1 Identification

- **Product name**: Aluminum Oxide Cut-Off & Wafering Blades, Resin Bond
- **Part number**: 80-10001 - 80-10045
- **Application of the substance / the mixture**: Abrasive blade
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier**: Allied High Tech Products Inc.
  2376 East Pacifica Place
  USA-RANCHO DOMINGUEZ, CA 90220
  USA
  info@alliedhightech.com
- **Information department**: Product safety department
- **Emergency telephone number**: During normal opening times: +1 (310) 635-2466
  Chemtrec: +1 (202) 483-7616

2 Hazard(s) identification

- **Classification of the substance or mixture**

  ![GHS08](image)
  **Health hazard**
  Carc. 2  H351  Suspected of causing cancer. Route of exposure: Inhalation.
  STOT RE 1  H372  Causes damage to the lung and the bones through prolonged or repeated exposure.

  ![GHS07](image)
  **Skin irritation**
  Skin Irrit. 2  H315  Causes skin irritation.
  Eye Irrit. 2A  H319  Causes serious eye irritation.
  Skin Sens. 1  H317  May cause an allergic skin reaction.

  **Aquatic Chronic 3**  H412  Harmful to aquatic life with long lasting effects.

  **Additional information**: Classification may change depending on the exact product composition.
  All components listed for this product are bound within the product. When handled as intended and under normal conditions of use, there is no evidence that any of the ingredients are released in amounts that pose a significant health risk.

(Contd. on page 2)
Safety Data Sheet
acc. to OSHA HCS

Printing date 05/01/2020
Version 2.0
Last revision 04/30/2020

Product name: Aluminum Oxide Cut-Off & Wafering Blades, Resin Bond

· Label elements
  · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
  · Hazard pictograms

![GHS Pictograms]
GHS07  GHS08

· Signal word Danger

· Hazard-determining components of labeling:
  trisodium hexafluoroaluminate
  methenamine
  Formaldehyde, polymer with phenol and urea

· Hazard statements
  Causes skin irritation.
  Causes serious eye irritation.
  May cause an allergic skin reaction.
  Suspected of causing cancer. Route of exposure: Inhalation.
  Causes damage to the lung and the bones through prolonged or repeated exposure.
  Harmful to aquatic life with long lasting effects.

· Precautionary statements
  Obtain special instructions before use.
  Do not handle until all safety precautions have been read and understood.
  Do not breathe dust/fume/gas/mist/vapors/spray.
  Wash thoroughly after handling.
  Do not eat, drink or smoke when using this product.
  Contaminated work clothing must not be allowed out of the workplace.
  Avoid release to the environment.
  Wear protective gloves/protective clothing/eye protection/face protection.
  If on skin: Wash with plenty of water.
  If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  IF exposed or concerned: Get medical advice/attention.
  Specific treatment (see on this label).
  Get medical advice/attention if you feel unwell.
  Take off contaminated clothing and wash it before reuse.
  If skin irritation or rash occurs: Get medical advice/attention.
  If eye irritation persists: Get medical advice/attention.
  Wash contaminated clothing before reuse.
  Store locked up.
  Dispose of contents/container in accordance with local/regional/national/international regulations.

· Classification system:

· NFPA ratings (scale 0 - 4)
  ![NFPA Ratings]
  Health = 2
  Fire = 0
  Reactivity = 0

· HMIS-ratings (scale 0 - 4)
  ![HMIS Ratings]
  Health = *2
  Fire = 0
  Reactivity = 0

· Other hazards
  · Results of PBT and vPvB assessment
  · PBT: Not applicable.

