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

1.1 Product identifier
   Trade name : METALURE L-51016 MA

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

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.

   Classification (67/548/EEC, 1999/45/EC)
   Flammable
   R10: Flammable.

2.2 Label elements
   Labelling (REGULATION (EC) No 1272/2008)
   Hazard pictograms :
   Signal word : Warning
Hazard statements  : H226 Flammable liquid and vapour.
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:
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P370 + P378 In case of fire: Use for extinction: Dry sand.
Storage:
P403 + P235 Store in a well-ventilated place. Keep cool.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards
No information available.

SECTION 3: Composition/information on ingredients
3.2 Mixtures

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium</td>
<td>7429-90-5 231-072-3 01-2119529243-45</td>
<td>F; R11 Flam. Sol. 1; H228</td>
<td>&gt;= 10 - &lt; 20</td>
<td></td>
</tr>
<tr>
<td>acetone</td>
<td>67-64-1 200-662-2 01-2119471330-49</td>
<td>F; R11 Xi; R36 R66 R67 Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336</td>
<td>&gt;= 3 - &lt; 10</td>
<td></td>
</tr>
<tr>
<td>2-methoxypropyl acetate</td>
<td>70657-70-4 274-724-2</td>
<td>R10 Repr.Cat.2; R61 Xi; R37 Flam. Liq. 3; H226 Repr. 1B; H360D STOT SE 3; H335</td>
<td>&lt; 0.3</td>
<td></td>
</tr>
</tbody>
</table>
## SECTION 4: First aid measures

### 4.1 Description of first aid measures

**General advice**
- Move out of dangerous area.
- 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 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**
- Flush eyes with water as a precaution.
- 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

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

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. 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: 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.

German storage class: 4.1B, Flammable solid hazardous materials

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-methoxy-1-methylethyl acetate</td>
<td>108-65-6</td>
<td>TWA</td>
<td>50 ppm 275 mg/m³</td>
<td>2000-06-16</td>
<td>2000/39/EC</td>
</tr>
<tr>
<td>Further information</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identifies the possibility of significant uptake through the skin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-methoxy-1-methylethyl acetate</td>
<td>108-65-6</td>
<td>STEL</td>
<td>100 ppm 550 mg/m³</td>
<td>2000-06-16</td>
<td>2000/39/EC</td>
</tr>
<tr>
<td>Further information</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>2-methoxy-1-methylethyl acetate</td>
<td>108-65-6</td>
<td>TWA</td>
<td>50 ppm 274 mg/m³</td>
<td>2005-04-06</td>
<td>GB EH40</td>
</tr>
<tr>
<td>Further information</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2-methoxy-1-methylethyl</td>
<td>108-65-6</td>
<td>STEL</td>
<td>100 ppm 548 mg/m³</td>
<td>2005-04-06</td>
<td>GB EH40</td>
</tr>
</tbody>
</table>
acetate

Further information  Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.

<table>
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<tr>
<th>Components</th>
<th>CAS-No.</th>
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<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<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>
</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·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>
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<tr>
<th>Components</th>
<th>CAS-No.</th>
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<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium</td>
<td>7429-90-5</td>
<td>TWA (Respirable)</td>
<td>4 mg/m³</td>
<td>2011-12-01</td>
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</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·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.

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<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>aluminium</td>
<td>7429-90-5</td>
<td>TWA (Inhalable)</td>
<td>10 mg/m³</td>
<td>2005-04-06</td>
<td>GB EH40</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>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

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.
### METALURE L-51016 MA

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<table>
<thead>
<tr>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,210 mg/m³</td>
<td>1,500 ppm</td>
<td>2005-04-06</td>
<td>GB EH40</td>
</tr>
<tr>
<td>acetone</td>
<td>67-64-1</td>
<td>STEL</td>
<td>3,620 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

**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:**
- acetone (67-64-1)
  - Soil
    - Value: 29.5 mg/kg

**PNEC:**
- acetone (67-64-1)
  - Fresh water
    - Value: 10.6 mg/l

**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

: Goggles

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 workplace.

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**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>silver</td>
</tr>
<tr>
<td>Odour</td>
<td>characteristic</td>
</tr>
<tr>
<td>pH</td>
<td>no data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>no data available</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>146 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>39 °C</td>
</tr>
<tr>
<td>Bulk density</td>
<td>no data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>no data available</td>
</tr>
<tr>
<td>Auto-flammability</td>
<td>no data available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>no data available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>no data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>no data available</td>
</tr>
<tr>
<td>Density</td>
<td>0.9 g/cm³</td>
</tr>
<tr>
<td>Water solubility</td>
<td>no data available</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>no data available</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

METALURE L-51016 MA

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.
Do not allow evaporation to dryness.

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

**Components:**

7429-90-5:

Acute inhalation toxicity: LC50 rat: > 5 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

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 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

R10  Flammable.
R11  Highly flammable.
R36  Irritating to eyes.
R37  Irritating to respiratory system.
R61  May cause harm to the unborn child.

Full text of H-Statements

H225  Highly flammable liquid and vapour.
H226  Flammable liquid and vapour.
H228  Flammable solid.
H319  Causes serious eye irritation.
H335  May cause respiratory irritation.
H336  May cause drowsiness or dizziness.
H360D  May damage the unborn child.

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.