 8-hour TWA of inhalable dust or 4 mg.m⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.
For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust. The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg·m⁻³ 8-hour TWA of inhalable dust or 4 mg·m⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit. Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed ‘inhalable’ and ‘respirable’. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3. Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.
deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3.Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with.Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.

<table>
<thead>
<tr>
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<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>acetone</td>
<td>67-64-1</td>
<td>TWA</td>
<td>500 ppm 1,210 mg/m³</td>
<td>2000-06-16</td>
<td>2000/39/EC</td>
</tr>
<tr>
<td>acetone</td>
<td>67-64-1</td>
<td>STEL</td>
<td>1,500 ppm 3,620 mg/m³</td>
<td>2005-04-06</td>
<td>GB EH40</td>
</tr>
</tbody>
</table>

Further information: Indicative

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>acetone</td>
<td>67-64-1</td>
<td>TWA</td>
<td>500 ppm 1,210 mg/m³</td>
<td>2005-04-06</td>
<td>GB EH40</td>
</tr>
</tbody>
</table>
Potential health effects: short term – systemic effects
Value: 44.5 mg/kg

**DNEL:**
2-butoxyethanol (111-76-2)
End Use: Consumers
Exposure routes: Inhalation
Potential health effects: short term – systemic effects
Value: 426 mg/m³

**DNEL:**
2-butoxyethanol (111-76-2)
End Use: Consumers
Exposure routes: Ingestion
Potential health effects: long term – systemic effects
Value: 3.2 mg/kg

**DNEL:**
2-butoxyethanol (111-76-2)
End Use: Consumers
Exposure routes: Skin contact
Potential health effects: long term – systemic effects
Value: 38 mg/kg

**DNEL:**
2-butoxyethanol (111-76-2)
End Use: Consumers
Exposure routes: Inhalation
Potential health effects: long term – systemic effects
Value: 49 mg/m³

**DNEL:**
acetone (67-64-1)
End Use: Workers
Exposure routes: Skin contact
Potential health effects: long term – systemic effects
Value: 186 mg/kg

**DNEL:**
acetone (67-64-1)
End Use: Workers
Exposure routes: Inhalation
Potential health effects: long term – systemic effects
Value: 1210 mg/m³

**DNEL:**
acetone (67-64-1)
End Use: Consumers
Exposure routes: Ingestion
Potential health effects: long term – systemic effects
Value: 62 mg/kg

**DNEL:**
acetone (67-64-1)
End Use: Consumers
Exposure routes: Skin contact
Potential health effects: long term – systemic effects
Value: 62 mg/kg

**DNEL:**
acetone (67-64-1)
End Use: Consumers
Exposure routes: Inhalation
Potential health effects: long term – systemic effects
Value: 200 mg/m³

**PNEC:**
- 2-butoxyethanol (111-76-2)
  Fresh water
  Value: 8.8 mg/l
- 2-butoxyethanol (111-76-2)
  Fresh water sediment
  Value: 34.6 mg/kg
- 2-butoxyethanol (111-76-2)
  Marine water
  Value: 0.88 mg/l
- 2-butoxyethanol (111-76-2)
  Marine sediment
  Value: 3.46 mg/kg
- 2-butoxyethanol (111-76-2)
  STP
  Value: 463 mg/l
- acetone (67-64-1)
  Soil
  Value: 29.5 mg/kg
- acetone (67-64-1)
  Fresh water
  Value: 10.6 mg/l
- acetone (67-64-1)
  Fresh water sediment
  Value: 30.4 mg/kg
- acetone (67-64-1)
  Marine water
  Value: 1.06 mg/l
- acetone (67-64-1)
  Marine sediment
  Value: 3.04 mg/kg
8.2 Exposure controls

Personal protective equipment
Eye protection: Eye wash bottle with pure water
Wear face-shield and protective suit for abnormal processing problems.

Hand protection
Material: Solvent-resistant gloves (butyl-rubber)

Remarks: The suitability for a specific workplace should be discussed with the producers of the protective gloves.

: Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). The exact break through time can be obtained from the protective glove producer and this has to be observed. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Recommended preventive skin protection
Skin should be washed after contact.

The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Skin and body protection: Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection: Use suitable breathing protection if workplace concentration requires.

