

HPD UNIQUE IDENTIFIER: 20515

CLASSIFICATION: 074299

PRODUCT DESCRIPTION: Shildan provides advanced terracotta rainscreen and sunscreen systems for today's high performing, energy efficient facades. Information herein pertains to Shildan's GEN 06 and GEN 95 horizontal support rails, M2 vertical support rail, and the terracotta baguette's internal support tube. The information disclosed herein also applies to Shildan's Fabrik® carrier plate, tie back brackets, and shims, including their seal, revel, and jamb trims. These parts consist of 6xxx aluminum alloy extrusions, more specifically 6063, 6005A and P1020 in either a T5 or T6 temper. These tempers are chemically identical, but have been put through different heat treatments to impart slightly different strength and performance characteristics.

Section 1: Summary

Basic Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format

- Nested Materials Method
 Basic Method

Threshold Disclosed Per

- Material
 Product

Threshold level

- 100 ppm
 1,000 ppm
 Per GHS SDS
 Other

Residuals/Impurities

- Considered
 Partially Considered
 Not Considered

Explanation(s) provided
for Residuals/Impurities?

- Yes No

All Substances Above the Threshold Indicated Are:

Characterized Yes Ex/SC Yes No

% weight and role provided for all substances.

Screened Yes Ex/SC Yes No

All substances screened using Priority Hazard Lists with results disclosed.

Identified Yes Ex/SC Yes No

All substances disclosed by Name (Specific or Generic) and Identifier.

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

ALUMINUM CURTAINWALL EXTRUSION [6063 ALUMINUM LT-P1 | RES | PHY | END | MAGNESIUM LT-UNK | PHY | SILICON LT-UNK | IRON LT-P1 | END | CHROMIUM LT-P1 | RES | END | SKI | COPPER LT-UNK | ZINC LT-P1 | AQU | PHY | END | MUL | MANGANESE LT-P1 | END | MUL | REP | TITANIUM LT-UNK]

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:

Per Safety Data sheets provided by suppliers, Pharos Project Database, and Quartz Database.

VOLATILE ORGANIC COMPOUND (VOC) CONTENT

VOC Content data is not applicable for this product category.

CERTIFICATIONS AND COMPLIANCE See Section 3 for additional listings.

VOC emissions: NA

CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4 Material Ingredients, Option 1

Third Party Verified?

- Yes
 No

PREPARER: Self-Prepared

VERIFIER:
VERIFICATION #:

SCREENING DATE: 2018-11-28

PUBLISHED DATE: 2020-06-12

EXPIRY DATE: 2021-11-28



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 2.1.1, available on the HPDC website at: www.hpd-collaborative.org/hpd-2-1-1-standard

ALUMINUM CURTAINWALL EXTRUSION

PRODUCT THRESHOLD: 1000 ppm

RESIDUALS AND IMPURITIES CONSIDERED: Yes

RESIDUALS AND IMPURITIES NOTES: Residuals and Impurities were considered based on supplier SDS, process chemistry via Pharos CML, and Quartz Project Database. Aluminum products may contain varying trace Residual or Impurity elements according to differing supplier data (.05% other elements each; .15% other elements total). SDS may not identify all Residuals or Impurities present in 6xxx aluminum alloy series that would require reporting on the HPD. Aluminum Curtainwall Extrusion is considered a “Common Product”, and includes no known hazards as listed in Quartz Project Database.

OTHER PRODUCT NOTES: The annual recycled portion of the aluminum billets/logs used in the cast by supplier for 2017 was 35.64% (33.30% Pre-Consumer & 2.34% Post-Consumer, respectively).

6063 ALUMINUM

ID: 7429-90-5

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2018-11-28

#: 95.8000 - 98.5000

GS: LT-P1

RC: Both

NANO: No

SUBSTANCE ROLE: Alloy element

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
RESPIRATORY	AOEC - Asthmagens	Asthmagens (Rs) - sensitizer-induced
PHYSICAL HAZARD (REACTIVE)	EU - GHS (H-Statements)	H228 - Flammable solid
PHYSICAL HAZARD (REACTIVE)	EU - GHS (H-Statements)	H250 - Catches fire spontaneously if exposed to air
PHYSICAL HAZARD (REACTIVE)	EU - GHS (H-Statements)	H261 - In contact with water releases flammable gases
ENDOCRINE	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor

SUBSTANCE NOTES:

MAGNESIUM

ID: 7439-95-4

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2018-11-28

#: 0.5000 - 1.2000

GS: LT-UNK

RC: UNK

NANO: No

SUBSTANCE ROLE: Alloy element

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
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

