**Section 1: Summary**

**CONTENT INVENTORY**

<table>
<thead>
<tr>
<th>Inventory Reporting Format</th>
<th>Threshold level</th>
<th>Residuals/Impurities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nested Materials Method</td>
<td>100 ppm</td>
<td>Residuals/Impurities Considered in 7 of 10 Materials</td>
</tr>
<tr>
<td>Basic Method</td>
<td>1,000 ppm</td>
<td></td>
</tr>
<tr>
<td>Per GHS SDS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per OSHA MSDS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Nest Methods**

- **Nested Method**
- **Product Threshold**: All Substances Above the Threshold Indicated Are:
  - Characterized: Yes Ex/SC
  - Screened: Yes Ex/SC
  - Identified: Yes Ex/SC

**CONTENT IN DESCENDING ORDER OF QUANTITY**

Summary of product contents and results from screening individual chemical substances against HPD Priority Hazard Lists and the GreenScreen for Safer Chemicals®. The HPD does not assess whether using or handling this product will expose individuals to its chemical substances or any health risk. Refer to Section 2 for further details.

**MATERIAL | SUBSTANCE | RESIDUAL OR IMPURITY**

**GREENSCREEN SCORE | HAZARD TYPE**

- **STAINLESS STEEL**
- **IRON**
- **LT-P1**
- **END CHROMIUM**
- **LT-P1**
- **RES**
- **END**
- **SKI NICKEL**
- **LT-1**
- **RES**
- **CAN**
- **SKI**
- **MAM**
- **MUL**
- **MANGANESE**
- **LT-P1**
- **END**
- **MUL**
- **REP**
- **SILICON**
- **LT-UNK**
- **MOLYBDENUM**
- **LT-UNK**
- **COBALT**
- **LT-1**
- **RES**
- **CAN**
- **SKI**
- **MUL**
- **GEN**
- **REP**
- **COPPER**
- **LT-UNK**
- **TUNGSTEN METAL**
- **LT-UNK**
- **ALUMINUM**
- **3003-H14 ALUMINUM**
- **LT-P1**
- **RES**
- **PHY**
- **END**
- **GALVANIZED STEEL WOVEN MESH (SCREEN)**
- **IRON**
- **LT-P1**
- **END**
- **MANGANESE**
- **LT-P1**
- **END**
- **MUL**
- **REP**
- **CARBON**
- **LT-UNK**
- **CHROMIUM**
- **LT-P1**
- **RES**
- **END**
- **SKI**
- **BRASS ALLOY MESH (SCREEN)**
- **COPPER**
- **LT-UNK**
- **ZINC**
- **LT-P1**
- **AQU**
- **PHY**
- **END**
- **MUL**
- **LEAD**
- **LT-1**
- **DEL**
- **CAN**
- **PBT**
- **REP**
- **MUL**
- **END**
- **GEN**
- **IRON**
- **LT-P1**
- **END**
- **COLD ROLLED STEEL**
- **IRON**
- **LT-P1**
- **END**
- **MANGANESE**
- **LT-P1**
- **END**
- **MUL**
- **REP**
- **CHROMIUM**
- **LT-P1**
- **RES**
- **END**
- **SKI NICKEL**
- **LT-1**
- **RES**
- **CAN**
- **SKI**
- **MAM**
- **MUL**
- **CARBON**
- **LT-UNK**
- **MOLYBDENUM**
- **LT-UNK**
- **COPPER**
- **LT-UNK**
- **STEEL GALVANNEAL**
- **IRON**
- **LT-P1**
- **END**
- **3003-H14 ALUMINUM**
- **LT-P1**
- **RES**
- **PHY**
- **END**
- **NICKEL**
- **LT-1**
- **RES**
- **CAN**
- **SKI**
- **MAM**
- **MUL**
- **CARBON**
- **LT-UNK**
- **MOLYBDENUM**
- **LT-UNK**
- **MANGANESE**
- **LT-P1**
- **END**
- **MUL**
- **REP**
- **TIN**
- **LT-UNK**
- **CHROMIUM**
- **LT-P1**
- **RES**
- **END**
- **SKI**
- **COPPER**
- **LT-UNK**
- **SILICON**
- **LT-UNK**
- **STAINLESS STEEL ALLOY MESH (SCREEN)**
- **CHROMIUM**
- **LT-P1**
- **RES**
- **END**
- **SKI NICKEL**
- **LT-1**
- **RES**
- **CAN**
- **SKI**
- **MAM**
- **MUL**
- **MANGANESE**
- **LT-P1**
- **END**
- **MUL**
- **REP**
- **CARBON**
- **LT-UNK**
- **SILICON**
- **LT-UNK**
- **ALUMINUM ALLOY MESH (SCREEN)**
- **3003-H14 ALUMINUM**
- **LT-P1**
- **RES**
- **PHY**
- **END**
- **NICKEL**
- **LT-1**
- **RES**
- **CAN**
- **SKI**
- **MAM**
- **MUL**
- **COPPER**
- **LT-UNK**
- **MANGANESE**
- **LT-P1**
- **END**
- **MUL**
- **REP**
- **FUSIBLE LINK AND SPRING**
- **COPPER**
- **LT-UNK**
- **STEEL MANUFACTURE, CHEMICALS**
- **LT-UNK**
- **TIN**
- **LT-UNK**
- **BISMUTH**
- **LT-UNK**
- **SELENIUM**
- **LT-P1**
- **RES**
- **END**
- **SKI NICKEL**
- **LT-1**
- **RES**
- **CAN**
- **SKI**
- **MAM**
- **MUL**
- **MANGANESE**
- **LT-P1**
- **END**
- **MUL**
- **REP**
- **CARBON**
- **LT-UNK**
- **SILICON**
- **LT-UNK**
- **ALUMINUM ALLOY MESH (SCREEN)**
- **3003-H14 ALUMINUM**
- **LT-P1**
- **RES**
- **PHY**
- **END**
- **NICKEL**
- **LT-1**
- **RES**
- **CAN**
- **SKI**
- **MAM**
- **MUL**
- **COPPER**
- **LT-UNK**
- **MANGANESE**
- **LT-P1**
- **END**
- **MUL**
- **REP**
- **FUSIBLE LINK AND SPRING**
- **COPPER**
- **LT-UNK**
- **STEEL MANUFACTURE, CHEMICALS**
- **LT-UNK**
- **TIN**
- **LT-UNK**
- **BISMUTH**
- **LT-UNK**
- **SELENIUM**
- **LT-P1**

**Inventory Notes:**

- **Per OSHA MSDS:**
- **Per GHS SDS:**
- **Threshold level:**
- **One or more substances not disclosed by Name (Specific or Generic) and Identifier and/ or one or more Special Condition did not follow guidance.**

**INVENTORY AND SCREENING NOTES:**

This HPD is prepared using the Nested Materials Inventory with product threshold at 1,000 ppm. Activar Construction Products Group - Air Louvers door louvers are manufactured in steel, aluminum, stainless steel or galvanized steel.
VOLATILE ORGANIC COMPOUND (VOC) CONTENT

VOC Content data is not applicable for this product category.

CERTIFICATIONS AND COMPLIANCE

VOC emissions: CDPH Standard Method - Not tested

CONSISTENCY WITH OTHER PROGRAMS

No pre-checks completed or disclosed.

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<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>VERIFIER:</td>
<td>PUBLISHED DATE: 2019-12-20</td>
</tr>
<tr>
<td>○ Yes</td>
<td></td>
<td>EXPiry DATE: 2022-12-20</td>
</tr>
<tr>
<td>☐ No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PREPARER:
VERIFIER:
VERIFICATION #:
This section lists contents in a product based on specific threshold(s) and reports detailed health information including hazards. This HPD uses the inventory method indicated above, which is one of three possible methods:

- Basic Inventory method with Product-level threshold.
- Nested Material Inventory method with Product-level threshold
- Nested Material Inventory method with individual Material-level thresholds

Definitions and requirements for the three inventory methods and requirements for each data field can be found in the HPD Open Standard version 2.1.1, available on the HPDC website at: [www.hpd-collaborative.org/hpd-2-1-1-standard](http://www.hpd-collaborative.org/hpd-2-1-1-standard)

### STAINLESS STEEL

<table>
<thead>
<tr>
<th>%: 98.00 - 100.00</th>
</tr>
</thead>
</table>

**PRODUCT THRESHOLD:** 1000 ppm  
**RESIDUALS AND IMPURITIES CONSIDERED:** No

**RESIDUALS AND IMPURITIES NOTES:** Other trace elements (less than 0.1%) may also be present per the manufacturer. These trace elements generally originate in the raw material used.

**OTHER MATERIAL NOTES:** The ingredients listed are the elements used in alloying stainless steel. Stainless steel contains chromium metal in the zero valence state. As such per the manufacturer, chromium metal does not present any unusual health risk. All vision lites manufactured by Activar Construction Product Group - Air Louvers are #4 stainless steel finish.

