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

1.1. Product identifier
Product form : Mixture
Product name : PAL 23, 34, 36, 47, 54, 60, PALNI 25, GE B50TF198 (Solid and Paste)
Product code : PAL 23, 34, 36, 47, 54, 60, PALNI 25, GE B50TF198 (Solid and Paste)
Type of product : Alloy

1.2. Relevant identified uses of the substance or mixture and uses advised against
1.2.1. Relevant identified uses
Main use category : Professional use
Industrial/Professional use spec : For professional use only
Use of the substance/mixture : Brazing
Function or use category : Welding, cutting, heating and brazing.

1.2.2. Uses advised against
No additional information available

1.3. Details of the supplier of the safety data sheet
The Prince & Izant Companies
12999 Plaza Drive
44130 Cleveland, Ohio - USA
T 001-216-362-7000 - F 001-216-362-7456
support@princeizant.com - www.princeizant.com

1.4. Emergency telephone number
Emergency number : Global: +44 1865 407333 (NCEC)
USA: +1 202 464 2554 (NCEC)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification according to Regulation (EC) No. 1272/2008 [CLP]
Sensitisation — Skin, Category 1 H317
Carcinogenicity, Category 2 H351
Specific target organ toxicity — Repeated exposure, Category 1 H372

Full text of H statements : see section 16

2.2. Label elements
Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) : GHS07 GHS08

Signal word (CLP) : Danger
Hazardous ingredients : nickel

Hazard statements (CLP) : H317 - May cause an allergic skin reaction
                        H351 - Suspected of causing cancer (if inhaled)
                        H372 - Causes damage to organs through prolonged or repeated exposure

Precautionary statements (CLP) : P201 - Obtain special instructions before use
                                 P202 - Do not handle until all safety precautions have been read and understood
                                 P264 - Wash hands thoroughly after handling
                                 P270 - Do not eat, drink or smoke when using this product
                                 P272 - Contaminated work clothing should not be allowed out of the workplace
                                 P302+P352 - IF ON SKIN: Wash with plenty of soap and water
PAL 23, 34, 36, 47, 54, 60, PALNI 25, GE B50TF198 (Solid and Paste)
Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

P314 - Get medical advice/attention if you feel unwell
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention
P362+P364 - Take off contaminated clothing and wash it before reuse
P405 - Store locked up
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

Child-resistant fastening : No
Tactile warning : No

2.3. Other hazards
Adverse physicochemical, human health and environmental effects : Suspected of causing cancer. Causes damage to organs through prolonged or repeated exposure. May cause an allergic skin reaction.
Other hazards not contributing to the classification : None under normal conditions.

SECTION 3: Composition/information on ingredients

3.1. Substance
Not applicable

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>nickel</td>
<td>(CAS No) 7440-02-0 (EC no) 231-111-4 (EC index no) 028-002-00-7</td>
<td>10 - 60</td>
<td>Carc. 2, H351 STOT RE 1, H372 Skin Sens. 1, H317</td>
</tr>
<tr>
<td>Silver substance with a Community workplace exposure limit</td>
<td>(CAS No) 7440-22-4 (EC no) 231-131-3</td>
<td>&lt; 60</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures
First-aid measures general : Get medical advice/attention if you feel unwell.
First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention.
First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/injuries after inhalation : May cause respiratory irritation. May cause cancer by inhalation.
Symptoms/injuries after skin contact : May cause an allergic skin reaction.
Symptoms/injuries after eye contact : Dust from this product may cause eye irritation.
Symptoms/injuries after ingestion : May cause irritation to the respiratory tract and to other mucous membranes.

4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media : Dry powder. Use extinguishing media appropriate for surrounding fire.

5.2. Special hazards arising from the substance or mixture
Fire hazard : The product is not flammable.
Explosion hazard : Product is not explosive.
Reactivity in case of fire : Not known.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters
Precautionary measures fire : No special measures required.
Firefighting instructions : Use extinguishing media appropriate for surrounding fire.
Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Avoid release to the environment.

6.1.1. For non-emergency personnel

Protective equipment: Wear suitable protective clothing, gloves and eye or face protection.

