1 Identification

· Product name: Aluminum Oxide Abrasive Belts
· Part number:
  50-10220-A
  50-10456, 50-10460, 50-10470
  50-10475, 50-10480, 50-10490
· Application of the substance / the mixture: Abrasive
· 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
  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.
· Label elements
  · GHS label elements: The product is classified and labeled according to the Globally Harmonized System (GHS).
  · Hazard pictograms: Void
  · Signal word: Void
  · Hazard statements
  Harmful to aquatic life with long lasting effects.
· Precautionary statements
  Avoid release to the environment.
  Dispose of contents/container in accordance with local/regional/national/international regulations.
· Classification system:
· NFPA ratings (scale 0 - 4)
  Health = 1
  Fire = 0
  Reactivity = 0
Product name: Aluminum Oxide Abrasive Belts

· HMIS-ratings (scale 0 - 4)

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FIRE</th>
<th>REACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Health = 1
Fire = 0
Reactivity = 0

· Other hazards

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

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 aluminum oxide</td>
<td>25-50%</td>
</tr>
<tr>
<td>1317-65-3 Limestone</td>
<td>![Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319]</td>
</tr>
<tr>
<td>1332-58-7 Kaolin</td>
<td></td>
</tr>
<tr>
<td>557-05-1 zinc distearate, pure</td>
<td>![Acute Tox. 4, H312]</td>
</tr>
<tr>
<td>15096-52-3 cryolite</td>
<td>![Acute Tox. 4, H332; Aquatic Chronic 2, H411]</td>
</tr>
<tr>
<td>107-21-1 ethylene glycol</td>
<td>![Acute Tox. 4, H302]</td>
</tr>
<tr>
<td>1309-37-1 diiron trioxide</td>
<td></td>
</tr>
<tr>
<td>7778-18-9 calcium sulphate, natural</td>
<td></td>
</tr>
<tr>
<td>14075-53-7 potassium tetrafluoroborate</td>
<td>![Acute Tox. 3, H301; Skin Irrit. 2, H315; Eye Irrit. 2A, H319]</td>
</tr>
</tbody>
</table>

· Non-hazardous Components:

| Paper Backing | 10-25% |
| Resin | 10-25% |
| Wax | 1-10% |
| Garnet | 1-10% |
| Filler | 1-10% |
| Nylon loop | 1-10% |
| 1592-23-0 calcium distearate, pure | 1-10% |
| Lubricant | 1-10% |

· 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
  · After inhalation: Supply fresh air; consult doctor in case of complaints.
  · After skin contact: Generally the product does not irritate the skin.
  · After eye contact: Rinse opened eye for several minutes under running water.
  · After swallowing: If symptoms persist consult doctor.
  · Information for doctor:
    · Most important symptoms and effects, both acute and delayed No further relevant information available.
    · 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.
  · Special hazards arising from the substance or mixture No further relevant information available.

(Contd. on page 3)
Product name: Aluminum Oxide Abrasive Belts

· Advice for firefighters
· Protective equipment: No special measures required.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures Not required.
· Environmental precautions:
  Do not allow to enter sewers/ surface or ground water.
  Inform respective authorities in case of seepage into water course or sewage system.
· Methods and material for containment and cleaning up: Dispose contaminated material as waste according to item 13.
· 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></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1344-28-1</td>
<td>aluminium oxide</td>
<td>15 mg/m³</td>
</tr>
<tr>
<td>557-05-1</td>
<td>zinc distearate, pure</td>
<td>30 mg/m³</td>
</tr>
<tr>
<td>107-21-1</td>
<td>ethylene glycol</td>
<td>30 ppm</td>
</tr>
<tr>
<td>1309-37-1</td>
<td>diiron trioxide</td>
<td>15 mg/m³</td>
</tr>
<tr>
<td>14075-53-7</td>
<td>potassium tetrafluoroborate</td>
<td>12 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-2:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1344-28-1</td>
<td>aluminium oxide</td>
<td>170 mg/m³</td>
</tr>
<tr>
<td>557-05-1</td>
<td>zinc distearate, pure</td>
<td>330 mg/m³</td>
</tr>
<tr>
<td>107-21-1</td>
<td>ethylene glycol</td>
<td>150 ppm</td>
</tr>
<tr>
<td>1309-37-1</td>
<td>diiron trioxide</td>
<td>360 mg/m³</td>
</tr>
<tr>
<td>14075-53-7</td>
<td>potassium tetrafluoroborate</td>
<td>140 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-3:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1344-28-1</td>
<td>aluminium oxide</td>
<td>990 mg/m³</td>
</tr>
<tr>
<td>557-05-1</td>
<td>zinc distearate, pure</td>
<td>2,000 mg/m³</td>
</tr>
<tr>
<td>107-21-1</td>
<td>ethylene glycol</td>
<td>900 ppm</td>
</tr>
<tr>
<td>1309-37-1</td>
<td>diiron trioxide</td>
<td>2,200 mg/m³</td>
</tr>
<tr>
<td>14075-53-7</td>
<td>potassium tetrafluoroborate</td>
<td>830 mg/m³</td>
</tr>
</tbody>
</table>

