DEMU Bolt Anchor 1988
by HALFEN Gmbh

CLASSIFICATION: 01 73 23

PRODUCT DESCRIPTION: The bolt anchor 1988 is a cast in place anchor that consists of a hexagonal bolt (no corrosion finish) with a steel pipe sleeve that is crimped on to the end of the bolt. The sleeve has an electro-plated corrosion finish (GV or Yellow Zinc) and is manufactured from a steel precision tubing. An optional plastic data clip is attached to the opening to clearly identify the system once cast into concrete.

Section 1: Summary

Basic Method / Product Threshold

CONTENT INVENTORY

<table>
<thead>
<tr>
<th>Inventory Reporting Format</th>
<th>Threshold Disclosed Per</th>
</tr>
</thead>
<tbody>
<tr>
<td>○ Nested Materials Method</td>
<td>○ Material</td>
</tr>
<tr>
<td>○ Basic Method</td>
<td>○ Product</td>
</tr>
</tbody>
</table>

Threshold level

- 100 ppm
- 1,000 ppm
- Per GHS SDS
- Per OSHA MSDS
- Other

Residuals/Impurities

- Considered
- Partially Considered
- Not Considered

Are All Substances Above the Threshold Indicated:

- Characterized: [ ] Yes [ ] No

Percent Weight and Role Provided?

- [ ] Yes [ ] No

Screened Using Priority Hazard Lists with Results Disclosed?

- [ ] Yes [ ] No

Identified Name and Identifier Provided?

- [ ] Yes [ ] No

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 |
----------|-----------|----------------------|-------------------|-------------|
DEMU BOLT ANCHOR 1988 [ STEEL NoGS CARBON LT-UNK ZINC LT-P1 | AQU | END | MUL | PHY MANGANESE LT-P1 | END | MUL | REP SILICON LT-UNK PHOSPHORUS BM-3 | MAM | PHY SULFUR LT-UNK | SKI ]

Number of Greenscreen BM-4/BM3 contents ... 0
Contents highest concern Greenscreen Benchmark or List translator Score ... LT-P1
Nanomaterial ... No

INVENTORY AND SCREENING NOTES:
HALFEN worked with the the HPDC Approved Preparer, ToxServices LLC, to screen all intentionally added ingredients in the product formulation to the level of 100 ppm (0.01%).

VOLATILE ORGANIC COMPOUND (VOC) CONTENT

VOC emissions: CDPH Standard Method V1.2 (Section 01350/CHPS) - Residential scenario

CONSISTENCY WITH OTHER PROGRAMS
No pre-checks completed or disclosed.

Third Party Verified?

- [ ] Yes [ ] No

PREPARER: ToxServices LLC
VERIFIER: 
VERIFICATION #: 
SCREENING DATE: 2018-03-29
PUBLISHED DATE: 2018-07-20
EXPIRY DATE: 2021-03-29
Section 2: Content in Descending Order of Quantity

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, available on the HPDC website at: [www.hpd-collaborative.org/hpd-2-1-standard](http://www.hpd-collaborative.org/hpd-2-1-standard)

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**DEMU BOLT ANCHOR 1988**

<table>
<thead>
<tr>
<th>PRODUCT THRESHOLD: 100 ppm</th>
<th>RESIDUALS AND IMPURITIES CONSIDERED: Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>RESIDUALS AND IMPURITIES NOTES: HALFEN worked with the the HPDC Approved Preparer, ToxServices LLC, to screen all intentionally added ingredients and all residuals/impurities that are present in product formulation to the level of 100ppm (0.01%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>OTHER PRODUCT NOTES:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### STEEL

<table>
<thead>
<tr>
<th>%: 99.1100 - 99.8200</th>
<th>GS: NoGS</th>
<th>RC: None</th>
<th>NANO: No</th>
<th>ROLE: Structure Component</th>
</tr>
</thead>
</table>

**HAZARDS:**

None Found

**AGENCY(IES) WITH WARNINGS:**

No warnings found on HPD Priority lists

*3rd Party Screened*

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### CARBON

<table>
<thead>
<tr>
<th>%: 0.1100 - 0.3400</th>
<th>GS: LT-UNK</th>
<th>RC: None</th>
<th>NANO: No</th>
<th>ROLE: Structure Component</th>
</tr>
</thead>
</table>

