**Bonded Metal**

**Product ID Website**
https://www.forms-surfaces.com/bonded-metal

**Manufacturer**
Forms+Surfaces
30 Pine Street
Pittsburgh, PA 15223

**Contact Name**
Green

**Title**

**Phone**
1-800-451-0410

**Email**
green@forms-surfaces.com

**Description**
Bonded Metal is the product of a unique technology that casts metal granules in a tough, fiber-reinforced polymer matrix. Advanced mold-making techniques assure perfect reproduction of every fine detail in the original patterned surface. The result is lightweight but extremely durable castings with the character and appearance of solid metal.

**Release Date**
2016-09-06

**Expiry Date**
2019-09-06

**HPD URL**

**SUMMARY DISCLOSURE**
The content of this product was assessed for health hazard warnings as required using Pharos.

**Residuals Disclosure**
- Measured 100 ppm (ideal)
- Measured 1000 ppm
- Predicted by process chemistry
- As per MSDS (1,000 & 10,000 ppm)
- Not disclosed
- Other

**Full Disclosure of Intentional Ingredients**
- Yes
- No

**Full Disclosure of Known Hazards**
- Yes
- No

**Disclosure Notes**
The residuals have been imported from Pharos Life Cycle Research. The residuals were imported based on the names and CAS #s of the intentional ingredients, although the names and details have not been shared for proprietary reasons.

**Contents in Descending Order of Quantity**
Undisclosed (Metal Powder), Undisclosed (Fiber-reinforced polymer matrix), Undisclosed (Residual Content)

**Hazardous**
- PBT (Persistent Bioaccumulative Toxic)
- Cancer
- Gene Mutation

**Highest concern GreenScreen score**
- List Translator Benchmark 1
- Neurotoxicity
- Mammal
- Skin or Eye
- Aquatic toxicity
- Land toxicity
- Physical hazard
- Global warming
- Ozone depletion
- Multiple
- Unknown

**Total VOC Content**
Material (g/L) N/A
Regulatory (g/L) N/A

**Does the product contain exempt VOCs?**
- N/A
- Yes
- No

**Are there VOC-free tints available?**
- N/A
- Yes
- No

**Notes**

**Certifications + Compliance**
- VOC Emissions Not tested
- Multi-attribute ISO 14021
- VOC Content N/A
The HPD Standard is solely a declaration of product content and direct health hazards associated with exposure to its individual contents. It is not a full assessment of environmental impacts from the life cycle of this product. It is not an assessment of risks associated with actual use of the product. It does not address the potential health impacts of substances used or created during manufacture that do not appear in the final product as residuals, nor substances created during combustion or other degradation processes.

This Health Product Declaration was generated following the requirements of the noted Standard version and is valid for a total of three years after date of issue or three months after a substantive change of product contents occurs. Users should verify that this Health Product Declaration is compliant with the most current version of the HPD Standard. Accuracy of claims made in this Health Product Declaration is the sole responsibility of the listed manufacturer and certifier (if applicable). The HPD Collaborative does not warrant any claim made herein, explicit or implicit. The HPD Standard is an “open standard” developed and managed by the HPD Collaborative, a nonprofit organization. For more information, visit hpdcollaborative.org.

### CONTENT IN DESCENDING ORDER OF QUANTITY

All ingredients must be assessed for health warnings against Priority Hazard Lists, regardless of disclosure level. Priority Hazard Lists and information on the GreenScreen Benchmarks can be found at www.hpdcollaborative.org/hazardlists.

**GS**: GreenScreen Benchmark; **RC**: Recycled Content, **PC**: Post Consumer, **PI**: Post Industrial (Pre-consumer), **BO**: Both; **Nano**: comprised of nanoscale particles or nanotechnology

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS RN</th>
<th>% weight</th>
<th>GS</th>
<th>RC</th>
<th>Nano</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard A</td>
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<tr>
<td>Hazard B</td>
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<tr>
<td>Hazard C</td>
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<tr>
<td>Hazard D</td>
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<tr>
<td>Hazard E</td>
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</tbody>
</table>

#### Undisclosed (Metal Powder)

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS RN</th>
<th>% weight</th>
<th>GS</th>
<th>RC</th>
<th>Nano</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undisclosed (Metal Powder)</td>
<td></td>
<td>0 - 100%</td>
<td>LT-P1</td>
<td>PI</td>
<td>U</td>
<td>metal powders (aluminum, bronze, nickel silver)</td>
</tr>
</tbody>
</table>

- **CANCER**: EU R-Phrases: R40: Limited evidence of a carcinogenic effect
- **ENDOCRINE**: TEDX: Potential Endocrine Disruptor
- **RESPIRATORY**: AOEC: Asthmagen (ARs) - sensitizer-induced - inhalable forms only
- **MAMMALIAN**: EU R-Phrases: R23: Toxic by inhalation.
- **SKIN IRRITATION**: EU H-Statements: H317 May cause an allergic skin reaction
- **SKIN SENSITIZE**: EU R-Phrases: R43: May cause sensitization by skin contact.
- **ORGAN TOXICANT**: EU R-Phrases: R48: Danger of serious damage to health by prolonged exposure.
- **ACUTE AQUATIC**: EU R-Phrases: R52: Harmful to aquatic organisms.
- **CHRON AQUATIC**: EU H-Statements: H410 - Aquatic Chronic 1 - Very toxic to aquatic life with long lasting effects
- **FLAMMABLE**: EU H-Statements: H250 Catches fire spontaneously if exposed to air
- **REACTIVE**: EU H-Statements: H261 In contact with water releases flammable gases
- **MULTIPLE**: VvVwS: Class 2 Hazard to Waters

All Bonded Metal components are proprietary. Bonded Aluminum contains 28% post-industrial recycled content and 1% post-consumer. Bonded Bronze contains 52% post-industrial and 0% post-consumer. Bonded Nickel Silver contains 39% post-industrial and 1% post-consumer.