### IRON

<table>
<thead>
<tr>
<th>ID: 7439-89-6</th>
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</thead>
</table>

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-12-20

<table>
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<th>%: 45.00 - 90.00</th>
<th>GS: LT-P1</th>
<th>RC: Both</th>
<th>RC: Both</th>
<th>NANO: No</th>
<th>ROLE: Main element</th>
</tr>
</thead>
</table>

**HAZARD TYPE**  
**AGENCY AND LIST TITLES**  
**WARNINGS**

**ENDOCRINE**  
**TEDX - Potential Endocrine Disruptors**  
**Potential Endocrine Disruptor**

**SUBSTANCE NOTES:** Main ingredient in stainless steel.

### CHROMIUM

<table>
<thead>
<tr>
<th>ID: 7440-47-3</th>
</tr>
</thead>
</table>

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-12-20

<table>
<thead>
<tr>
<th>%: 10.00 - 30.00</th>
<th>GS: LT-P1</th>
<th>RC: UNK</th>
<th>RC: UNK</th>
<th>NANO: No</th>
<th>ROLE: Alloying element</th>
</tr>
</thead>
</table>

**HAZARD TYPE**  
**AGENCY AND LIST TITLES**  
**WARNINGS**

**RESPIRATORY**  
**AOEC - Asthmagens**  
**Asthmagen (Rs) - sensitizer-induced**

**ENDOCRINE**  
**TEDX - Potential Endocrine Disruptors**  
**Potential Endocrine Disruptor**

**SKIN SENSITIZE**  
**MAK**  
**Sensitizing Substance Sh - Danger of skin sensitization**

**SUBSTANCE NOTES:** Ingredient used in manufacture of stainless steel.
### Nickel

- **ID:** 7440-02-0
- **HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library
- **HAZARD SCREENING DATE:** 2019-12-20
- **%:** 0.00 - 40.00
- **GS:** LT-1
- **RC:** UNK
- **NANO:** No
- **ROLE:** Alloying element

<table>
<thead>
<tr>
<th>HAZARD TYPE</th>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESPIRATORY</td>
<td>AOEC - Asthmagens</td>
<td>Asthmagen (Rs) - sensitizer-induced</td>
</tr>
<tr>
<td>CANCER</td>
<td>IARC</td>
<td>Group 1 - Agent is Carcinogenic to humans</td>
</tr>
<tr>
<td>CANCER</td>
<td>IARC</td>
<td>Group 2b - Possibly carcinogenic to humans</td>
</tr>
<tr>
<td>CANCER</td>
<td>CA EPA - Prop 65</td>
<td>Carcinogen</td>
</tr>
<tr>
<td>CANCER</td>
<td>US CDC - Occupational Carcinogens</td>
<td>Occupational Carcinogen</td>
</tr>
<tr>
<td>CANCER</td>
<td>US NIH - Report on Carcinogens</td>
<td>Known to be a human Carcinogen</td>
</tr>
<tr>
<td>CANCER</td>
<td>US NIH - Report on Carcinogens</td>
<td>Reasonably Anticipated to be Human Carcinogen</td>
</tr>
<tr>
<td>SKIN SENSITIZE</td>
<td>EU - GHS (H-Statements)</td>
<td>H317 - May cause an allergic skin reaction</td>
</tr>
<tr>
<td>CANCER</td>
<td>EU - GHS (H-Statements)</td>
<td>H351 - Suspected of causing cancer</td>
</tr>
<tr>
<td>ORGAN TOXICANT</td>
<td>EU - GHS (H-Statements)</td>
<td>H372 - Causes damage to organs through prolonged or repeated exposure</td>
</tr>
<tr>
<td>MULTIPLE</td>
<td>German FEA - Substances Hazardous to Waters</td>
<td>Class 2 - Hazard to Waters</td>
</tr>
<tr>
<td>CANCER</td>
<td>MAK</td>
<td>Carcinogen Group 1 - Substances that cause cancer in man</td>
</tr>
<tr>
<td>RESPIRATORY</td>
<td>MAK</td>
<td>Sensitizing Substance Sah - Danger of airway &amp; skin sensitization</td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** Ingredient used in manufacture of stainless steel.

### Manganese

- **ID:** 7439-96-5
- **HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library
- **HAZARD SCREENING DATE:** 2019-12-20
- **%:** 0.00 - 15.00
- **GS:** LT-P1
- **RC:** UNK
- **NANO:** No
- **ROLE:** Alloying element

<table>
<thead>
<tr>
<th>HAZARD TYPE</th>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENDOCRINE</td>
<td>TEDX - Potential Endocrine Disruptors</td>
<td>Potential Endocrine Disruptor</td>
</tr>
<tr>
<td>MULTIPLE</td>
<td>German FEA - Substances Hazardous to Waters</td>
<td>Class 2 - Hazard to Waters</td>
</tr>
<tr>
<td>REPRODUCTIVE</td>
<td>GHS - Japan</td>
<td>Toxic to reproduction - Category 1B [H360]</td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** Ingredient used in manufacture of stainless steel.

### Silicon

- **ID:** 7440-21-3
- **HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library
- **HAZARD SCREENING DATE:** 2019-12-20
- **%:** 0.00 - 40.00
- **GS:** LT-1
- **RC:** UNK
- **NANO:** No
- **ROLE:** Alloying element

<table>
<thead>
<tr>
<th>HAZARD TYPE</th>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>REPRODUCTIVE</td>
<td>GHS - Japan</td>
<td>Toxic to reproduction - Category 1B [H360]</td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** Ingredient used in manufacture of stainless steel.
### MOLYBDENUM

**ID:** 7439-98-7

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library

**HAZARD SCREENING DATE:** 2019-12-20

**%:** 0.00 - 9.50

<table>
<thead>
<tr>
<th>GS</th>
<th>RC</th>
<th>NANO</th>
<th>ROLE</th>
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<tbody>
<tr>
<td>LT-UNK</td>
<td>UNK</td>
<td>No</td>
<td>Alloying element</td>
</tr>
</tbody>
</table>

**HAZARD TYPE**

**AGENCY AND LIST TITLES**

**WARNINGS**

None found

No warnings found on HPD Priority Hazard Lists

**SUBSTANCE NOTES:** Ingredient used in manufacture of stainless steel.

### COBALT

**ID:** 7440-48-4

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library

**HAZARD SCREENING DATE:** 2019-12-20

**%:** 0.00 - 5.00

<table>
<thead>
<tr>
<th>GS</th>
<th>RC</th>
<th>NANO</th>
<th>ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LT-1</td>
<td>UNK</td>
<td>No</td>
<td>Alloying element</td>
</tr>
</tbody>
</table>

**HAZARD TYPE**

**AGENCY AND LIST TITLES**

**WARNINGS**

None found

No warnings found on HPD Priority Hazard Lists

**SUBSTANCE NOTES:** Ingredient used in manufacture of stainless steel.
### Copper

**ID:** 7440-50-8  
**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-12-20  
**%:** 0.00 - 5.00  
**GS:** LT-UNK  
**RC:** UNK  
**NANO:** No  
**ROLE:** Alloying element  

**HAZARD TYPE** | **AGENCY AND LIST TITLES** | **WARNINGS**  
--- | --- | ---  
RESPIRATORY | AOEC - Asthmagens | Asthmagen (Rs) - sensitizer-induced  
RESPIRATORY | AOEC - Asthmagens | Asthmagen (G) - generally accepted  
CANCER | IARC | Group 2a - Agent is probably Carcinogenic to humans  
CANCER | IARC | Group 2b - Possibly carcinogenic to humans  
CANCER | CA EPA - Prop 65 | Carcinogen  
CANCER | US NIH - Report on Carcinogens | Reasonably Anticipated to be Human Carcinogen  
SKIN SENSITIZE | EU - GHS (H-Statements) | H317 - May cause an allergic skin reaction  
RESPIRATORY | EU - GHS (H-Statements) | H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled  
MULTIPLE | ChemSec - SIN List | CMR - Carcinogen, Mutagen &/or Reproductive Toxicant  
MULTIPLE | German FEA - Substances Hazardous to Waters | Class 3 - Severe Hazard to Waters  
CANCER | MAK | Carcinogen Group 2 - Considered to be carcinogenic for man  
RESPIRATORY | MAK | Sensitizing Substance Sah - Danger of airway & skin sensitization  
GENE MUTATION | MAK | Germ Cell Mutagen 3a  
CANCER | GHS - Australia | H350i - May cause cancer by inhalation  
REPRODUCTIVE | GHS - Australia | H360F - May damage fertility  

**SUBSTANCE NOTES:** Ingredient used in manufacture of stainless steel.

### Tungsten Metal

**ID:** 7440-33-7  
**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-12-20  
**%:** 0.00 - 4.00  
**GS:** LT-UNK  
**RC:** UNK  
**NANO:** No  
**ROLE:** Alloying element  

**HAZARD TYPE** | **AGENCY AND LIST TITLES** | **WARNINGS**  
--- | --- | ---  
RESPIRATORY | AOEC - Asthmagens | Asthmagen (Rs) - sensitizer-induced  
RESPIRATORY | AOEC - Asthmagens | Asthmagen (G) - generally accepted  
CANCER | IARC | Group 2a - Agent is probably Carcinogenic to humans  
CANCER | IARC | Group 2b - Possibly carcinogenic to humans  
CANCER | CA EPA - Prop 65 | Carcinogen  
CANCER | US NIH - Report on Carcinogens | Reasonably Anticipated to be Human Carcinogen  
SKIN SENSITIZE | EU - GHS (H-Statements) | H317 - May cause an allergic skin reaction  
RESPIRATORY | EU - GHS (H-Statements) | H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled  
MULTIPLE | ChemSec - SIN List | CMR - Carcinogen, Mutagen &/or Reproductive Toxicant  
MULTIPLE | German FEA - Substances Hazardous to Waters | Class 3 - Severe Hazard to Waters  
CANCER | MAK | Carcinogen Group 2 - Considered to be carcinogenic for man  
RESPIRATORY | MAK | Sensitizing Substance Sah - Danger of airway & skin sensitization  
GENE MUTATION | MAK | Germ Cell Mutagen 3a  
CANCER | GHS - Australia | H350i - May cause cancer by inhalation  
REPRODUCTIVE | GHS - Australia | H360F - May damage fertility  

**SUBSTANCE NOTES:** Ingredient used in manufacture of stainless steel.
### ALUMINUM

**%:** 98.00 - 100.00

**Product Threshold:** 1000 ppm

**Residuals and Impurities Considered:** Yes

**Residuals and Impurities Notes:** Information not provided by the supplier.

**Other Material Notes:** Mill finished aluminum is used in the 1300 all-aluminum louver and the 1400 storm proof aluminum Z-blade louver.