(Contd. of page 1)

(Contd. on page 3)
Product name: Aluminum Oxide Cut-Off & Wafering Blades, Resin Bond

3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>Hazardous Components:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1344-28-1 aluminium oxide</td>
<td>50-100%</td>
</tr>
<tr>
<td>1309-37-1 diiron trioxide</td>
<td>1-10%</td>
</tr>
<tr>
<td>7789-75-5 calcium fluoride</td>
<td>1-10%</td>
</tr>
<tr>
<td>13775-53-6 trisodium hexafluoroaluminate</td>
<td>≥2.5-&lt;10%</td>
</tr>
<tr>
<td></td>
<td>STOT RE 1, H372; Aquatic Chronic 2, H411; Acute Tox. 4, H332</td>
</tr>
<tr>
<td>15096-52-3 cryolite</td>
<td>≥2.5-&lt;10%</td>
</tr>
<tr>
<td></td>
<td>Aquatic Chronic 2, H411; Acute Tox. 4, H332</td>
</tr>
<tr>
<td>8002-74-2 Paraffin waxes and Hydrocarbon waxes</td>
<td>1-10%</td>
</tr>
<tr>
<td>14075-53-7 potassium tetrafluoroborate</td>
<td>≥1-&lt;10%</td>
</tr>
<tr>
<td></td>
<td>Acute Tox. 3, H301; Skin Irrit. 2, H315; Eye Irrit. 2A, H319</td>
</tr>
<tr>
<td>1305-62-0 calcium dihydroxide</td>
<td>≥1-&lt;3%</td>
</tr>
<tr>
<td></td>
<td>Skin Corr. 1B, H314; Eye Dam. 1, H318</td>
</tr>
<tr>
<td>100-97-0 methylene</td>
<td>≥0.1-&lt;1%</td>
</tr>
<tr>
<td></td>
<td>Flam. Sol. 2, H228; Skin Sens. 1, H317</td>
</tr>
<tr>
<td>13463-67-7 titanium dioxide</td>
<td>≥0.1-≤1%</td>
</tr>
<tr>
<td></td>
<td>Carc. 2, H351</td>
</tr>
<tr>
<td>25104-55-6 Formaldehyde, polymer with phenol and urea</td>
<td>≥0.1-&lt;1%</td>
</tr>
<tr>
<td></td>
<td>Acute Tox. 4, H312; Skin Sens. 1B, H317</td>
</tr>
</tbody>
</table>

Non-hazardous Components:

<table>
<thead>
<tr>
<th>Non-hazardous Components:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>12068-85-8 Iron Disulphide</td>
<td>1-10%</td>
</tr>
<tr>
<td>1314-98-3 Zinc sulphide</td>
<td>1-10%</td>
</tr>
<tr>
<td>Polymeric Resin (cured)</td>
<td>1-10%</td>
</tr>
<tr>
<td>Epoxy (cured)</td>
<td></td>
</tr>
</tbody>
</table>

- Additional information: Product may contain many or all of the above ingredients of varying hazardous composition.

4 First-aid measures

- Description of first aid measures
- General information:
  Immediately remove any clothing soiled by the product.
  Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- After inhalation:
  Supply fresh air and to be sure call for a doctor.
  In case of unconsciousness place patient stably in side position for transportation.

- After skin contact:
  Immediately wash with water and soap and rinse thoroughly.

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

- After swallowing:
  If symptoms persist consult doctor.

- Information for doctor:
  Most important symptoms and effects, both acute and delayed
  Breathing difficulty
  Coughing

- Indication of any immediate medical attention and special treatment needed: No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
  - Suitable extinguishing agents: Use fire fighting measures that suit the environment.
Product name: Aluminum Oxide Cut-Off & Wafering Blades, Resin Bond

- Special hazards arising from the substance or mixture: During heating or in case of fire poisonous gases are produced.
- Advice for firefighters
- Protective equipment: Mouth respiratory protective device.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**: Mount respiratory protective device.
- **Environmental precautions**: Do not allow product to reach sewage system or any water course. Inform respective authorities in case of seepage into water course or sewage system.
- **Methods and material for containment and cleaning up**: Pick up mechanically. Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

### Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

### Protective Action Criteria for Chemicals

<table>
<thead>
<tr>
<th>PAC-1</th>
<th>PAC-2</th>
<th>PAC-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1344-28-1 aluminium oxide</td>
<td>1344-28-1 aluminium oxide</td>
<td>1344-28-1 aluminium oxide</td>
</tr>
<tr>
<td>15 mg/m³</td>
<td>170 mg/m³</td>
<td>990 mg/m³</td>
</tr>
<tr>
<td>1309-37-1 diiron trioxide</td>
<td>1309-37-1 diiron trioxide</td>
<td>1309-37-1 diiron trioxide</td>
</tr>
<tr>
<td>15 mg/m³</td>
<td>360 mg/m³</td>
<td>2,200 mg/m³</td>
</tr>
<tr>
<td>7789-75-5 calcium fluoride</td>
<td>7789-75-5 calcium fluoride</td>
<td>7789-75-5 calcium fluoride</td>
</tr>
<tr>
<td>15 mg/m³</td>
<td>170 mg/m³</td>
<td>1,000 mg/m³</td>
</tr>
<tr>
<td>12068-85-8 iron Disulphide</td>
<td>12068-85-8 iron Disulphide</td>
<td>12068-85-8 iron Disulphide</td>
</tr>
<tr>
<td>30 mg/m³</td>
<td>330 mg/m³</td>
<td>2,000 mg/m³</td>
</tr>
<tr>
<td>1314-98-3 zinc sulphide</td>
<td>1314-98-3 zinc sulphide</td>
<td>1314-98-3 zinc sulphide</td>
</tr>
<tr>
<td>8.9 mg/m³</td>
<td>99 mg/m³</td>
<td>590 mg/m³</td>
</tr>
<tr>
<td>14075-53-7 potassium tetrafluoroborate</td>
<td>14075-53-7 potassium tetrafluoroborate</td>
<td>14075-53-7 potassium tetrafluoroborate</td>
</tr>
<tr>
<td>12 mg/m³</td>
<td>140 mg/m³</td>
<td>830 mg/m³</td>
</tr>
<tr>
<td>1305-62-0 calcium dihydroxide</td>
<td>1305-62-0 calcium dihydroxide</td>
<td>1305-62-0 calcium dihydroxide</td>
</tr>
<tr>
<td>15 mg/m³</td>
<td>240 mg/m³</td>
<td>1,500 mg/m³</td>
</tr>
<tr>
<td>100-97-0 methenamine</td>
<td>100-97-0 methenamine</td>
<td>100-97-0 methenamine</td>
</tr>
<tr>
<td>55 mg/m³</td>
<td>610 mg/m³</td>
<td>3,600 mg/m³</td>
</tr>
<tr>
<td>13463-67-7 titanium dioxide</td>
<td>13463-67-7 titanium dioxide</td>
<td>13463-67-7 titanium dioxide</td>
</tr>
<tr>
<td>30 mg/m³</td>
<td>330 mg/m³</td>
<td>2,000 mg/m³</td>
</tr>
</tbody>
</table>
7 Handling and storage

· Handling:
  · Precautions for safe handling
    Any deposit of dust which cannot be avoided must be regularly removed.
    Open and handle receptacle with care.
  · Information about protection against explosions and fires: Keep respiratory protective device available.

· Conditions for safe storage, including any incompatibilities
  · Storage:
    · Requirements to be met by storerooms and receptacles:
      Store in a cool location.
      No special requirements.
    · Information about storage in one common storage facility: Store away from foodstuffs.

· Further information about storage conditions:
  Keep receptacle tightly sealed.
  Store receptacle in a well ventilated area.

· Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

· Additional information about design of technical systems: No further data; see item 7.

· Control parameters
  · Components with limit values that require monitoring at the workplace:
    The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

<table>
<thead>
<tr>
<th>1344-28-1 aluminium oxide</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL</td>
<td>Long-term value: 15*; 5** mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Total dust; ** Respirable fraction</td>
<td></td>
</tr>
<tr>
<td>REL</td>
<td>Long-term value: 10* 5** mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>as Al*Total dust**Respirable/pyro powd./welding f.</td>
<td></td>
</tr>
<tr>
<td>TLV</td>
<td>Long-term value: 1* mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>as Al; *as respirable fraction</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1309-37-1 diiron trioxide</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL</td>
<td>Long-term value: 10* mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Fume</td>
<td></td>
</tr>
<tr>
<td>REL</td>
<td>Long-term value: 5 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dust &amp; fume, as Fe</td>
<td></td>
</tr>
<tr>
<td>TLV</td>
<td>Long-term value: 5* mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>*as respirable fraction</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7789-75-5 calcium fluoride</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL</td>
<td>Long-term value: 2.5 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>as F</td>
<td></td>
</tr>
<tr>
<td>REL</td>
<td>Long-term value: 2.5 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>as F</td>
<td></td>
</tr>
<tr>
<td>TLV</td>
<td>Long-term value: 2.5 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>as F, BEI</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>15096-52-3 cryolite</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL</td>
<td>Long-term value: 2.5 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>as F</td>
<td></td>
</tr>
<tr>
<td>REL</td>
<td>Long-term value: 2.5 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>as F</td>
<td></td>
</tr>
</tbody>
</table>
### Product name: Aluminum Oxide Cut-Off & Wafering Blades, Resin Bond

