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

1.1 Product identifier
Trade name : METALURE A-41010 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)
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

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.

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.

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.

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.

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

This information is not available.

4.3 Indication of any immediate medical attention and special treatment needed

This information is not available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

This information is not available.

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

Personal precautions: Use personal protective equipment. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

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.

6.4 Reference to other sections

This information is not available.

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.

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

7.3 Specific end use(s)
### 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</td>
<td>2000-06-16</td>
<td>2000/39/EC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>98 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Further information</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-butoxyethanol</td>
<td>111-76-2</td>
<td>STEL</td>
<td>50 ppm</td>
<td>2000-06-16</td>
<td>2000/39/EC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>246 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Further information</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-butoxyethanol</td>
<td>111-76-2</td>
<td>TWA</td>
<td>25 ppm</td>
<td>2005-04-06</td>
<td>GB EH40</td>
</tr>
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<td>Further information</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>aluminium</td>
<td>7429-90-5</td>
<td>TWA (Inhalable)</td>
<td>10 mg/m³</td>
<td>2011-12-01</td>
<td>GB EH40</td>
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<tr>
<td>Further information</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>aluminium</td>
<td>7429-90-5</td>
<td>TWA (Respirable)</td>
<td>4 mg/m³</td>
<td>2011-12-01</td>
<td>GB EH40</td>
</tr>
</tbody>
</table>

Further information: 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/m³ 8-hour TWA of inhalable dust or 4 mg/m³ 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.
Further information

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.

<table>
<thead>
<tr>
<th>Substance</th>
<th>TWA (Inhalable)</th>
<th>Limit</th>
<th>Date</th>
<th>Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium</td>
<td>10 mg/m(^3)</td>
<td>2005-04-06</td>
<td>GB EH40</td>
<td></td>
</tr>
</tbody>
</table>

Further information

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.

<table>
<thead>
<tr>
<th>Substance</th>
<th>TWA (Respirable)</th>
<th>Limit</th>
<th>Date</th>
<th>Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium</td>
<td>4 mg/m(^3)</td>
<td>2005-04-06</td>
<td>GB EH40</td>
<td></td>
</tr>
</tbody>
</table>
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.

<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>2000-06-16</td>
<td>2000/39/EC</td>
</tr>
</tbody>
</table>

Further information

<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>
<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>

DNEL:
2-butoxyethanol (111-76-2)
End Use: Workers
Exposure routes: Skin contact
Potential health effects: short term – systemic effects
Value: 89 mg/kg

DNEL:
2-butoxyethanol (111-76-2)
End Use: Workers
Exposure routes: Skin contact
Potential health effects: long term – systemic effects
Value: 75 mg/kg

DNEL:
2-butoxyethanol (111-76-2)
End Use: Consumers
Exposure routes: Inhalation
Potential health effects: short term – local effects
Value: 123 mg/m³

**DNEL:**
2-butoxyethanol (111-76-2)  
End Use: Consumers  
Exposure routes: Ingestion  
Potential health effects: short term – systemic effects  
Value: 13.4 mg/kg

**DNEL:**
2-butoxyethanol (111-76-2)  
End Use: Consumers  
Exposure routes: Skin contact  
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

### DNEL:

<table>
<thead>
<tr>
<th>Substance</th>
<th>End Use: Consumers</th>
<th>Exposure routes</th>
<th>Potential health effects: long term – systemic effects</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone (67-64-1)</td>
<td></td>
<td>Ingestion</td>
<td></td>
<td>1210 mg/m³</td>
</tr>
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</table>

### DNEL:

<table>
<thead>
<tr>
<th>Substance</th>
<th>End Use: Consumers</th>
<th>Exposure routes</th>
<th>Potential health effects: long term – systemic effects</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone (67-64-1)</td>
<td></td>
<td>Skin contact</td>
<td></td>
<td>62 mg/kg</td>
</tr>
</tbody>
</table>

### DNEL:

<table>
<thead>
<tr>
<th>Substance</th>
<th>End Use: Consumers</th>
<th>Exposure routes</th>
<th>Potential health effects: long term – systemic effects</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone (67-64-1)</td>
<td></td>
<td>Inhalation</td>
<td></td>
<td>200 mg/m³</td>
</tr>
</tbody>
</table>

### PNEC:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Medium</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-butoxyethanol (111-76-2)</td>
<td>Fresh water</td>
<td>8.8 mg/l</td>
</tr>
<tr>
<td>2-butoxyethanol (111-76-2)</td>
<td>Fresh water sediment</td>
<td>34.6 mg/kg</td>
</tr>
<tr>
<td>2-butoxyethanol (111-76-2)</td>
<td>Marine water</td>
<td>0.88 mg/l</td>
</tr>
<tr>
<td>2-butoxyethanol (111-76-2)</td>
<td>Marine sediment</td>
<td>3.46 mg/kg</td>
</tr>
<tr>
<td>2-butoxyethanol (111-76-2)</td>
<td>STP</td>
<td>463 mg/l</td>
</tr>
<tr>
<td>Acetone (67-64-1)</td>
<td>Soil</td>
<td>29.5 mg/kg</td>
</tr>
<tr>
<td>Acetone (67-64-1)</td>
<td>Fresh water</td>
<td>10.6 mg/l</td>
</tr>
</tbody>
</table>
PNEC: acetone (67-64-1) : Fresh water sediment
Value: 30.4 mg/kg

PNEC: acetone (67-64-1) : Marine water
Value: 1.06 mg/l

PNEC: 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
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Hand protection
Remarks : 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.

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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
Appearance : viscous

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
Viscosity, kinematic : no data available
Flow time : no data available

9.2 Other information
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.

10.5 Incompatible materials

Materials to avoid: no data available

10.6 Hazardous decomposition products

Other information: no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product

Acute oral toxicity: Acute toxicity estimate: 568.18 mg/kg
Method: Calculation method

Acute inhalation toxicity: Acute toxicity estimate: 12.5 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Acute dermal toxicity: Acute toxicity estimate: 1,250 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
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
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 aircraft) : 366
Packing instruction (passenger aircraft) : 355
Packing instruction (LQ) : Y344
Packaging group : III
Labels : 3

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
Water contaminating class (Germany) : WGK 1 slightly water endangering
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.
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.