**3003-H14 ALUMINUM**

**ID:** 7429-90-5

<table>
<thead>
<tr>
<th>Hazard Type</th>
<th>Agency and List Titles</th>
<th>Warning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory</td>
<td>AOEC - Asthmagens</td>
<td>Asthmagen (Rs) - sensitizer-induced</td>
</tr>
<tr>
<td>Physical Hazard (Reactive)</td>
<td>EU - GHS (H-Statements)</td>
<td>H228 - Flammable solid</td>
</tr>
<tr>
<td>Physical Hazard (Reactive)</td>
<td>EU - GHS (H-Statements)</td>
<td>H250 - Catches fire spontaneously if exposed to air</td>
</tr>
<tr>
<td>Physical Hazard (Reactive)</td>
<td>EU - GHS (H-Statements)</td>
<td>H261 - In contact with water releases flammable gases</td>
</tr>
<tr>
<td>Endocrine</td>
<td>TEDX - Potential Endocrine Disruptors</td>
<td>Potential Endocrine Disruptor</td>
</tr>
</tbody>
</table>

**Substance Notes:** Ingredient used in the manufacturer of mill finish aluminum louvers.

### GALVANIZED STEEL WOVEN MESH (SCREEN)

**%:** 2.00 - 2.50

**Product Threshold:** 1000 ppm

**Residuals and Impurities Considered:** Yes

**Residuals and Impurities Notes:** Information not provided by the supplier.

**Other Material Notes:** Galvanized steel woven mesh screen used to prevent insects or birds from getting through a louver on an exterior door.

### IRON

**%:** 95.00 - 97.00

**ID:** 7439-89-6

**Hazard Screening Method:** Pharos Chemical and Materials Library

**Hazard Screening Date:** 2019-12-20

**Role:** Main Ingredient
<table>
<thead>
<tr>
<th>HAZARD TYPE</th>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENDOCRINE</td>
<td>TEDX - Potential Endocrine Disruptors</td>
<td>Potential Endocrine Disruptor</td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** Ingredient used in the manufacturer of galvanized steel mesh screen.

**MANGANESE**

ID: 7439-96-5

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library
HAZARD SCREENING DATE: 2019-12-20

<table>
<thead>
<tr>
<th>%: 0.50 - 1.30</th>
<th>GS: LT-P1</th>
<th>RC: UNK</th>
<th>NANO: No</th>
<th>ROLE: Ingredient</th>
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<table>
<thead>
<tr>
<th>HAZARD TYPE</th>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENDOCRINE</td>
<td>TEDX - Potential Endocrine Disruptors</td>
<td>Potential Endocrine Disruptor</td>
</tr>
<tr>
<td>MULTIPLE</td>
<td>German FEA - Substances Hazardous to Waters</td>
<td>Class 2 - Hazard to Waters</td>
</tr>
<tr>
<td>REPRODUCTIVE</td>
<td>GHS - Japan</td>
<td>Toxic to reproduction - Category 1B [H360]</td>
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</tbody>
</table>

**SUBSTANCE NOTES:** Ingredient used in the manufacturer of galvanized steel mesh screen.

**CARBON**

ID: 7440-44-0

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library
HAZARD SCREENING DATE: 2019-12-20

<table>
<thead>
<tr>
<th>%: 0.10 - 0.87</th>
<th>GS: LT-UNK</th>
<th>RC: UNK</th>
<th>NANO: No</th>
<th>ROLE: Ingredient</th>
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</table>

<table>
<thead>
<tr>
<th>HAZARD TYPE</th>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>None found</td>
<td></td>
<td>No warnings found on HPD Priority Hazard Lists</td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** Ingredient used in the manufacturer of galvanized steel mesh screen.

**CHROMIUM**

ID: 7440-47-3

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library
HAZARD SCREENING DATE: 2019-12-20

<table>
<thead>
<tr>
<th>%: 0.00 - 0.15</th>
<th>GS: LT-P1</th>
<th>RC: UNK</th>
<th>NANO: No</th>
<th>ROLE: Ingredient</th>
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</table>

<table>
<thead>
<tr>
<th>HAZARD TYPE</th>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESPIRATORY</td>
<td>AOEC - Asthmagens</td>
<td>Asthmagen (Rs) - sensitizer-induced</td>
</tr>
<tr>
<td>ENDOCRINE</td>
<td>TEDX - Potential Endocrine Disruptors</td>
<td>Potential Endocrine Disruptor</td>
</tr>
<tr>
<td>SKIN SENSITIZE</td>
<td>MAK</td>
<td>Sensitizing Substance Sh - Danger of skin sensitization</td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** Ingredient used in the manufacturer of galvanized steel mesh screen.
### BRASS ALLOY MESH (SCREEN)

**PRODUCT THRESHOLD:** 1000 ppm  
**RESIDUALS AND IMPURITIES CONSIDERED:** Yes

**RESIDUALS AND IMPURITIES NOTES:** Information not provided by the supplier.

**OTHER MATERIAL NOTES:** Brass mesh screen is made from copper alloys.

---

#### COPPER  
**ID:** 7440-50-8

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-12-20

<table>
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<tr>
<th>%: 89.00 - 92.00</th>
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<th>RC: UNK</th>
<th>NANO: No</th>
<th>ROLE: Main Ingredient</th>
</tr>
</thead>
</table>

**HAZARD TYPE**  
- None found  

**AGENCY AND LIST TITLES**  
- **WARNINGS**  
  - No warnings found on HPD Priority Hazard Lists

**SUBSTANCE NOTES:** Ingredient used in the manufacturer of brass alloy mesh screen.

---

#### ZINC  
**ID:** 7440-66-6

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-12-20

<table>
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<tr>
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<th>RC: UNK</th>
<th>NANO: No</th>
<th>ROLE: Ingredient</th>
</tr>
</thead>
</table>

**HAZARD TYPE**  
- **ACUTE AQUATIC**  
  - EU - GHS (H-Statements)  
  - H400 - Very toxic to aquatic life

- **CHRON AQUATIC**  
  - EU - GHS (H-Statements)  
  - H410 - Very toxic to aquatic life with long lasting effects

- **PHYSICAL HAZARD (REACTIVE)**  
  - EU - GHS (H-Statements)  
  - H250 - Catches fire spontaneously if exposed to air

- **PHYSICAL HAZARD (REACTIVE)**  
  - EU - GHS (H-Statements)  
  - H260 - In contact with water releases flammable gases which may ignite spontaneously

- **ENDOCRINE**  
  - TEDX - Potential Endocrine Disruptors  
  - Potential Endocrine Disruptor

- **MULTIPLE**  
  - German FEA - Substances Hazardous to Waters  
  - Class 2 - Hazard to Waters

**SUBSTANCE NOTES:** Ingredient used in the manufacturer of brass alloy mesh screen.

---

#### LEAD  
**ID:** 7439-92-1

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-12-20

<table>
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<th>RC: UNK</th>
<th>NANO: No</th>
<th>ROLE: Ingredient</th>
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</thead>
</table>