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Description</th>
<th>REL Long-term value: 2 mg/m³</th>
<th>TLV Long-term value: 2 mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>8002-74-2</td>
<td>Paraffin waxes and Hydrocarbon waxes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14075-53-7</td>
<td>potassium tetrafluoroborate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEL</td>
<td>Long-term value: 2.5 mg/m³ as F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REL</td>
<td>Long-term value: 2.5 mg/m³ as F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TLV</td>
<td>Long-term value: 2.5 mg/m³ as F, BEI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1305-62-0</td>
<td>calcium dihydroxide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEL</td>
<td>Long-term value: 15* 5** mg/m³ *total dust **respirable fraction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REL</td>
<td>Long-term value: 5 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TLV</td>
<td>Long-term value: 5 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100-97-0</td>
<td>methenamine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TLV</td>
<td>Long-term value: NIC-1* mg/m³ *inhalable fraction, NIC-A4, NIC-DSEN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13463-67-7</td>
<td>titanium dioxide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PEL</td>
<td>Long-term value: 15* mg/m³ *total dust</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TLV</td>
<td>Long-term value: 10 mg/m³</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Ingredients with biological limit values:

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Description</th>
<th>BEI 2 mg/L Medium: urine Time: prior to shift Parameter: Fluoride (background, nonspecific)</th>
<th>3 mg/L Medium: urine Time: end of shift Parameter: Fluoride (background, nonspecific)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7789-75-5</td>
<td>calcium fluoride</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15096-52-3</td>
<td>cryolite</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Product name: Aluminum Oxide Cut-Off & Wafering Blades, Resin Bond

<table>
<thead>
<tr>
<th>14075-53-7 potassium tetrafluoroborate</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEI 2 mg/L</td>
</tr>
<tr>
<td>Medium: urine</td>
</tr>
<tr>
<td>Time: prior to shift</td>
</tr>
<tr>
<td>Parameter: Fluoride (background, nonspecific)</td>
</tr>
<tr>
<td>3 mg/L</td>
</tr>
<tr>
<td>Medium: urine</td>
</tr>
<tr>
<td>Time: end of shift</td>
</tr>
<tr>
<td>Parameter: Fluoride (background, nonspecific)</td>
</tr>
</tbody>
</table>

- **Additional information**: The lists that were valid during the creation were used as basis.

- **Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**:
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing.
  - Wash hands before breaks and at the end of work.
  - Store protective clothing separately.
  - Avoid contact with the eyes and skin.
- **Breathing equipment**: Use suitable respiratory protective device when high concentrations are present.
- **Protection of hands**: Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

![Protective gloves](image)

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
  - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**
  - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection**:

![Tightly sealed goggles](image)

Tightly sealed goggles

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**

  - **Appearance**: Solid
  - **Form**: According to product specification
  - **Color**: Odorless
  - **Odor**: Not determined.
  - **Odor threshold**: Not applicable.
  - **pH-value**: Not applicable.
  - **Change in condition**
    - **Melting point/Melting range**: Undetermined.
    - **Boiling point/Boiling range**: Undetermined.

(Contd. on page 8)
Product name: Aluminum Oxide Cut-Off & Wafering Blades, Resin Bond

(Contd. of page 7)

- Flash point: Not applicable.
- Flammability (solid, gaseous): Not determined.
- Decomposition temperature: Not determined.
- Auto igniting: Product is not selfigniting.
- Danger of explosion: Product does not present an explosion hazard.

