High Temperature Tag and Label Materials for Hot Metals Processing

Industry Needs
The metals processing industry requires readable barcodes be added to sheets, bars, rolls, slabs, springs, coils, etc. at temperatures of 400+°C. The barcodes are used to identify and track materials from the furnace through to delivery to customers. The materials also help manufacturers assure accurate inventories. Finding a durable barcode tag or label that will survive these harsh processes, stay affixed to the material and be readable throughout the 400+°C process temperatures presents a major challenge to manufacturers.

Polyonics Solutions
Polyonics manufactures thermal transfer printable barcode tag and label materials designed specifically for the unique requirements of tracking very hot materials in the metals processing industry. The barcode tags and labels are constructed of durable print surfaces combined with thick polyimide films and aluminum foils. The tag products include 5 mil white and yellow polyimide constructions as well as a 9 mil white aluminum composite. The label products include 2 mil polyimide films and aluminum foils combined with aggressive 1 and 2 mil acrylic and silicone pressure sensitive adhesives (PSA).

Assuring Accurate Inventories
The Polyonics family of high temperature tag and label materials provides a wide variety of robust ID and tracking solutions for hot metal manufacturers. The polymer coatings provide durable and abrasion resistant print surfaces for long term retention of critical bar code information. The coatings will also not degrade during long-term exposures to elevated temperatures and weather plus resist fading and/or discoloring. This further enhances long-term readability throughout the complete process assuring manufacturers accurate inventories.
Applications

- Identification of red hot metal slabs, billets, pipes, tubes, sheets, rolls, coils, springs, etc.
- Track and trace products from furnace to customer delivery.
- Inventory control
- Post furnace, in-process labeling/tagging
- Annealing, pickling, heat treating, chemical coatings, etc.

Features and Benefits

- High temperature resistance
- High tear resistance (tags)
- Weather resistance
- High Chemical Resistance
- Application of Labels up to 300°C
- High Strength Permanent Bond -40°C to 600°C (labels)
- Thermal Transfer Printable
- Halogen Free
- REACH and RoHS Compliant

Product Line

<table>
<thead>
<tr>
<th>Labels</th>
<th>Film/foil</th>
<th>PSA</th>
<th>Applications</th>
<th>Continuous</th>
<th>Short Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>XF-519</td>
<td>Matte white 2 mil polyimide</td>
<td>1 mil high temperature acrylic</td>
<td>Auto apply, tracking hot aluminum and steel rolls</td>
<td>200 – 225</td>
<td>300</td>
</tr>
<tr>
<td>XF-803</td>
<td>White 2 mil aluminum</td>
<td>1 mil ultra-high temperature silicone</td>
<td>Track and trace hot metal rolls, sheets, tubes, etc.</td>
<td>400 – 500</td>
<td>600</td>
</tr>
<tr>
<td>XF-808</td>
<td>White 2 mil aluminum</td>
<td>2 mil high temperature acrylic</td>
<td>Tracking hot metal rolls, sheets, etc.</td>
<td>200 – 300</td>
<td>350</td>
</tr>
<tr>
<td>XF-610</td>
<td>5 mil white polyimide coated two sides</td>
<td>N/A</td>
<td>Identifying hot coils metals, bars, ingots, rolls, sheets, etc.</td>
<td>300-400</td>
<td>450</td>
</tr>
<tr>
<td>XF-612</td>
<td>5 mil yellow polyimide coated two sides</td>
<td>N/A</td>
<td>Tracking all forms of hot metals</td>
<td>300-400</td>
<td>450</td>
</tr>
<tr>
<td>XT-660</td>
<td>9 mil coated aluminum composite</td>
<td>N/A</td>
<td>Tracking hot metals, springs, etc., through heat treat, name plates, etc.</td>
<td>350-450</td>
<td>500</td>
</tr>
</tbody>
</table>

For further details or to receive samples please contact us at 603.352.1415 or info@polyonics.com