Emergency procedures: Ventilate spillage area. Avoid dust formation. Do not breathe dust, fume. Avoid contact with skin and eyes.

Measures in case of dust release: Where excessive dust may result, use approved respiratory protection equipment.

6.1.2. For emergency responders

Protective equipment: Do not attempt to take action without suitable protective equipment. Wear suitable protective clothing, gloves and eye or face protection. For further information refer to section 8: "Exposure controls/personal protection". Do not breathe Dust, Fumes. Avoid contact with skin and eyes.

Emergency procedures: Ventilate area. Avoid dust formation.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment: Collect spillage.

Methods for cleaning up: This material and its container must be disposed of in a safe way, and as per local legislation. Carefully shovel or sweep up spilled material and place in suitable container. Minimize generation of dust.

Other information: This material and its container must be disposed of as hazardous waste.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For disposal of solid materials or residues refer to section 13: "Disposal considerations".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Ensure good ventilation of the work station. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not breathe dust, fume. Avoid contact with skin and eyes.

Hygiene measures: Always wash hands after handling the product. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: Ensure adequate ventilation, especially in confined areas.

Storage conditions: Store locked up. Store in a well-ventilated place. Keep cool.

Incompatible materials: Acetylene, ammonia, ammonium nitrate, aqua regia, dioxygen, ethylene oxide, chlorine trifluoride, halogens, hydrogen peroxide, hydrazine, hydrazine, mononitrate, hydrazoic acid, hydroxylamine, hydrogen sulfide, performic acid, phosphorus, selenium, sulfur, titanium plus potassium chlorate. Bromates, chlorates and iodates of alkali and alkali earth metals.

Storage area: Store in a well-ventilated place.

Packaging materials: Keep only in original container.

7.3. Specific end use(s)

Other hot work operations with metals.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Silver (7440-22-4)</th>
<th>EU Local name</th>
<th>EU IOELV TWA (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Silver, metallic</td>
<td>0.1 mg/m³</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls: Ensure good ventilation of the work station.

Materials for protective clothing : Wear suitable protective clothing
Hand protection : Protective gloves
Eye protection : Wear tight fitting safety glasses or face shield
Skin and body protection : Wear suitable protective clothing
Respiratory protection : Combined gas/dust mask with filter type P1

Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| Physical state | Solid |
| Appearance | Silver-gray alloy. Metallic wire, rod, strip, paste. |
| Colour | Silver. |
| Odour | Odourless. |
| Odour threshold | No data available |
| pH | No data available |
| Relative evaporation rate (butylacetate=1) | No data available |
| Melting point | No data available |
| Freezing point | Not applicable |
| Boiling point | No data available |
| Flash point | Not applicable |
| Auto-ignition temperature | Not applicable |
| Decomposition temperature | No data available |
| Flammability (solid, gas) | Non flammable |
| Vapour pressure | No data available |
| Relative vapour density at 20 °C | No data available |
| Relative density | Not applicable |
| Solubility | Insoluble in water. |
| Log Pow | No data available |
| Viscosity, kinematic | Not applicable |
| Viscosity, dynamic | No data available |
| Explosive properties | Product is not explosive. |
| Oxidising properties | Oxidising solids Not applicable. |
| Explosive limits | Not applicable |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Acetylene, ammonia, ammonium nitrate, aqua regia, dioxane, ethylene oxide, chlorine trifluoride, halogens, hydrogen peroxide, hydrazine, hydrazine, mononitrate, hydrazoic acid, hydroxyamine, hydrogen sulfide, performic acid, phosphorus, selenium, sulfur, titanium plus potassium chlorate. Bromates, chlorates and iodates of alkali and alkali earth metals.
### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Not classified (Based on available data, the classification criteria are not met)</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified (Based on available data, the classification criteria are not met)</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not classified (Based on available data, the classification criteria are not met)</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>May cause an allergic skin reaction. Long-term exposure to brazing fume, gasses, or dust may contribute to pulmonary irritation or pneumoconiosis.</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified (Based on available data, the classification criteria are not met)</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Suspected of causing cancer (if inhaled).</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified (Based on available data, the classification criteria are not met)</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Not classified (Based on available data, the classification criteria are not met)</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>Causes damage to organs through prolonged or repeated exposure.</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified (Based on available data, the classification criteria are not met)</td>
</tr>
</tbody>
</table>

### SECTION 12: Ecological information

#### 12.1. Toxicity

- **Ecology - general**: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
- **Ecology - water**: The product does not have any known adverse effect on the tested aquatic organisms.