- Explosion limits:
  - Lower: Not determined.
  - Upper: Not determined.
- Vapor pressure: Not applicable.
- Density: Not determined.
- Relative density: Not determined.
- Vapor density: Not applicable.
- Evaporation rate: Not applicable.
- Solubility in / Miscibility with
  - Water: Insoluble.
- Partition coefficient (n-octanol/water): Not determined.
- Viscosity:
  - Dynamic: Not applicable.
  - Kinematic: Not applicable.
- Solvent content: 0.00 %
- VOC content: 0.00 %
- Solids content: 100.0 %
- Other information: No further relevant information available.

10 Stability and reactivity

- Reactivity: No further relevant information available.
- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions: No dangerous reactions known.
- Conditions to avoid: Keep away from oxidising agents and acidic substances.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products:
  - Aluminum oxides
  - Carbon monoxide and carbon dioxide
- Additional information: Hazardous decomposition products may form during combustion.

11 Toxicological information

- Information on toxicological effects
- Acute toxicity:

  1344-28-1 aluminium oxide

<table>
<thead>
<tr>
<th></th>
<th>Oral</th>
<th>Inhalative</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50</td>
<td>5,507 mg/kg</td>
<td>&gt;7.13 mg/l</td>
</tr>
<tr>
<td>LC50/4 h</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>5,010 mg/kg (rat)</td>
<td>&gt;6 mg/l (rat)</td>
</tr>
<tr>
<td>Inhalative</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Contd. on page 9)
Product name: Aluminum Oxide Cut-Off & Wafering Blades, Resin Bond

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS Number</th>
<th>Dose Form</th>
<th>LD50</th>
<th>Concentration</th>
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</thead>
<tbody>
<tr>
<td>diiron trioxide</td>
<td>1309-37-1</td>
<td>Oral</td>
<td>LD50</td>
<td>&gt;5,000 mg/kg (rat)</td>
</tr>
<tr>
<td>calcium fluoride</td>
<td>7789-75-5</td>
<td>Oral</td>
<td>LD50</td>
<td>4,250 mg/kg (rat)</td>
</tr>
<tr>
<td>trisodium hexafluoroaluminate</td>
<td>13775-53-6</td>
<td>Inhalative</td>
<td>LC50/4 h</td>
<td>1.5 mg/l (ATE)</td>
</tr>
<tr>
<td>cryolite</td>
<td>15096-52-3</td>
<td>Inhalative</td>
<td>LC50/4 h</td>
<td>1.5 mg/l (ATE)</td>
</tr>
<tr>
<td>potassium tetrafluoroborate</td>
<td>14075-53-7</td>
<td>Oral</td>
<td>LD50</td>
<td>100 mg/kg (ATE)</td>
</tr>
<tr>
<td>calcium dihydroxide</td>
<td>1305-62-0</td>
<td>Oral</td>
<td>LD50</td>
<td>7,340 mg/kg (rat)</td>
</tr>
<tr>
<td>titanium dioxide</td>
<td>13463-67-7</td>
<td>Oral</td>
<td>LD50</td>
<td>&gt;20,000 mg/kg (rat)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dermal</td>
<td>LD50</td>
<td>&gt;10,000 mg/kg (rabbit)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inhalative</td>
<td>LC50/4 h</td>
<td>&gt;6.82 mg/l (rat)</td>
</tr>
<tr>
<td>Formaldehyde, polymer with phenol and urea</td>
<td>25104-55-6</td>
<td>Oral</td>
<td>LD50</td>
<td>5,000 mg/kg (rat)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dermal</td>
<td>LD50</td>
<td>2,000 mg/kg (rat)</td>
</tr>
</tbody>
</table>

- **Primary chemical irritant effect:**
  - **on the skin:** Irritant to skin and mucous membranes.
  - **on the eye:** Irritating effect.
  - **Sensitization:** Sensitization possible through skin contact.
  - **Additional toxicological information:**
    - Abrasive skin irritant
    - Abrasive eye irritant

**Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**
  - 1309-37-1 diiron trioxide 3
  - 7789-75-5 calcium fluoride 3
  - 14075-53-7 potassium tetrafluoroborate 3
  - 13463-67-7 titanium dioxide 2B

- **NTP (National Toxicology Program)**
  - None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**
  - None of the ingredients is listed.