**HAZARD TYPE**  
- **DEVELOPMENTAL**  
  - G&L - Neurotoxic Chemicals  
  - Developmental Neurotoxicant

---
<table>
<thead>
<tr>
<th>Category</th>
<th>Source</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CANCER</td>
<td>IARC</td>
<td>Group 2a - Agent is probably Carcinogenic to humans</td>
</tr>
<tr>
<td>CANCER</td>
<td>IARC</td>
<td>Group 2b - Possibly carcinogenic to humans</td>
</tr>
<tr>
<td>CANCER</td>
<td>CA EPA - Prop 65</td>
<td>Carcinogen</td>
</tr>
<tr>
<td>DEVELOPMENTAL</td>
<td>CA EPA - Prop 65</td>
<td>Developmental toxicity</td>
</tr>
<tr>
<td>PBT</td>
<td>US EPA - Priority PBTs (NWMP)</td>
<td>Priority PBT</td>
</tr>
<tr>
<td>PBT</td>
<td>WA DoE - PBT</td>
<td>PBT</td>
</tr>
<tr>
<td>REPRODUCTIVE</td>
<td>CA EPA - Prop 65</td>
<td>Reproductive Toxicity - Female</td>
</tr>
<tr>
<td>REPRODUCTIVE</td>
<td>CA EPA - Prop 65</td>
<td>Reproductive Toxicity - Male</td>
</tr>
<tr>
<td>CANCER</td>
<td>US NIH - Report on Carcinogens</td>
<td>Reasonably Anticipated to be Human Carcinogen</td>
</tr>
<tr>
<td>PBT</td>
<td>US EPA - Toxics Release Inventory PBTs</td>
<td>PBT</td>
</tr>
<tr>
<td>REPRODUCTIVE</td>
<td>EU - SVHC Authorisation List</td>
<td>Toxic to reproduction - Candidate list</td>
</tr>
<tr>
<td>PBT</td>
<td>OSPAR - Priority PBTs &amp; EDs &amp; equivalent concern</td>
<td>PBT - Chemical for Priority Action</td>
</tr>
<tr>
<td>PBT</td>
<td>OR DEQ - Priority Persistent Pollutants</td>
<td>Priority Persistent Pollutant - Tier 1</td>
</tr>
<tr>
<td>DEVELOPMENTAL</td>
<td>US NIH - Reproductive &amp; Developmental Monographs</td>
<td>Clear Evidence of Adverse Effects - Developmental Toxicity</td>
</tr>
<tr>
<td>REPRODUCTIVE</td>
<td>US NIH - Reproductive &amp; Developmental Monographs</td>
<td>Clear Evidence of Adverse Effects - Reproductive Toxicity</td>
</tr>
<tr>
<td>REPRODUCTIVE</td>
<td>EU - GHS (H-Statements)</td>
<td>H360FD - May damage fertility. May damage the unborn child</td>
</tr>
<tr>
<td>DEVELOPMENTAL</td>
<td>EU - GHS (H-Statements)</td>
<td>H362 - May cause harm to breast-fed children</td>
</tr>
<tr>
<td>REPRODUCTIVE</td>
<td>EU - REACH Annex XVII CMRs</td>
<td>Toxic to Reproduction Category 1 - Substances known to impair fertility or cause Developmental Toxicity in humans</td>
</tr>
<tr>
<td>MULTIPLE</td>
<td>ChemSec - SIN List</td>
<td>CMR - Carcinogen, Mutagen &amp;/or Reproductive Toxicant</td>
</tr>
<tr>
<td>ENDOCRINE</td>
<td>TEDX - Potential Endocrine Disruptors</td>
<td>Potential Endocrine Disruptor</td>
</tr>
<tr>
<td>CANCER</td>
<td>MAK</td>
<td>Carcinogen Group 2 - Considered to be carcinogenic for man</td>
</tr>
<tr>
<td>CANCER</td>
<td>GHS - Korea</td>
<td>Carcinogenicity - Category 1 [H350 - May cause cancer]</td>
</tr>
<tr>
<td>REPRODUCTIVE</td>
<td>GHS - Korea</td>
<td>Reproductive toxicity - Category 1 [H360 - May damage fertility or the unborn child]</td>
</tr>
<tr>
<td>REPRODUCTIVE</td>
<td>GHS - New Zealand</td>
<td>6.8A - Known or presumed human reproductive or developmental toxicants</td>
</tr>
<tr>
<td>REPRODUCTIVE</td>
<td>GHS - Japan</td>
<td>Toxic to reproduction - Category 1A [H360]</td>
</tr>
<tr>
<td>GENE MUTATION</td>
<td>MAK</td>
<td>Germ Cell Mutagen 3a</td>
</tr>
<tr>
<td>REPRODUCTIVE</td>
<td>EU - Annex VI CMRs</td>
<td>Reproductive Toxicity - Category 1A</td>
</tr>
<tr>
<td>DEVELOPMENTAL</td>
<td>GHS - Australia</td>
<td>H360Df - May damage the unborn child. Suspected of damaging fertility</td>
</tr>
<tr>
<td>REPRODUCTIVE</td>
<td>GHS - Norway</td>
<td>Reproductive Toxicity - Category 1A</td>
</tr>
<tr>
<td>DEVELOPMENTAL</td>
<td>GHS - Australia</td>
<td>Reproductive Toxicity - Category 1A</td>
</tr>
</tbody>
</table>
### IRON

**ID:** 7439-89-6  

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  

**HAZARD SCREENING DATE:** 2019-12-20  

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<th>%:</th>
<th>0.00 - 0.05</th>
<th>GS: LT-P1</th>
<th>RC: UNK</th>
<th>NANO: No</th>
<th>ROLE: Ingredient</th>
</tr>
</thead>
</table>

**HAZARD TYPE**  

**AGENCY AND LIST TITLES**  

**WARNINGS**  

**ENDOCRINE**  

**TEDX - Potential Endocrine Disruptors**  

**Potential Endocrine Disruptor**

**SUBSTANCE NOTES:** Ingredient used in the manufacturer of brass alloy mesh screen.

---

### COLD ROLLED STEEL

**%:** 1.00 - 100.00  

**PRODUCT THRESHOLD:** 1000 ppm  

**RESIDUALS AND IMPURITIES CONSIDERED:** No  

**RESIDUALS AND IMPURITIES NOTES:** Residuals and impurities not considered. Only intentionally added ingredients are detailed in this HPD.  

**OTHER MATERIAL NOTES:** Cold rolled steel is the standard material used to manufacture vision lites. Vision lites are also available in galvanneal steel and stainless steel.

---

### IRON

**ID:** 7439-89-6  

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  

**HAZARD SCREENING DATE:** 2019-12-20  

<table>
<thead>
<tr>
<th>%:</th>
<th>96.00 - 99.00</th>
<th>GS: LT-P1</th>
<th>RC: Both</th>
<th>NANO: No</th>
<th>ROLE: Main element</th>
</tr>
</thead>
</table>

**HAZARD TYPE**  

**AGENCY AND LIST TITLES**  

**WARNINGS**  

**ENDOCRINE**  

**TEDX - Potential Endocrine Disruptors**  

**Potential Endocrine Disruptor**

**SUBSTANCE NOTES:** Cold rolled steel formed into louvers.

---

### MANGANESE

**ID:** 7439-96-5  

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  

**HAZARD SCREENING DATE:** 2019-12-20  

<table>
<thead>
<tr>
<th>%:</th>
<th>0.00 - 2.00</th>
<th>GS: LT-P1</th>
<th>RC: UNK</th>
<th>NANO: No</th>
<th>ROLE: Alloying element</th>
</tr>
</thead>
</table>

**HAZARD TYPE**  

**AGENCY AND LIST TITLES**  

**WARNINGS**
<table>
<thead>
<tr>
<th>HAZARD TYPE</th>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENDOCRINE</td>
<td>TEDX - Potential Endocrine Disruptors</td>
<td>Potential Endocrine Disruptor</td>
</tr>
<tr>
<td>MULTIPLE</td>
<td>German FEA - Substances Hazardous to Waters</td>
<td>Class 2 - Hazard to Waters</td>
</tr>
<tr>
<td>REPRODUCTIVE</td>
<td>GHS - Japan</td>
<td>Toxic to reproduction - Category 1B [H360]</td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** Alloy included in steel.

### CHROMIUM

**ID:** 7440-47-3

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library

**HAZARD SCREENING DATE:** 2019-12-20

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<th>%: 0.00 - 1.00</th>
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<th>RC: UNK</th>
<th>NANO: No</th>
<th>ROLE: Alloying element</th>
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<table>
<thead>
<tr>
<th>HAZARD TYPE</th>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESPIRATORY</td>
<td>AOEC - Asthmagens</td>
<td>Asthmagen (Rs) - sensitizer-induced</td>
</tr>
<tr>
<td>ENDOCRINE</td>
<td>TEDX - Potential Endocrine Disruptors</td>
<td>Potential Endocrine Disruptor</td>
</tr>
<tr>
<td>SKIN SENSITIZE</td>
<td>MAK</td>
<td>Sensitizing Substance Sh - Danger of skin sensitization</td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** Alloy used in steel.

### NICKEL

**ID:** 7440-02-0

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library

**HAZARD SCREENING DATE:** 2019-12-20

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<th>RC: UNK</th>
<th>NANO: No</th>
<th>ROLE: Alloying element</th>
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</table>

<table>
<thead>
<tr>
<th>HAZARD TYPE</th>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESPIRATORY</td>
<td>AOEC - Asthmagens</td>
<td>Asthmagen (Rs) - sensitizer-induced</td>
</tr>
<tr>
<td>ENDOCRINE</td>
<td>TEDX - Potential Endocrine Disruptors</td>
<td>Potential Endocrine Disruptor</td>
</tr>
<tr>
<td>SKIN SENSITIZE</td>
<td>MAK</td>
<td>Sensitizing Substance Sh - Danger of skin sensitization</td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** Alloy used in steel.
<table>
<thead>
<tr>
<th>HAZARD TYPE</th>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESPIRATORY</td>
<td>AOEC - Asthmagens</td>
<td>Asthmagen (Rs) - sensitizer-induced</td>
</tr>
<tr>
<td>CANCER</td>
<td>IARC</td>
<td>Group 1 - Agent is Carcinogenic to humans</td>
</tr>
<tr>
<td>CANCER</td>
<td>IARC</td>
<td>Group 2b - Possibly carcinogenic to humans</td>
</tr>
<tr>
<td>CANCER</td>
<td>CA EPA - Prop 65</td>
<td>Carcinogen</td>
</tr>
<tr>
<td>CANCER</td>
<td>US CDC - Occupational Carcinogens</td>
<td>Occupational Carcinogen</td>
</tr>
<tr>
<td>CANCER</td>
<td>US NIH - Report on Carcinogens</td>
<td>Known to be a human Carcinogen</td>
</tr>
<tr>
<td>CANCER</td>
<td>US NIH - Report on Carcinogens</td>
<td>Reasonably Anticipated to be Human Carcinogen</td>
</tr>
<tr>
<td>SKIN SENSITIZE</td>
<td>EU - GHS (H-Statements)</td>
<td>H317 - May cause an allergic skin reaction</td>
</tr>
<tr>
<td>CANCER</td>
<td>EU - GHS (H-Statements)</td>
<td>H351 - Suspected of causing cancer</td>
</tr>
<tr>
<td>ORGAN TOXICANT</td>
<td>EU - GHS (H-Statements)</td>
<td>H372 - Causes damage to organs through prolonged or repeated exposure</td>
</tr>
<tr>
<td>MULTIPLE</td>
<td>German FEA - Substances Hazardous to Waters</td>
<td>Class 2 - Hazard to Waters</td>
</tr>
<tr>
<td>CANCER</td>
<td>MAK</td>
<td>Carcinogen Group 1 - Substances that cause cancer in man</td>
</tr>
<tr>
<td>RESPIRATORY</td>
<td>MAK</td>
<td>Sensitizing Substance Sah - Danger of airway &amp; skin sensitization</td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** Alloy used in steel.