Environmental exposure controls
General advice: Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Water:

: The product should not be allowed to enter drains, water courses or the soil.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : liquid

Colour : silver

Odour : characteristic

pH : no data available

Freezing point : no data available

Boiling point/boiling range : 171 °C

Flash point : 28 °C

Bulk density : no data available

Flammability (solid, gas) : no data available

Auto-flammability : no data available

Upper explosion limit : no data available

Lower explosion limit : no data available

Vapour pressure : no data available

Density : 1.08 g/cm³

Water solubility : no data available

Solubility in other solvents : no data available

Partition coefficient: n-octanol/water : no data available

Auto-ignition temperature : no data available

Thermal decomposition : no data available

Viscosity, dynamic : no data available

SECTION 10: Stability and reactivity

10.1 Reactivity
No decomposition if stored and applied as directed.

10.2 Chemical stability
No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions
Hazardous reactions: Stable under recommended storage conditions.
Vapours may form explosive mixture with air.

10.4 Conditions to avoid
Conditions to avoid: Heat, flames and sparks.
Do not allow evaporation to dryness.

10.5 Incompatible materials
Materials to avoid: no data available

10.6 Hazardous decomposition products
Hazardous decomposition products: no data available
Other information: no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product
Acute oral toxicity : Acute toxicity estimate : 581.4 mg/kg
    Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate : 12.79 mg/l
    Exposure time: 4 h
    Test atmosphere: vapour
    Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate : 1,279 mg/kg
    Method: Calculation method

Components:
111-76-2 :
    Acute oral toxicity : Acute toxicity estimate : 500 mg/kg
        Method: Converted acute toxicity point estimate

    Acute toxicity estimate : 500 mg/kg
        Method: Converted acute toxicity point estimate

    Acute dermal toxicity : Acute toxicity estimate : 1,100 mg/kg
        Method: Converted acute toxicity point estimate

    Acute toxicity estimate : 1,100 mg/kg
        Method: Converted acute toxicity point estimate

Skin corrosion/irritation
Product
May cause skin irritation in susceptible persons.

Serious eye damage/eye irritation
Product
May cause irreversible eye damage.

Respiratory or skin sensitisation
no data available

Carcinogenicity
no data available

Toxicity to reproduction/fertility
no data available

Reprod.Tox./Development/Teratogenicity
no data available

STOT - single exposure
no data available

STOT - repeated exposure
no data available

Aspiration toxicity
no data available

Further information
Product
Solvents may degrease the skin.
SECTION 12: Ecological information

12.1 Toxicity

no data available

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

Product:
Additional ecological information : no data available

SECTION 13: Disposal considerations

European Waste Catalogue : 08 01 11 - waste paint and varnish containing organic solvents or other dangerous substances

13.1 Waste treatment methods

Product : Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging:
- Empty remaining contents.
- Dispose of as unused product.
- Do not re-use empty containers.
- Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

14.1 UN number
ADR : 1263
IMDG : 1263
IATA : 1263

14.2 Proper shipping name
ADR : PAINT
IMDG : PAINT
IATA : PAINT

14.3 Transport hazard class
ADR : 3
IMDG : 3
IATA : 3

14.4 Packing group
ADR
Packaging group : III
Classification Code : F1
Hazard identification No : 30
Labels : 3
Tunnel restriction code : (D/E)

IMDG
Packaging group : III
Labels : 3
EmS Number : F-E, S-E

IATA
Packing instruction (cargo) : 366
14.5 Environmental hazards

14.6 Special precautions for user

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

no data available

SECTION 15: Regulatory information

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

no data available

15.2 Chemical Safety Assessment

no data available

SECTION 16: Other information

Full text of R-Phrases

R11    Highly flammable.
R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R36    Irritating to eyes.
R36/38 Irritating to eyes and skin.
R66    Repeated exposure may cause skin dryness or cracking.
R67    Vapours may cause drowsiness and dizziness.

Full text of H-Statements

H225    Highly flammable liquid and vapour.
H228    Flammable solid.
METALURE A-61010 BG

Version 1.0  Revision Date 21.02.2014  Print Date 20.11.2018

H302  Harmful if swallowed.
H312  Harmful in contact with skin.
H315  Causes skin irritation.
H319  Causes serious eye irritation.
H332  Harmful if inhaled.
H336  May cause drowsiness or dizziness.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.