7 Handling and storage

· Handling:
· Precautions for safe handling No special precautions are necessary if used correctly.
· Information about protection against explosions and fires: No special measures required.
· 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: Not required.
· Further information about storage conditions: Store in dry conditions.
· 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.
Product name: Aluminum Oxide Abrasive Belts

· Control parameters

· Components with limit values that require monitoring at the workplace:

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

<table>
<thead>
<tr>
<th>1317-65-3 Limestone</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL</td>
<td>Long-term value: 15 mg/m³</td>
</tr>
<tr>
<td>TLV</td>
<td>Long-term value: 10 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1332-58-7 Kaolin</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL</td>
<td>Long-term value: 15* 5** mg/m³</td>
</tr>
<tr>
<td></td>
<td>*total dust **respirable fraction</td>
</tr>
<tr>
<td>REL</td>
<td>Long-term value: 10* 5** mg/m³</td>
</tr>
<tr>
<td></td>
<td>*total dust **respirable fraction</td>
</tr>
<tr>
<td>TLV</td>
<td>Long-term value: 2* mg/m³</td>
</tr>
<tr>
<td></td>
<td>E; as respirable fraction</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>557-05-1 zinc distearate, pure</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL</td>
<td>Long-term value: 15* 5** mg/m³</td>
</tr>
<tr>
<td></td>
<td>*total dust **respirable fraction</td>
</tr>
<tr>
<td>REL</td>
<td>Long-term value: 10* 5** mg/m³</td>
</tr>
<tr>
<td></td>
<td>*total dust **respirable fraction</td>
</tr>
<tr>
<td>TLV</td>
<td>Long-term value: 10 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>15096-52-3 cryolite</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL</td>
<td>Long-term value: 2.5 mg/m³</td>
</tr>
<tr>
<td></td>
<td>as F</td>
</tr>
<tr>
<td>REL</td>
<td>Long-term value: 2.5 mg/m³</td>
</tr>
<tr>
<td></td>
<td>as F</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>107-21-1 ethylene glycol</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TLV</td>
<td>Short-term value: 10** mg/m³, 50* ppm</td>
</tr>
<tr>
<td></td>
<td>Long-term value: 25* ppm</td>
</tr>
<tr>
<td></td>
<td>*vapor fraction: **inh. fraction, aerosol only</td>
</tr>
<tr>
<td>WEEL</td>
<td>I (2)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>7778-18-9 calcium sulphate, natural</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL</td>
<td>Long-term value: 15* 5** mg/m³</td>
</tr>
<tr>
<td></td>
<td>*total dust **respirable fraction</td>
</tr>
<tr>
<td>REL</td>
<td>Long-term value: 10* 5** mg/m³</td>
</tr>
<tr>
<td></td>
<td>*total dust **respirable fraction</td>
</tr>
</tbody>
</table>
Product name: Aluminum Oxide Abrasive Belts

| TLV  | Long-term value: 10* mg/m³  
|      | as inhalable fraction |

14075-53-7 potassium tetrafluoroborate

| PEL  | Long-term value: 2.5 mg/m³  
|      | as F |
| REL  | Long-term value: 2.5 mg/m³  
|      | as F |
| TLV  | Long-term value: 2.5 mg/m³  
|      | as F, BEI |

· Ingredients with biological limit values:

15096-52-3 cryolite

BEI 2 mg/L  
Medium: urine  
Time: prior to shift  
Parameter: Fluoride (background, nonspecific)

3 mg/L  
Medium: urine  
Time: end of shift  
Parameter: Fluoride (background, nonspecific)

14075-53-7 potassium tetrafluoroborate

BEI 2 mg/L  
Medium: urine  
Time: prior to shift  
Parameter: Fluoride (background, nonspecific)

3 mg/L  
Medium: urine  
Time: end of shift  
Parameter: Fluoride (background, nonspecific)

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

· Exposure controls
· Personal protective equipment:
· General protective and hygienic measures: Wash hands before breaks and at the end of work.

· Breathing equipment:
Not required.  
Use suitable respiratory protective device in case of insufficient ventilation.

· Protection of hands:
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

· 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: Not required.