SUBSTANCE NOTES:

SILICON

ID: 7440-21-3

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

HAZARD SCREENING DATE: **2018-11-28**

%: **0.2000 - 1.0000** GS: **LT-UNK** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Alloy element**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES:

IRON

ID: 7439-89-6

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

HAZARD SCREENING DATE: **2018-11-28**

%: **0.0000 - 0.7000** GS: **LT-P1** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Alloy element**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
ENDOCRINE	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor

SUBSTANCE NOTES:

CHROMIUM

ID: 7440-47-3

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

HAZARD SCREENING DATE: **2018-11-28**

%: **0.0000 - 0.4000** GS: **LT-P1** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Alloy element**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
RESPIRATORY	AOEC - Asthmagens	Asthmagens (Rs) - sensitizer-induced
ENDOCRINE	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
SKIN SENSITIZE	MAK	Sensitizing Substance Sh - Danger of skin sensitization

SUBSTANCE NOTES:

COPPER

ID: 7440-50-8

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library**HAZARD SCREENING DATE: **2018-11-28**%: **0.0000 - 0.4000**GS: **LT-UNK**RC: **UNK**NANO: **No**SUBSTANCE ROLE: **Alloy element**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES:

ZINC

ID: 7440-66-6

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library**HAZARD SCREENING DATE: **2018-11-28**%: **0.0000 - 0.3000**GS: **LT-P1**RC: **UNK**NANO: **No**SUBSTANCE ROLE: **Alloy element**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
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:

MANGANESE

ID: 7439-96-5

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library**HAZARD SCREENING DATE: **2018-11-28**%: **0.0000 - 0.1000**GS: **LT-P1**RC: **UNK**NANO: **No**SUBSTANCE ROLE: **Alloy element**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
ENDOCRINE	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
MULTIPLE	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
REPRODUCTIVE	Japan - GHS	Toxic to reproduction - Category 1B

SUBSTANCE NOTES:

TITANIUM

ID: 7440-32-6

#: **0.0000 - 0.1000**

GS: **LT-UNK**

RC: **UNK**

NANO: **No**

SUBSTANCE ROLE: **Alloy element**

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

None found

No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES:

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

NA

CERTIFYING PARTY: **Self-declared**

ISSUE DATE: **2018-**

EXPIRY DATE:

CERTIFIER OR LAB: **NA**

APPLICABLE FACILITIES: **All**

11-28

CERTIFICATE URL:

CERTIFICATION AND COMPLIANCE NOTES: **This HPD is for a products that are NOT liquid/wet applied. All products included in this HPD are exterior products and are inherently non-emitting VOC sources.**

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.

TERRACOTTA BAGUETTE

HPD URL: **No HPD available**

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:

The main visible shading element used in the Shildan sunscreen system. The baguette is a clay product which can be produced in standard and custom shapes, finishes, and colors.

TERRACOTTA PANEL

HPD URL: **No HPD available**

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:

The main visible cladding element used in the Shildan rainscreen system. The rainscreen panel is a clay product which can be produced in standard and custom shapes, finishes, and colors.

CARRIER PLATES

HPD URL: **No HPD available**

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:

A vertical or horizontal main support framing member used to support the load of the terracotta baguette system.

END PLATE

HPD URL: **No HPD available**

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:

End plates are installed at each end of a baguette element and enable attachment between the carrier plate and baguette.

SILICONE SPACER

HPD URL: **No HPD available**

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:

This gasket is installed along a vertical aluminum fin as part of the M2 support framing system. The spacer gasket prevents contact of the two terracotta rainscreen panels and conceals the mill finish of the aluminum surface.

METAL SPACER

HPD URL: **No HPD available**

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:

This spacer is installed at the vertical joint of terracotta rainscreen panels using the Gen. 06 support framing system. The spacer provides uniform pressure behind the panels for an even plane while offering a consistent vertical joint spacing between panels. The spacer also serves as a gutter to channel water and dirt away from the surface of the panel.

RAPID INSERT CLIPS

HPD URL: **No HPD available**

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:

This insert is installed with the rapid aluminum panel clips and offers a secure connection between the clips and panels. The clips engages a kerf on the backside of the rainscreen panels, locking it into place.

STAINLESS STEEL SCREWS

HPD URL: **No HPD available**

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:

Used in assembly of Shildan's rainscreen and sunscreen systems.

NEOPRENE GASKETS

HPD URL: **No HPD available**

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:

Used with Shildan's sunscreen system.