---

**CARBON**

<table>
<thead>
<tr>
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<th>HAZARD SCREENING DATE: 2019-12-20</th>
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<tbody>
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<td></td>
<td>RC: UNK</td>
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<td>NANO: No</td>
</tr>
<tr>
<td></td>
<td>ROLE: Alloying element</td>
</tr>
<tr>
<td>None found</td>
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**SUBSTANCE NOTES:** Alloy used in steel.

---

**MOLYBDENUM**

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<th>HAZARD SCREENING DATE: 2019-12-20</th>
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<tbody>
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<td>ROLE: Alloying element</td>
</tr>
<tr>
<td>None found</td>
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</table>

**SUBSTANCE NOTES:** No warnings found on HPD Priority Hazard Lists.
<table>
<thead>
<tr>
<th>Substance</th>
<th>ID</th>
<th>Hazard Screening Method</th>
<th>Hazard Screening Date</th>
<th>%</th>
<th>GS</th>
<th>RC</th>
<th>Nano</th>
<th>Role</th>
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<tbody>
<tr>
<td>Copper</td>
<td>7440-50-8</td>
<td>Pharos Chemical and Materials Library</td>
<td>2019-12-20</td>
<td>0.00 - 0.60</td>
<td>LT-UNK</td>
<td>UNK</td>
<td>No</td>
<td>Alloying element</td>
</tr>
<tr>
<td>Steel Galvanneal</td>
<td></td>
<td></td>
<td></td>
<td>1.00 - 100.00</td>
<td>LT-P1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iron</td>
<td>7439-89-6</td>
<td>Pharos Chemical and Materials Library</td>
<td>2019-12-20</td>
<td>90.00 - 99.00</td>
<td>LT-P1</td>
<td>PostC</td>
<td>No</td>
<td>Main element</td>
</tr>
<tr>
<td>3003-H14 Aluminum</td>
<td>7429-90-5</td>
<td>Pharos Chemical and Materials Library</td>
<td>2019-12-20</td>
<td>0.10 - 10.50</td>
<td>LT-P1</td>
<td>UNK</td>
<td>No</td>
<td>Alloying element</td>
</tr>
</tbody>
</table>

**Substance Notes:**
- Copper: Alloy used in steel.
- Steel Galvanneal: Ingredient of galvanneal steel.
- Iron: Main element in steel.
- 3003-H14 Aluminum: Alloying element.
<table>
<thead>
<tr>
<th>HAZARD TYPE</th>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESPIRATORY</td>
<td>AOEC - Asthmagens</td>
<td>Asthmagen (Rs) - sensitizer-induced</td>
</tr>
<tr>
<td>PHYSICAL HAZARD (REACTIVE)</td>
<td>EU - GHS (H-Statements)</td>
<td>H228 - Flammable solid</td>
</tr>
<tr>
<td>PHYSICAL HAZARD (REACTIVE)</td>
<td>EU - GHS (H-Statements)</td>
<td>H250 - Catches fire spontaneously if exposed to air</td>
</tr>
<tr>
<td>PHYSICAL HAZARD (REACTIVE)</td>
<td>EU - GHS (H-Statements)</td>
<td>H261 - In contact with water releases flammable gases</td>
</tr>
</tbody>
</table>

**ENDOCRINE**

<table>
<thead>
<tr>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEDX - Potential Endocrine Disruptors</td>
<td>Potential Endocrine Disruptor</td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** Ingredient in galvanneal steel.

---

**NICKEL**

<table>
<thead>
<tr>
<th>HAZARD SCREENING METHOD:</th>
<th>Pharos Chemical and Materials Library</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAZARD SCREENING DATE:</td>
<td>2019-12-20</td>
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</tbody>
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<th>%: 0.10 - 9.70</th>
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<th>ROLE: Alloying element</th>
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</table>

**HAZARD TYPE**

<table>
<thead>
<tr>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESPIRATORY</td>
<td>Asthmagen (Rs) - sensitizer-induced</td>
</tr>
<tr>
<td>CANCER</td>
<td>Group 1 - Agent is Carcinogenic to humans</td>
</tr>
<tr>
<td>CANCER</td>
<td>Group 2b - Possibly carcinogenic to humans</td>
</tr>
<tr>
<td>CANCER</td>
<td>Occupational Carcinogen</td>
</tr>
<tr>
<td>CANCER</td>
<td>Known to be a human Carcinogen</td>
</tr>
<tr>
<td>CANCER</td>
<td>Reasonably Anticipated to be Human Carcinogen</td>
</tr>
<tr>
<td>SKIN SENSITIZE</td>
<td>H317 - May cause an allergic skin reaction</td>
</tr>
<tr>
<td>ORGAN TOXICANT</td>
<td>H351 - Suspected of causing cancer</td>
</tr>
<tr>
<td>MULTIPLE</td>
<td>H372 - Causes damage to organs through prolonged or repeated exposure</td>
</tr>
<tr>
<td>CANCER</td>
<td>Class 2 - Hazard to Waters</td>
</tr>
<tr>
<td>RESPIRATORY</td>
<td>Carcinogen Group 1 - Substances that cause cancer in man</td>
</tr>
<tr>
<td>RESPIRATORY</td>
<td>Sensitizing Substance Sah - Danger of airway &amp; skin sensitization</td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** Ingredient in galvanneal steel.

---

**CARBON**

| ID: 7440-44-0 |

**HAZARD SCREENING METHOD: German FEA - Substances Hazardous to Waters**

<table>
<thead>
<tr>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAK</td>
<td>Carcinogen Group 1 - Substances that cause cancer in man</td>
</tr>
<tr>
<td>MAK</td>
<td>Sensitizing Substance Sah - Danger of airway &amp; skin sensitization</td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** Ingredient in galvanneal steel.
<table>
<thead>
<tr>
<th>Substance</th>
<th>ID</th>
<th>HAZARD SCREENING METHOD</th>
<th>HAZARD SCREENING DATE</th>
<th>%:</th>
<th>GS</th>
<th>RC</th>
<th>NANO</th>
<th>ROLE</th>
<th>HAZARD TYPE</th>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
<th>SUBSTANCE NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molybdenum</td>
<td>7439-98-7</td>
<td>Pharos Chemical and Materials Library</td>
<td>2019-12-20</td>
<td>0.10-5.00</td>
<td>LT-UNK</td>
<td>UNK</td>
<td>No</td>
<td>Alloying element</td>
<td>None found</td>
<td>No warnings found on HPD Priority Hazard Lists</td>
<td>Ingredient in galvanneal steel.</td>
<td></td>
</tr>
<tr>
<td>Manganese</td>
<td>7439-96-5</td>
<td>Pharos Chemical and Materials Library</td>
<td>2019-12-20</td>
<td>0.10-4.50</td>
<td>LT-P1</td>
<td>UNK</td>
<td>No</td>
<td>Alloying element</td>
<td>None found</td>
<td>No warnings found on HPD Priority Hazard Lists</td>
<td>Ingredient used in manufacture of galvanneal steel.</td>
<td></td>
</tr>
<tr>
<td>Tin</td>
<td>7440-31-5</td>
<td>Pharos Chemical and Materials Library</td>
<td>2019-12-20</td>
<td>0.10-3.50</td>
<td>LT-UNK</td>
<td>UNK</td>
<td>No</td>
<td>Alloying element</td>
<td>None found</td>
<td>No warnings found on HPD Priority Hazard Lists</td>
<td>Ingredient used in manufacture of galvanneal steel.</td>
<td></td>
</tr>
</tbody>
</table>
CHROMIUM

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library
HAZARD SCREENING DATE: 2019-12-20

%: 0.10 - 3.00
GS: LT-P1
RC: UNK
NANO: No
ROLE: Alloying element

RESPIRATORY
AOEC - Asthmagens
Asthmagen (Rs) - sensitizer-induced

ENDOCRINE
TEDX - Potential Endocrine Disruptors
Potential Endocrine Disruptor

SKIN SENSITIZE
MAK
Sensitizing Substance Sh - Danger of skin sensitization

SUBSTANCE NOTES: Ingredient used in manufacture of galvanneal steel.

COPPER

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library
HAZARD SCREENING DATE: 2019-12-20

%: 0.10 - 3.00
GS: LT-UNK
RC: UNK
NANO: No
ROLE: Alloying element

None found
No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: Ingredient used in manufacture of galvanneal steel.