9 Physical and chemical properties

· Information on basic physical and chemical properties
· General Information
· Appearance:
  Form: Belt
  Color: According to product specification

(Contd. on page 6)
Product name: Aluminum Oxide Abrasive Belts

- Odor: Odorless
- Odor threshold: Not determined.
- pH-value: Not applicable.
- Change in condition
  - Melting point/Melting range: Undetermined.
  - Boiling point/Boiling range: Undetermined.
- 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: VOC content: 1.47 %
- 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: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: Carbon monoxide and carbon dioxide
- Additional information: Hazardous decomposition products may form during combustion.

11 Toxicological information
- Information on toxicological effects
- Acute toxicity:
  - LD/LC50 values that are relevant for classification:
    - ATE (Acute Toxicity Estimate)
      - Oral LD50: 6,542 mg/kg
Product name: Aluminum Oxide Abrasive Belts

<table>
<thead>
<tr>
<th>Material</th>
<th>Endpoint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dermal</td>
<td>LD50</td>
<td>19,563 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LC50/4 h</td>
<td>&gt;10.6 mg/l</td>
</tr>
<tr>
<td><strong>1344-28-1 aluminium oxide</strong></td>
<td>Oral</td>
<td>5,010 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LC50/4 h</td>
<td>&gt;6 mg/l</td>
</tr>
<tr>
<td><strong>1317-65-3 Limestone</strong></td>
<td>Oral</td>
<td>6,450 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Dermal</td>
<td>2,010 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LC50/4 h</td>
<td>3 mg/l</td>
</tr>
<tr>
<td><strong>557-05-1 zinc distearate, pure</strong></td>
<td>Oral</td>
<td>5,000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Dermal</td>
<td>2,000 mg/kg</td>
</tr>
<tr>
<td><strong>15096-52-3 cryolite</strong></td>
<td>Inhalative</td>
<td>1.5 mg/l (ATE)</td>
</tr>
<tr>
<td><strong>107-21-1 ethylene glycol</strong></td>
<td>Oral</td>
<td>5,840 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Dermal</td>
<td>9,430 mg/kg</td>
</tr>
<tr>
<td><strong>1309-37-1 diiron trioxide</strong></td>
<td>Oral</td>
<td>&gt;5,000 mg/kg</td>
</tr>
<tr>
<td><strong>14075-53-7 potassium tetrafluoroborate</strong></td>
<td>Oral</td>
<td>100 mg/kg (ATE)</td>
</tr>
</tbody>
</table>

- **Primary chemical irritant effect:**
  - **on the skin:** No irritant effect.
  - **on the eye:** No irritating effect.
  - **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
  - Abrasive eye irritant
  - Abrasive skin irritant
- **Carcinogenic categories**
  - **IARC (International Agency for Research on Cancer)**
    - 1309-37-1 diiron trioxide 3
    - 14075-53-7 potassium tetrafluoroborate 3
  - **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.
- **Ecotoxical effects:**
- **Remark:** Harmful to fish
Product name: Aluminum Oxide Abrasive Belts

- Additional ecological information:
  - General notes:
    - Not hazardous for water.
    - 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
- Packing group
  - DOT, 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
  - 557-05-1 zinc distearate, pure
  - 107-21-1 ethylene glycol
- TSCA (Toxic Substances Control Act):
  - All components have the value ACTIVE.
- Hazardous Air Pollutants
  - 107-21-1 ethylene glycol

(Contd. of page 7)
Product name: Aluminum Oxide Abrasive Belts

- **Proposition 65**
  - **Chemicals known to cause cancer:**
    None of the ingredients is listed.
  - **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:**
    107-21-1 ethylene glycol

- **Carcinogenic categories**
  - **EPA (Environmental Protection Agency)**
    | Substance | Classification |
    |-----------|----------------|
    | 557-05-1 zinc distearate, pure | D, I, II |
    | 14075-53-7 potassium tetrafluoroborate | I (oral) |
  - **TLV (Threshold Limit Value established by ACGIH)**
    | Substance | Classification |
    |-----------|----------------|
    | 1344-28-1 aluminium oxide | A4 |
    | 1332-58-7 Kaolin | A4 |
    | 107-21-1 ethylene glycol | A4 |
    | 1309-37-1 diiron trioxide | A4 |
    | 14075-53-7 potassium tetrafluoroborate | A4 |
  - **NIOSH-Ca (National Institute for Occupational Safety and Health)**
    None of the ingredients is listed.

**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.
- **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
  - BEL: Biological Exposure Limit
  - Acute Tox. 3: Acute toxicity – Category 3
  - Acute Tox. 4: Acute toxicity – Category 4
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
  - Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
  - 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