#### 12.2. Persistence and degradability

- **PAL 23, 34, 36, 47, 54, 60, PALNI 25, GE B50TF198 (Solid and Paste)**: The product is not biodegradable.

#### 12.3. Bioaccumulative potential

- **PAL 23, 34, 36, 47, 54, 60, PALNI 25, GE B50TF198 (Solid and Paste)**: Not established.

#### 12.4. Mobility in soil

- **Ecology - soil**: Not established.

#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

- **Other adverse effects**: None known.
- **Additional information**: Avoid release to the environment

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

- **Regional legislation (waste)**: Disposal must be done according to official regulations.
- **Waste treatment methods**: Dispose of contents/container in accordance with licensed collector’s sorting instructions.
- **Waste disposal recommendations**: Dispose of contents/container to a hazardous or special waste collection point.

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

#### 14.1. UN number

Not regulated for transport

#### 14.2. UN proper shipping name

- **Proper Shipping Name (ADR)**: Not applicable
- **Proper Shipping Name (IMDG)**: Not applicable
- **Proper Shipping Name (IATA)**: Not applicable
**PAL 23, 34, 36, 47, 54, 60, PALNI 25, GE B50TF198 (Solid and Paste)**

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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14.3. **Transport hazard class(es)**

<table>
<thead>
<tr>
<th>Class</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADR</td>
<td>Not applicable</td>
</tr>
<tr>
<td>IMDG</td>
<td>Not applicable</td>
</tr>
<tr>
<td>IATA</td>
<td>Not applicable</td>
</tr>
<tr>
<td>ADN</td>
<td>Not applicable</td>
</tr>
<tr>
<td>RID</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

14.4. **Packing group**

<table>
<thead>
<tr>
<th>Group</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADR</td>
<td>Not applicable</td>
</tr>
<tr>
<td>IMDG</td>
<td>Not applicable</td>
</tr>
<tr>
<td>IATA</td>
<td>Not applicable</td>
</tr>
<tr>
<td>ADN</td>
<td>Not applicable</td>
</tr>
<tr>
<td>RID</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

14.5. **Environmental hazards**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dangerous</td>
<td>No</td>
</tr>
<tr>
<td>Marine pollutant</td>
<td>No</td>
</tr>
<tr>
<td>Other</td>
<td>No supplementary information available</td>
</tr>
</tbody>
</table>

14.6. **Special precautions for user**

- **Overland transport**
  No data available

- **Transport by sea**
  No data available

- **Air transport**
  No data available

- **Inland waterway transport**
  No data available

- **Rail transport**
  No data available

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

Not applicable

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**SECTION 15: Regulatory information**

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

15.1.1. **EU-Regulations**

Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances

15.1.2. **National regulations**

No additional information available

15.2. **Chemical safety assessment**

No chemical safety assessment has been carried out
**SECTION 16: Other information**

<table>
<thead>
<tr>
<th>H- and EUH-statements</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carc. 2</td>
<td>Carcinogenicity, Category 2</td>
</tr>
<tr>
<td>Skin Sens. 1</td>
<td>Sensitisation — Skin, Category 1</td>
</tr>
<tr>
<td>STOT RE 1</td>
<td>Specific target organ toxicity — Repeated exposure, Category 1</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction</td>
</tr>
<tr>
<td>H351</td>
<td>Suspected of causing cancer</td>
</tr>
<tr>
<td>H372</td>
<td>Causes damage to organs through prolonged or repeated exposure</td>
</tr>
</tbody>
</table>

**SDS EU (REACH Annex II)**

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.