SILICON

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library
HAZARD SCREENING DATE: 2019-12-20

%: 0.10 - 2.00
GS: LT-UNK
RC: UNK
NANO: No
ROLE: Alloying element

None found
No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: Ingredient used in manufacture of galvanneal steel.

STAINLESS STEEL ALLOY MESH (SCREEN)

%: 1.00 - 2.00

PRODUCT THRESHOLD: 1000 ppm
RESIDUALS AND IMPURITIES CONSIDERED: Yes

RESIDUALS AND IMPURITIES NOTES: Information not provided by supplier.

OTHER MATERIAL NOTES: Stainless steel alloy woven mesh used for insect or bird screen.

CHROMIUM

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library
HAZARD SCREENING DATE: 2019-12-20
### NICKEL

**ID:** 7440-02-0

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library

<table>
<thead>
<tr>
<th>HAZARD TYPE</th>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESPIRATORY</td>
<td>AOEC - Asthmagens</td>
<td>Asthmagen (Rs) - sensitizer-induced</td>
</tr>
<tr>
<td>CANCER</td>
<td>IARC</td>
<td>Group 1 - Agent is Carcinogenic to humans</td>
</tr>
<tr>
<td>CANCER</td>
<td>IARC</td>
<td>Group 2b - Possibly carcinogenic to humans</td>
</tr>
<tr>
<td>CANCER</td>
<td>CA EPA - Prop 65</td>
<td>Carcinogen</td>
</tr>
<tr>
<td>CANCER</td>
<td>US CDC - Occupational Carcinogens</td>
<td>Occupational Carcinogen</td>
</tr>
<tr>
<td>CANCER</td>
<td>US NIH - Report on Carcinogens</td>
<td>Known to be a human Carcinogen</td>
</tr>
<tr>
<td>CANCER</td>
<td>US NIH - Report on Carcinogens</td>
<td>Reasonably Anticipated to be Human Carcinogen</td>
</tr>
<tr>
<td>SKIN SENSITIZE</td>
<td>EU - GHS (H-Statements)</td>
<td>H317 - May cause an allergic skin reaction</td>
</tr>
<tr>
<td>CANCER</td>
<td>EU - GHS (H-Statements)</td>
<td>H351 - Suspected of causing cancer</td>
</tr>
<tr>
<td>ORGAN TOXICANT</td>
<td>EU - GHS (H-Statements)</td>
<td>H372 - Causes damage to organs through prolonged or repeated exposure</td>
</tr>
<tr>
<td>MULTIPLE</td>
<td>German FEA - Substances Hazardous to Waters</td>
<td>Class 2 - Hazard to Waters</td>
</tr>
<tr>
<td>CANCER</td>
<td>MAK</td>
<td>Carcinogen Group 1 - Substances that cause cancer in man</td>
</tr>
<tr>
<td>RESPIRATORY</td>
<td>MAK</td>
<td>Sensitizing Substance Sah - Danger of airway &amp; skin sensitization</td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** Ingredient used in the manufacturer of stainless steel mesh screen.

### MANGANESE

**ID:** 7439-96-5

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library

<table>
<thead>
<tr>
<th>HAZARD TYPE</th>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESPIRATORY</td>
<td>AOEC - Asthmagens</td>
<td>Asthmagen (Rs) - sensitizer-induced</td>
</tr>
<tr>
<td>CANCER</td>
<td>IARC</td>
<td>Group 1 - Agent is Carcinogenic to humans</td>
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<tr>
<td>CANCER</td>
<td>CA EPA - Prop 65</td>
<td>Carcinogen</td>
</tr>
<tr>
<td>CANCER</td>
<td>US CDC - Occupational Carcinogens</td>
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<tr>
<td>CANCER</td>
<td>US NIH - Report on Carcinogens</td>
<td>Known to be a human Carcinogen</td>
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<td>CANCER</td>
<td>US NIH - Report on Carcinogens</td>
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<tr>
<td>SKIN SENSITIZE</td>
<td>EU - GHS (H-Statements)</td>
<td>H317 - May cause an allergic skin reaction</td>
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<tr>
<td>CANCER</td>
<td>EU - GHS (H-Statements)</td>
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<td>H372 - Causes damage to organs through prolonged or repeated exposure</td>
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<td>MULTIPLE</td>
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<tr>
<td>CANCER</td>
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<td>Carcinogen Group 1 - Substances that cause cancer in man</td>
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<tr>
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<td>MAK</td>
<td>Sensitizing Substance Sah - Danger of airway &amp; skin sensitization</td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** Ingredient used in the manufacturer of stainless steel mesh screen.
ENDOCRINE
TEDX - Potential Endocrine Disruptors
Potential Endocrine Disruptor

MULTIPLE
German FEA - Substances Hazardous to Waters
Class 2 - Hazard to Waters

REPRODUCTIVE
GHS - Japan
Toxic to reproduction - Category 1B [H360]

SUBSTANCE NOTES: Ingredient used in the manufacturer of stainless steel mesh screen.

CARBON
ID: 7440-44-0
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library
HAZARD SCREENING DATE: 2019-12-20
%
0.00 - 0.15
GS: LT-UNK
RC: UNK
NANO: No
ROLE: Ingredient

None found
No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: Ingredient used in the manufacturer of stainless steel mesh screen.

SILICON
ID: 7440-21-3
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library
HAZARD SCREENING DATE: 2019-12-20
%
0.00 - 0.75
GS: LT-UNK
RC: UNK
NANO: No
ROLE: Ingredient

None found
No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: Ingredient used in the manufacturer of stainless steel mesh screen.

ALUMINUM ALLOY MESH (SCREEN)
%
1.00 - 2.00
PRODUCT THRESHOLD: 1000 ppm
RESIDUALS AND IMPURITIES CONSIDERED: Yes

RESIDUALS AND IMPURITIES NOTES: Information not provided by the supplier.

OTHER MATERIAL NOTES: One of the choices for screen material is an aluminum mesh screen.

3003-H14 ALUMINUM
ID: 7429-90-5
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library
HAZARD SCREENING DATE: 2019-12-20
%
98.00 - 99.00
GS: LT-P1
RC: UNK
NANO: No
ROLE: Main Ingredient
<table>
<thead>
<tr>
<th>HAZARD TYPE</th>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESPIRATORY</td>
<td>AOEC - Asthmagens</td>
<td>Asthmagen (Rs) - sensitizer-induced</td>
</tr>
<tr>
<td>PHYSICAL HAZARD (REACTIVE)</td>
<td>EU - GHS (H-Statements)</td>
<td>H228 - Flammable solid</td>
</tr>
<tr>
<td>PHYSICAL HAZARD (REACTIVE)</td>
<td>EU - GHS (H-Statements)</td>
<td>H250 - Catches fire spontaneously if exposed to air</td>
</tr>
<tr>
<td>PHYSICAL HAZARD (REACTIVE)</td>
<td>EU - GHS (H-Statements)</td>
<td>H261 - In contact with water releases flammable gases</td>
</tr>
<tr>
<td>ENDOCRINE</td>
<td>TEDX - Potential Endocrine Disruptors</td>
<td>Potential Endocrine Disruptor</td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** Ingredient used in the manufacturer of aluminum mesh screen.

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**NICKEL**

**ID:** 7440-02-0

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library

**HAZARD SCREENING DATE:** 2019-12-20

<table>
<thead>
<tr>
<th>%: 0.00 - 0.06</th>
<th>GS: LT-1</th>
<th>RD: UNK</th>
<th>NANO: No</th>
<th>ROLE: Ingredient</th>
</tr>
</thead>
</table>

**HAZARD TYPE**

<table>
<thead>
<tr>
<th>AGENCY AND LIST TITLES</th>
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<tr>
<td>CANCER</td>
<td>US NIH - Report on Carcinogens</td>
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<tr>
<td>CANCER</td>
<td>US NIH - Report on Carcinogens</td>
</tr>
<tr>
<td>SKIN SENSITIZE</td>
<td>EU - GHS (H-Statements)</td>
</tr>
<tr>
<td>CANCER</td>
<td>EU - GHS (H-Statements)</td>
</tr>
<tr>
<td>ORGAN TOXICANT</td>
<td>EU - GHS (H-Statements)</td>
</tr>
<tr>
<td>MULTIPLE</td>
<td>German FEA - Substances Hazardous to Waters</td>
</tr>
<tr>
<td>CANCER</td>
<td>MAK</td>
</tr>
<tr>
<td>RESPIRATORY</td>
<td>MAK</td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** Ingredient used in the manufacturer of aluminum mesh screen.