Section 5: General Notes

The Shildan/Moeding Terracotta Rainscreen Façade system merges the advantages of two worlds of construction technology, making it a building technique of the future. The warm, natural look of terracotta is combined with a more modern, highly-articulated rainscreen system to produce a truly advanced “masonry” exterior wall system with great advantages. The Terracotta Rainscreen system allows air to circulate behind the panels to provide pressure equalization, preventing water from being drawn into the building. This energy saving, no maintenance ventilated system keeps your building dry and protected from the worst weather conditions without the use of grout or sealants and without any need for maintenance. This includes positive and negative wind loads, as well as seismic, thermal, and normal movement. Shildan Group provides advanced terracotta façade products and systems to the architectural community. Since introducing terracotta rainscreen to the US market in 1998, Shildan has completed more than 350 institutional projects, with approximately 5 million ft² terracotta in place in the US. We specialize in designing and engineering systems to meet the needs of today’s high performing facades. Shildan is a member of the AIA and USGBC. Our experienced technical sales team offers early design guidance to architects, engineers & owners, design build services and technical assistance. Shildan offers premium support and solutions throughout the life of a project. Our in-house team of project managers and engineers works to develop custom colors & shapes to meet each project’s unique design intent. Information herein pertains to Shildan's GEN 06 and GEN 95 horizontal support rails, M2 vertical support rail, and the terracotta baguette's internal support tube. The information disclosed herein also applies to Shildan's Fabrik® carrier plate, tie back brackets, and shims, including their seal, revel, and jamb trims. Data herein pertains to Shildan's standard mill finish. These parts consist of 6xxx aluminum alloy extrusions, more specifically 6063, 6005A and P1020 in either a

T5 or T6 temper. These tempers are chemically identical, but have been put through different heat treatments to impart slightly different strength and performance characteristics. Typical rail depths and internal tube sizes exist, however depths and sizes are typically customized on a per project basis. The most common subgirt shapes include Z-shaped on stud wall and double L on CMU. Depths and sizes are typically customized on a per project basis. The raw material from which extrusions are made is aluminum ingot (99.9% pure aluminum). This pure aluminum ingot is cast into a molten bath (combined with recycled aluminum and other alloy constituents) and 6xxx series alloys are extracted from the cast and transformed into an extrusion log or billet. The log or billet is then loaded into an extrusion press, pushed through dies, and formed into quality aluminum extrusions.



MANUFACTURER INFORMATION

MANUFACTURER: **Shildan Group**
 ADDRESS: **2047 Briggs Road**
Mount Laurel New Jersey 08054, United States
 WEBSITE: **http://www.shildan.com/**

CONTACT NAME: **Moshe Steinmetz**
 TITLE: **President**
 PHONE: **215-525-4510**
 EMAIL: **info@shildan.com**

The listed contact is responsible for the validity of this HPD and attests that it is accurate and complete to the best of his or her knowledge.

KEY

Hazard Types

AQU Aquatic toxicity	LAN Land toxicity	PHY Physical hazard (flammable or reactive)
CAN Cancer	MAM Mammalian/systemic/organ toxicity	REP Reproductive
DEV Developmental toxicity	MUL Multiple	RES Respiratory sensitization
END Endocrine activity	NEU Neurotoxicity	SKI Skin sensitization/irritation/corrosivity
EYE Eye irritation/corrosivity	NF Not found on Priority Hazard Lists	UNK Unknown
GEN Gene mutation	OZO Ozone depletion	
GLO Global warming	PBT Persistent, bioaccumulative, and toxic	

GreenScreen (GS)

BM-4 Benchmark 4 (prefer-safer chemical)	LT-1 List Translator 1 (Likely Benchmark-1)
BM-3 Benchmark 3 (use but still opportunity for improvement)	LT-UNK List Translator Benchmark Unknown (the chemical is present on at least one GreenScreen Specified List, but the information contained within the list did not result in a clear mapping to a LT-1 or LTP1 score.)
BM-2 Benchmark 2 (use but search for safer substitutes)	NoGS No GreenScreen.
BM-1 Benchmark 1 (avoid - chemical of high concern)	
BM-U Benchmark Unspecified (due to insufficient data)	
LT-P1 List Translator Possible 1 (Possible Benchmark-1)	

Recycled Types

PreC Pre-consumer recycled content
PostC Post-consumer recycled content
UNK Inclusion of recycled content is unknown
None Does not include recycled content

Other Terms:

GHS SDS Globally Harmonized System of Classification and Labeling of Chemicals Safety Data Sheet

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.