**12 Ecological information**

- **Toxicity**
  - **Aquatic toxicity:** No further relevant information available.
  - **Persistence and degradability:** No further relevant information available.

- **Behavior in environmental systems:**
  - **Bioaccumulative potential:** No further relevant information available.
  - **Mobility in soil:** No further relevant information available.

- **Ecotoxicological effects:**
  - **Remark:** Harmful to fish

- **Additional ecological information:**
  - **General notes:**
    - Water hazard class 1 (Self-assessment): slightly hazardous for water
Product name: Aluminum Oxide Cut-Off & Wafering Blades, Resin Bond

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Harmful to aquatic organisms

- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

- Waste treatment methods
  - Recommendation: Contact waste processors for recycling information.

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

14 Transport information

- UN-Number
  - DOT, ADN, IMDG, IATA: not regulated

- UN proper shipping name
  - DOT, ADN, IMDG, IATA: not regulated

- Transport hazard class(es)
  - DOT, ADN, IMDG, IATA: not regulated

- Class
  - DOT, ADN, IMDG, IATA: not regulated

- Packing group
  - DOT, ADN, IMDG, IATA: not regulated

- Environmental hazards:
  - Marine pollutant: No

- Special precautions for user
  - Not applicable.

- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
  - Not applicable.

- UN "Model Regulation":
  - not regulated

15 Regulatory information

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

  - Section 355 (extremely hazardous substances):
    - None of the ingredients is listed.

  - Section 313 (Specific toxic chemical listings):
    - 1344-28-1 aluminium oxide
    - 1314-98-3 zinc sulphide

  - TSCA (Toxic Substances Control Act):
    - All components have the value ACTIVE.

- Hazardous Air Pollutants
  - None of the ingredients is listed.

- Proposition 65

  - Chemicals known to cause cancer:
    - 13463-67-7 titanium dioxide
Product name: Aluminum Oxide Cut-Off & Wafering Blades, Resin Bond

(Contd. of page 10)

- **Chemicals known to cause reproductive toxicity for females:**
  None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**
  None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**
  None of the ingredients is listed.

- **Carcinogenic categories**
  - **EPA (Environmental Protection Agency)**
    - 1314-98-3 zinc sulphide
    - 14075-53-7 potassium tetrafluoroborate
    - D, I, II
  - **TLV (Threshold Limit Value established by ACGIH)**
    - 1344-28-1 aluminium oxide
      - A4
    - 1309-37-1 diiron trioxide
      - A4
    - 7789-75-5 calcium fluoride
      - A4
    - 14075-53-7 potassium tetrafluoroborate
      - A4
    - 13463-67-7 titanium dioxide
      - A4
  - **NIOSH-Ca (National Institute for Occupational Safety and Health)**
    - 13463-67-7 titanium dioxide
  - **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 **Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Environment protection department.
- **Contact:** Kim Dermit
- **Last revision:** 04/30/2020 / 1.0
- **Abbreviations and acronyms:**
  - IMDG: International Maritime Code for Dangerous Goods
  - DOT: US Department of Transportation
  - IATA: International Air Transport Association
  - ACGIH: American Conference of Governmental Industrial Hygienists
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - NFPA: National Fire Protection Association (USA)
  - HMIS: Hazardous Materials Identification System (USA)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - NIOSH: National Institute for Occupational Safety
  - OSHA: Occupational Safety & Health
  - TLV: Threshold Limit Value
  - PEL: Permissible Exposure Limit
  - REL: Recommended Exposure Limit
  - BEE: Biological Exposure Limit
  - Flam. Sol. 2: Flammable solids – Category 2
  - Acute Tox. 3: Acute toxicity – Category 3
  - Acute Tox. 4: Acute toxicity – Category 4
  - Skin Corr. 1B: Skin corrosion/irritation – Category 1B
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
  - Eye Dam. 1: Serious eye damage/eye irritation – Category 1
  - Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
  - Skin Sens. 1: Skin sensitisation – Category 1
  - Skin Sens. 1B: Skin sensitisation – Category 1B
  - Carc. 2: Carcinogenicity – Category 2
  - STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

(Contd. on page 12)
Product name: Aluminum Oxide Cut-Off & Wafering Blades, Resin Bond

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3