---

**COPPER**

**ID:** 7440-50-8

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library

**HAZARD SCREENING DATE:** 2019-12-20

<table>
<thead>
<tr>
<th>%: 0.00 - 0.06</th>
<th>GS: LT-1</th>
<th>RD: UNK</th>
<th>NANO: No</th>
<th>ROLE: Ingredient</th>
</tr>
</thead>
</table>

**HAZARD TYPE**

<table>
<thead>
<tr>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
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</thead>
<tbody>
<tr>
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<td>AOEC - Asthmagens</td>
</tr>
<tr>
<td>CANCER</td>
<td>IARC</td>
</tr>
<tr>
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<tr>
<td>CANCER</td>
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</tr>
<tr>
<td>CANCER</td>
<td>US NIH - Report on Carcinogens</td>
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<td>CANCER</td>
<td>US NIH - Report on Carcinogens</td>
</tr>
<tr>
<td>SKIN SENSITIZE</td>
<td>EU - GHS (H-Statements)</td>
</tr>
<tr>
<td>CANCER</td>
<td>EU - GHS (H-Statements)</td>
</tr>
<tr>
<td>ORGAN TOXICANT</td>
<td>EU - GHS (H-Statements)</td>
</tr>
<tr>
<td>MULTIPLE</td>
<td>German FEA - Substances Hazardous to Waters</td>
</tr>
<tr>
<td>CANCER</td>
<td>MAK</td>
</tr>
<tr>
<td>RESPIRATORY</td>
<td>MAK</td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** Ingredient used in the manufacturer of aluminum mesh screen.
### Manganese

**Id:** 7439-96-5  
**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-12-20  
**%:** 0.00 - 0.05  
**GS:** LT-P1  
**RC:** UNK  
**NANO:** No  
**ROLE:** Ingredient  
**WARNINGS:**  
None found  
No warnings found on HPD Priority Hazard Lists  
**SUBSTANCE NOTES:** Ingredient used in the manufacturer of aluminum mesh screen.

### Fusible Link and Spring

**%:** 0.50 - 1.00  
**PRODUCT THRESHOLD:** 1000 ppm  
**RESIDUALS AND IMPURITIES CONSIDERED:** Yes  
**RESIDUALS AND IMPURITIES NOTES:** Information is not provided by the supplier.  
**OTHER MATERIAL NOTES:** The fusible link is part of the 1900 A fire rated louver and allows the operable blades to close one the link has melted (165F). 1900 A is the only louver that has this feature.

### Copper

**Id:** 7440-50-8  
**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-12-20  
**%:** 1.00 - 2.00  
**GS:** LT-UNK  
**RC:** UNK  
**NANO:** No  
**ROLE:** Ingredient  
**WARNINGS:**  
None found  
No warnings found on HPD Priority Hazard Lists  
**SUBSTANCE NOTES:** Used in creating Bismuth Alloy to soften the steel and allow the fusible link to melt at 165 degrees F.

### Steel Manufacture, Chemicals

**Id:** 65997-19-5  
**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-12-20  
**%:** 0.50 - 1.00  
**GS:** LT-UNK  
**RC:** UNK  
**NANO:** No  
**ROLE:** Ingredient  
**WARNINGS:**  
None found  
No warnings found on HPD Priority Hazard Lists  
**SUBSTANCE NOTES:** Used in creating Bismuth Alloy to soften the steel and allow the fusible link to melt at 165 degrees F.
### TIN

**ID:** 7440-31-5

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library

**HAZARD SCREENING DATE:** 2019-12-20

<table>
<thead>
<tr>
<th>%:</th>
<th>GS</th>
<th>RC</th>
<th>NANO</th>
<th>ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00 - 0.50</td>
<td>LT-UNK</td>
<td>UNK</td>
<td>No</td>
<td>Ingredient</td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** One of the ingredients in the fusible link for the 1900 A louver.

### BISMUTH

**ID:** 7440-69-9

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library

**HAZARD SCREENING DATE:** 2019-12-20

<table>
<thead>
<tr>
<th>%:</th>
<th>GS</th>
<th>RC</th>
<th>NANO</th>
<th>ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00 - 0.50</td>
<td>LT-UNK</td>
<td>UNK</td>
<td>No</td>
<td>Ingredient</td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** Used in making Bismuth Alloy which softens the steel allowing it to melt at 165 degrees F.

### SELENIUM

**ID:** 7782-49-2

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library

**HAZARD SCREENING DATE:** 2019-12-20

<table>
<thead>
<tr>
<th>%:</th>
<th>GS</th>
<th>RC</th>
<th>NANO</th>
<th>ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00 - 1.00</td>
<td>LT-P1</td>
<td>UNK</td>
<td>No</td>
<td>Ingredient</td>
</tr>
</tbody>
</table>

**PBT**
- OR DEQ - Priority Persistent Pollutants
  - Priority Persistent Pollutant - Tier 1

**MAMMALIAN**
- EU - GHS (H-Statements)
  - H301 - Toxic if swallowed

**MAMMALIAN**
- EU - GHS (H-Statements)
  - H331 - Toxic if inhaled

**MULTIPLE**
- German FEA - Substances Hazardous to Waters
  - Class 2 - Hazard to Waters

**CANCER**
- MAK
  - Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification

**SUBSTANCE NOTES:** Used in bismuth alloy.
### Nickel

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-12-20

<table>
<thead>
<tr>
<th>%</th>
<th>GS</th>
<th>RC</th>
<th>NANO</th>
<th>ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00 - 1.00</td>
<td>LT-1</td>
<td>UNK</td>
<td>No</td>
<td>Ingredient</td>
</tr>
</tbody>
</table>

**HAZARD TYPE**  
**AGENCY AND LIST TITLES**  
**WARNINGS**

- **RESPIRATORY**  
  - AOEC - Asthmagens  
  - Asthmagen (Rs) - sensitizer-induced
- **CANCER**  
  - IARC  
  - Group 1 - Agent is Carcinogenic to humans
  - IARC  
  - Group 2b - Possibly carcinogenic to humans
  - CA EPA - Prop 65  
  - Carcinogen
  - US CDC - Occupational Carcinogens  
  - Occupational Carcinogen
  - US NIH - Report on Carcinogens  
  - Known to be a human Carcinogen
  - US NIH - Report on Carcinogens  
  - Reasonably Anticipated to be Human Carcinogen

**SKIN SENSITIZE**  
**EU - GHS (H-Statements)**  
**WARNINGS**

- H317 - May cause an allergic skin reaction

**ORGAN TOXICANT**  
**EU - GHS (H-Statements)**  
**WARNINGS**

- H351 - Suspected of causing cancer

**MULTIPLE**  
**German FEA - Substances Hazardous to Waters**  
**WARNINGS**

- Class 2 - Hazard to Waters

**CANCER**  
**MAK**  
**WARNINGS**

- Carcinogen Group 1 - Substances that cause cancer in man

**RESPIRATORY**  
**MAK**  
**WARNINGS**

- Sensitizing Substance Sah - Danger of airway & skin sensitization

**SUBSTANCE NOTES:** Used in bismuth alloy.

---

### Powder Coat

**%:** 0.00 - 1.40

**PRODUCT THRESHOLD:** 1000 ppm  
**RESIDUALS AND IMPURITIES CONSIDERED:** Yes

**RESIDUALS AND IMPURITIES NOTES:** Information not provided by the supplier.

**OTHER MATERIAL NOTES:** Mixture of polyester resins and pigments for coating vision lites. This is a dry powder electrostatically applied and then cured in the oven.

---

### Undisclosed

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-12-20

<table>
<thead>
<tr>
<th>%</th>
<th>GS</th>
<th>RC</th>
<th>NANO</th>
<th>ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>50.00 - 59.00</td>
<td>NoGS</td>
<td>UNK</td>
<td>No</td>
<td>Main element</td>
</tr>
</tbody>
</table>

**HAZARD TYPE**  
**AGENCY AND LIST TITLES**  
**WARNINGS**

None found  
No warnings found on HPD Priority Hazard Lists
SUBSTANCE NOTES: The manufacturer does not provide specifics on these resins because its proprietary.

UNDISCLOSED

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library
HAZARD SCREENING DATE: 2019-12-20

%: 0.00 - 21.00
GS: LT-UNK
GC: UNK
RC: UNK
NANO: No
ROLE: Ingredient

HAZARD TYPE
GENCYM MUTATION
MAMMALIAN
SKIN SENSITIZE
EYE IRRITATION
MAMMALIAN
GENE MUTATION
GENE MUTATION
MULTIPLE
MULTIPLE
RESPIRATORY
GENE MUTATION
GENE MUTATION
GENE MUTATION
GENE MUTATION

WARNINGS
None found

No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: The manufacturer does not allow disclosure of the ingredients because the combination of ingredients is proprietary.

UNDISCLOSED

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library
HAZARD SCREENING DATE: 2019-12-20

%: 0.00 - 5.50
GS: LT-1
GC: UNK
RC: UNK
NANO: No
ROLE: Ingredient

HAZARD TYPE
GENCYM MUTATION
MAMMALIAN
SKIN SENSITIZE
EYE IRRITATION
MAMMALIAN
GENE MUTATION
GENE MUTATION
MULTIPLE
MULTIPLE
RESPIRATORY
GENE MUTATION
GENE MUTATION
GENE MUTATION
GENE MUTATION

WARNINGS
None found

No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: The manufacturer does not allow disclosure of the ingredients because the combination of ingredients is proprietary.
<table>
<thead>
<tr>
<th>HAZARD SCREENING METHOD: Pharos Chemical and Materials Library</th>
<th>HAZARD SCREENING DATE: 2019-12-20</th>
</tr>
</thead>
<tbody>
<tr>
<td>%: 0.00 - 2.60</td>
<td>GS: LT-1</td>
</tr>
<tr>
<td></td>
<td>RC: UNK</td>
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<tr>
<td></td>
<td>NANO: No</td>
</tr>
<tr>
<td></td>
<td>ROLE: Ingredient</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HAZARD TYPE</th>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CANCER</td>
<td>US CDC - Occupational Carcinogens</td>
<td>Occupational Carcinogen</td>
</tr>
<tr>
<td></td>
<td>CA EPA - Prop 65</td>
<td>Carcinogen - specific to chemical form or exposure route</td>
</tr>
<tr>
<td></td>
<td>IARC</td>
<td>Group 2B - Possibly carcinogenic to humans - inhaled from occupational sources</td>
</tr>
<tr>
<td>ENDOCRINE</td>
<td>TEDX - Potential Endocrine Disruptors</td>
<td>Potential Endocrine Disruptor</td>
</tr>
<tr>
<td>CANCER</td>
<td>MAK</td>
<td>Carcinogen Group 3A - Evidence of carcinogenic effects but not sufficient to establish MAK/BAT value</td>
</tr>
<tr>
<td>CANCER</td>
<td>MAK</td>
<td>Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels</td>
</tr>
</tbody>
</table>

SUBSTANCE NOTES: The manufacturer does not allow disclosure of the ingredients because the combination of ingredients is proprietary.