**HAZARDS:**

None Found

**AGENCY(IES) WITH WARNINGS:**

No warnings found on HPD Priority lists

*3rd Party Screened*

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### ZINC

<table>
<thead>
<tr>
<th>%: 0.0300 - 0.0300</th>
<th>GS: LT-P1</th>
<th>RC: None</th>
<th>NANO: No</th>
<th>ROLE: Finish Component</th>
</tr>
</thead>
</table>

**HAZARDS:**

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

ENDOCRINE

TEDX - Potential Endocrine Disruptors

Potential Endocrine Disruptor

MULTIPLE

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

---
<table>
<thead>
<tr>
<th>Substances</th>
<th>ID</th>
<th>% Range</th>
<th>GS</th>
<th>RC</th>
<th>NANO</th>
<th>ROLE</th>
<th>HAZARDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MANGANESE</td>
<td>7439-96-5</td>
<td>0.0000 - 0.3300</td>
<td>LT-P1</td>
<td>None</td>
<td>No</td>
<td>Structure Component</td>
<td>ENDOCRINE: TEDX - Potential Endocrine Disruptors, Potential Endocrine Disruptor</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MULTIPLE: German FEA - Substances Hazardous to Waters, Class 2 - Hazard to Waters</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>REPRODUCTIVE: Japan - GHS, Toxic to reproduction - Category 1B</td>
</tr>
<tr>
<td>SILICON</td>
<td>7440-21-3</td>
<td>0.0000 - 0.0900</td>
<td>LT-UNK</td>
<td>None</td>
<td>No</td>
<td>Structure Component</td>
<td>None Found, No warnings found on HPD Priority lists</td>
</tr>
<tr>
<td>PHOSPHORUS</td>
<td>7723-14-0</td>
<td>0.0000 - 0.0200</td>
<td>BM-2</td>
<td>None</td>
<td>No</td>
<td>Structure Component</td>
<td>MAMMALIAN: US EPA - EPCRA Extremely Hazardous Substances, Extremely Hazardous Substances</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PHYSICAL HAZARD (REACTIVE): EU - GHS (H-Statements), H228 - Flammable solid</td>
</tr>
<tr>
<td>SULFUR</td>
<td>7704-34-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### HAZARDS:

<table>
<thead>
<tr>
<th>SUBSTANCE</th>
<th>AGENCY(IES) WITH WARNINGS</th>
<th>WARNING</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>SKIN IRRITATION</td>
<td>EU - GHS (H-Statements)</td>
<td>H315</td>
<td>Causing skin irritation</td>
</tr>
</tbody>
</table>

*3rd Party Screened*
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>No VOC Testing Performed</td>
</tr>
<tr>
<td>Certificate URL:</td>
<td></td>
</tr>
<tr>
<td>Issue Date:</td>
<td>2018-07-12</td>
</tr>
<tr>
<td>Expiry Date:</td>
<td></td>
</tr>
<tr>
<td>Certifier or Lab:</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### 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.

**Plastic Data Clip**

<table>
<thead>
<tr>
<th>HPD URL:</th>
<th>No HPD Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condition When Recommended or Required and/or Other Notes:</td>
<td>An optional HDPE plastic data clip is attached to the opening to clearly identify the system once cast into concrete. The review of the HDPE plastic clip was not included under this HPD.</td>
</tr>
</tbody>
</table>

### Section 5: General Notes

HALFEN worked with the HPDC Approved Preparer, ToxServices LLC, to confirm that full formulation disclosure was properly obtained to the 100 ppm level, and that all residuals and impurities have been considered under the preparation of this HPD.
MANUFACTURER INFORMATION

MANUFACTURER: HALFEN GmbH
ADDRESS: Liebigstrasse 14
Langenfeld Richrath 40764, Germany
WEBSITE: www.halfen.com

CONTACT NAME: Raimo Fuellsack-Koeditz
TITLE: Innovation and Sustainability Officer
PHONE: +49 (0) 3466 3268 - 200
EMAIL: raimo.fuellsack-koeditz@halfen.de

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.