#### Undisclosed (Fiber-reinforced polymer matrix)

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS RN</th>
<th>% weight</th>
<th>GS</th>
<th>RC</th>
<th>Nano</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undisclosed (Fiber-reinforced polymer matrix)</td>
<td></td>
<td>0 - 100%</td>
<td>LT-1</td>
<td>PI</td>
<td>U</td>
<td>fiber-reinforced polymer</td>
</tr>
</tbody>
</table>

- **CANCER**: MAK: Carcinogen Group 2 - Considered to be carcinogenic for man (also in EU R-Phrases, IARC)
- **DEVELOPMENTAL**: EU H-Statements: H361d Suspected of damaging the unborn child
All Bonded Metal components are proprietary. Bonded Aluminum contains 28% post-industrial recycled content and 1% post-consumer. Bonded Bronze contains 52% post-industrial and 0% post-consumer. Bonded Nickel Silver contains 39% post-industrial and 1% post-consumer.

<table>
<thead>
<tr>
<th>Undisclosed (Residual Content)</th>
<th>Unknown</th>
<th>R</th>
<th>LT-1</th>
<th>Unknown</th>
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<tbody>
<tr>
<td>PBT</td>
<td>NWMP Priority: Priority PBT (also in EPA PBT, WA PBT, TRI PBT)</td>
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<tr>
<td>CANCER</td>
<td>EPA-C: (1986) Group B2 - Probable human carcinogen (also in NTP-RoC, EU R-Phrases, Prop 65, IARC, MAK)</td>
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<tr>
<td>DEVELOPMENTAL</td>
<td>EU R-Phrases: R63: Possible risk of harm to the unborn child.</td>
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<tr>
<td>REPRODUCTIVE</td>
<td>EU H-Statements: H360FD May damage fertility. May damage the unborn child. (also in EPA Action, EU R-Phrases)</td>
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<tr>
<td>ENDOCRINE</td>
<td>EU ED: Category 2 - In vitro evidence of biological activity related to endocrine disruption (also in TEDX)</td>
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<tr>
<td>GENE MUTATION</td>
<td>EU R-Phrases: R46: May cause heritable genetic damage. (also in EU H-Statements)</td>
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<tr>
<td>RESPIRATORY</td>
<td>AOEC: Asthmagen (ARs) - sensitizer-induced - inhalable forms only (also in EU R-Phrases)</td>
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<tr>
<td>MAMMALIAN</td>
<td>EU R-Phrases: R25: Toxic if swallowed. (also in EU H-Statements)</td>
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<tr>
<td>EYE IRRITATION</td>
<td>EU R-Phrases: R36: Irritating to eyes.</td>
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<tr>
<td>SKIN IRRITATION</td>
<td>EU R-Phrases: R38: Irritating to skin. (also in EU H-Statements)</td>
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<tr>
<td>SKIN SENSITIZE</td>
<td>EU R-Phrases: R43: May cause sensitization by skin contact.</td>
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<tr>
<td>ACUTE AQUATIC</td>
<td>EU H-Statements: H400 - Aquatic Acute 1 - Very toxic to aquatic life / M-Factor of 1000 (also in EU R-Phrases)</td>
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<tr>
<td>CHRON AQUATIC</td>
<td>EU H-Statements: H411 - Aquatic Chronic 2 - Toxic to aquatic life with long lasting effects</td>
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<tr>
<td>FLAMMABLE</td>
<td>EU H-Statements: H225 Highly flammable liquid and vapour.</td>
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<tr>
<td>MULTIPLE</td>
<td>SIN: Classified CMR (Carcinogen, Mutagen &amp;/or Reproductive Toxicant) (also in VwWvS, EPA Action)</td>
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</table>

**CERTIFICATIONS AND COMPLIANCE**

Certifying Party = First: Manufacturer’s self-declaration; Second: Verification by trade association or other interested party; Third: Verification by independent certifier (ideal).

Applicable facilities = Manufacturing sites to which testing applies.

<table>
<thead>
<tr>
<th>Type</th>
<th>Standard or Certification</th>
<th>Certifier or Laboratory</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Certifying Party</td>
<td>Issue Date</td>
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<tr>
<td></td>
<td>Applicable Facilities</td>
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<td></td>
<td>Notes</td>
<td></td>
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</tbody>
</table>

<p>| VOC Emissions | Not tested | | | |</p>
<table>
<thead>
<tr>
<th>Required or Recommended Product</th>
<th>URL for Companion Health Product Declaration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonia-free cleaner/degreaser</td>
<td></td>
</tr>
<tr>
<td>Bonded Metal requires very little maintenance. Routine dust should be removed by periodic vacuuming or with a soft brush. Fingerprints, smudges and more persistent dirt can be removed by using an ammonia-free cleaner/degreaser such as Simple Green.</td>
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**NOTES**