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<tr>
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<th>HAZARD SCREENING DATE: 2019-12-20</th>
</tr>
</thead>
<tbody>
<tr>
<td>%: 0.00 - 2.30</td>
<td>GS: LT-UNK</td>
</tr>
<tr>
<td></td>
<td>RC: UNK</td>
</tr>
<tr>
<td></td>
<td>NANO: No</td>
</tr>
<tr>
<td></td>
<td>ROLE: Ingredient</td>
</tr>
</tbody>
</table>

None found

No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: The manufacturer does not allow disclosure of the ingredients because the combination of ingredients is proprietary.

<table>
<thead>
<tr>
<th>HAZARD SCREENING METHOD: Pharos Chemical and Materials Library</th>
<th>HAZARD SCREENING DATE: 2019-12-20</th>
</tr>
</thead>
<tbody>
<tr>
<td>%: 0.00 - 1.30</td>
<td>GS: BM-2</td>
</tr>
<tr>
<td></td>
<td>RC: UNK</td>
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<tr>
<td></td>
<td>NANO: No</td>
</tr>
<tr>
<td></td>
<td>ROLE: Ingredient</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HAZARD TYPE</th>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CANCER</td>
<td>MAK</td>
<td>Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification</td>
</tr>
</tbody>
</table>

SUBSTANCE NOTES: The manufacturer does not allow disclosure of the ingredients because the combination of ingredients is proprietary.
### HAZARD TYPE

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<th>HAZARD TYPE</th>
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</tr>
<tr>
<td>CANCER</td>
<td>CA EPA - Prop 65</td>
<td>Carcinogen - specific to chemical form or exposure route</td>
</tr>
<tr>
<td>CANCER</td>
<td>IARC</td>
<td>Group 2B - Possibly carcinogenic to humans - inhaled from occupational sources</td>
</tr>
<tr>
<td>CANCER</td>
<td>MAK</td>
<td>Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification</td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** The manufacturer does not allow disclosure of the ingredients because the combination of ingredients is proprietary.

### UNDISCLOSED

<table>
<thead>
<tr>
<th>HAZARD SCREENING METHOD: Pharos Chemical and Materials Library</th>
<th>HAZARD SCREENING DATE: 2019-12-20</th>
</tr>
</thead>
<tbody>
<tr>
<td>%: 0.00 - 0.64</td>
<td>GS: LT-UNK</td>
</tr>
<tr>
<td>GS: LT-UNK</td>
<td>RC: UNK</td>
</tr>
<tr>
<td>HAZARD SCREENING METHOD: Pharos Chemical and Materials Library</td>
<td>RC: UNK</td>
</tr>
<tr>
<td>HAZARD SCREENING DATE:</td>
<td>NANO: No</td>
</tr>
<tr>
<td>None found</td>
<td>ROLE: Ingredient</td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** The manufacturer does not allow disclosure of the ingredients because the combination of ingredients is proprietary.
Section 3: Certifications and Compliance

This section lists applicable certification and standards compliance information for VOC emissions and VOC content. Other types of health or environmental performance testing or certifications completed for the product may be provided.

VOC EMISSIONS

<table>
<thead>
<tr>
<th>CERTIFYING PARTY:</th>
<th>Self-declared</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPLICABLE FACILITIES:</td>
<td>All</td>
</tr>
<tr>
<td>ISSUE DATE:</td>
<td>2019-11-08</td>
</tr>
<tr>
<td>EXPIRY DATE:</td>
<td>2022-11-08</td>
</tr>
<tr>
<td>CERTIFIER OR LAB:</td>
<td>None</td>
</tr>
</tbody>
</table>

CERTIFICATION AND COMPLIANCE NOTES: No liquid paint product is used in the manufacture of louvers. Finish is powder coat electrostatically applied and baked on for a durable long lasting finish.

Section 4: Accessories

This section lists related products or materials that the manufacturer requires or recommends for installation (such as adhesives or fasteners), maintenance, cleaning, or operations. For information relating to the contents of these related products, refer to their applicable Health Product Declarations, if available.

SCREWS

<table>
<thead>
<tr>
<th>CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depending on the louver model the appropriate screws will be included. For steel louvers, steel screws with powder coat paint are sent. For stainless steel louvers, stainless steel screws are included. Steel screws are powder coat painted to match the product.</td>
</tr>
</tbody>
</table>

| HPD URL: | No HPD available |

Section 5: General Notes

This HPD covers all steel, galvanneal, aluminum and stainless steel door louvers manufactured by Activar Construction Products Group - Air Louvers. Final assembly locations include: Minneapolis, MN and Commerce, CA. This product can be used to meet LEED v4 points for MR Credit: Building Product Disclosure and Optimization - Material Ingredients - Option 1. All ingredients have been screened against the Living Building Challenge Red List and is found to be Red List Free. Note: The undisclosed ingredients of the powder coat paint have also been screened and are confirmed Red List Free. Please contact us for more information is you are looking to meet LEED or LBC.
Section 6: References

MANUFACTURER INFORMATION

MANUFACTURER: Activar Construction Products Group
ADDRESS: 4450 West 78th Street Circle
Minneapolis Minnesota 55435, United States
WEBSITE: www.activarcpg.com/

CONTACT NAME: Kathrine Barrett
TITLE: Market Analyst/Specifications Engineer
PHONE: 9528381912
EMAIL: khbarrett@activarpdt.com

KEY

OSHA MSDS Occupational Safety and Health Administration Material Safety Data Sheet
GHS SDS Globally Harmonized System of Classification and Labeling of Chemicals Safety Data Sheet

Hazard Types

- AQU Aquatic toxicity
- CAN Cancer
- DEV Developmental toxicity
- END Endocrine activity
- EYE Eye irritation/corrosivity
- GEN Gene mutation
- GLO Global warming
- MAM Mammalian/systemic/organ toxicity
- MUL Multiple hazards
- NEU Neurotoxicity
- OZO Ozone depletion
- PBT Persistent Bioaccumulative Toxic
- PHY Physical Hazard (reactive)
- REP Reproductive toxicity
- RES Respiratory sensitization
- SKI Skin sensitization/irritation/corrosivity
- LAN Land Toxicity
- NF Not found on Priority Hazard Lists

GreenScreen (GS)

- BM-4 Benchmark 4 (prefer-safer chemical)
- BM-3 Benchmark 3 (use but still opportunity for improvement)
- BM-2 Benchmark 2 (use but search for safer substitutes)
- BM-1 Benchmark 1 (avoid - chemical of high concern)
- BM-U Benchmark Unspecified (insufficient data to benchmark)
- LT-P1 List Translator Possible Benchmark 1
- LT-1 List Translator Likely Benchmark 1
- LT-UNK List Translator Benchmark Unknown (insufficient information from List Translator lists to benchmark)
- NoGS Unknown (no data on List Translator Lists)

Recycled Types

- PreC Preconsumer (Post-Industrial)
- PostC Postconsumer
- Both Both Preconsumer and Postconsumer
- Unk Inclusion of recycled content is unknown
- None Does not include recycled content

Other Terms

Inventory Methods:
- Nested Method / Material Threshold: Substances listed within each material per threshold indicated per material
- Nested Method / Product Threshold: Substances listed within each material per threshold indicated per product
- Basic Method / Product Threshold: Substances listed individually per threshold indicated per product

Nano: Composed of nano scale particles or nanotechnology
Third Party Verified: Verification by independent certifier approved by HPDC
Preparer: Third party preparer, if not self-prepared by manufacturer
Applicable facilities: Manufacturing sites to which testing applies

The Health Product Declaration (HPD) Open Standard provides for the disclosure of product contents and potential associated human and environmental health hazards. Hazard associations are based on the HPD Priority Hazard Lists, the GreenScreen List Translator™, and when available, full GreenScreen® assessments. The HPD Open Standard v2.1 is not:

- a method for the assessment of exposure or risk associated with product handling or use,
- a method for assessing potential health impacts of: (i) substances used or created during the manufacturing process or (ii) substances created after the product is delivered for end use.

Information about life cycle, exposure and/or risk assessments performed on the product may be reported by the manufacturer in appropriate Notes sections, and/or, where applicable, in the Certifications section.

The HPD Open Standard was created and is supported by the Health Product Declaration Collaborative (the HPD Collaborative), a customer-led organization composed of stakeholders throughout the building industry that is committed to the continuous improvement of building products through transparency, openness, and innovation throughout the product supply chain.

The product manufacturer and any applicable independent verifier are solely responsible for the accuracy of statements and claims made in this HPD and for compliance with the HPD standard noted.