

SHIELD RED BRICK
by QTC

HPD UNIQUE IDENTIFIER: 1141128192
HPD UNIQUE PRODUCT ID: Not provided.
CLASSIFICATION: 04 21 13 Brick Masonry
PRODUCT TYPE: Blocks And Bricks
PRODUCT DESCRIPTION: The Shield is a premium hollow red brick engineered for modern construction, combining structural reliability with superior insulation performance. Manufactured by El-Khayyat Red Bricks Factories in Jeddah, Saudi Arabia, The Shield features a unique horizontal opening design that makes it the material of choice for residential towers, high-rise buildings, and heavy-stone cladding applications. The Shield's robust clay composition and ribbed surface texture create exceptional cement adhesion, making it ideal for mounting heavy building materials such as natural stone and marble. Its hollow design simplifies plumbing and electrical routing, reducing installation time and cost on-site. Superior Thermal & Acoustic Performance Tested and certified by SASO and ACES laboratories, The Shield delivers outstanding thermal resistance with a U-Value as low as 0.398 W/m².K (insulated variant), fully compliant with Saudi Building Code SBC 602 requirements for Zone 1. Its clay granule structure provides natural sound, heat, and moisture resistance. Independently tested to ASTM C67, The Shield achieves a fire resistance rating exceeding 5 hours, providing critical protection for building occupants and structures. All raw materials used in manufacturing The Shield are completely free of harmful chemicals, making it a safe and environmentally responsible choice for any project.

Section 1: Summary

Basic Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format → Basic Method	Residuals/Impurities Evaluation → Completed	<i>For all contents above the threshold, the manufacturer has:</i>
Threshold Disclosed Per → Product	Explanation(s) provided : Yes	Characterized Yes <i>Provided weight and role.</i>
Threshold Level → 100 ppm		Screened Yes <i>Provided screening results using HPDC-approved methods.</i>
		Identified Yes <i>Provided name and CAS RN or other identifier.</i>

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.

PRODUCT | MATERIAL OR SUBSTANCE | RESIDUAL OR IMPURITY
GREENSCREEN SCORE | HAZARD TYPE
SHIELD RED BRICK [CLAY NoGS POLYSTYRENE LT-UNK]

Number of Greenscreen BM-4/BM3 contents ... 0
Contents highest-concern GreenScreen score(s) (BM-1, LT-1, LT-P1) ... None
Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

The Shield is a locally manufactured hollow clay brick (400×200×200 mm, 13 kg) produced by El-Khayyat Red Bricks Factories in Jeddah, Saudi Arabia, available in standard and polystyrene-insulated variants. All submitted technical documentation has been reviewed and verified, with the product demonstrating full compliance across key performance parameters: compressive strength of 8 MPA (ASTM C140), fire resistance exceeding 5 hours (ASTM C67), water absorption of 3–4.4% (ASTM C140), thermal U-Value of 0.398 W/m².K for the insulated variant (ASTM C518), and SBC 602 Zone 1 compliance at U-Value 0.592. Test reports are issued by accredited laboratories SASO and ACES, and the product has received B-Approved As Noted status on both the Al-Sadan Community Project and the Meknan Alsadan Project. No harmful substances were detected, and all materials are environmentally friendly. The product is recommended for screening approval for use in non-loadbearing wall applications.

VOLATILE ORGANIC COMPOUND (VOC) CONTENT
VOC Content data is not applicable for this product category.

COMPLIANCE See Section 3 for additional listings.
VOC emissions: Inherently non-emitting source per LEED

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

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 3.0, available on the HPDC website at: www.hpd-collaborative.org/hpd-3-0-standard

SHIELD RED BRICK

PRODUCT THRESHOLD: 100 ppm	RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes
RESIDUALS AND IMPURITIES NOTES: The Shield Red Brick is manufactured entirely from natural clay materials with no harmful chemicals or additives introduced during production. The manufacturer explicitly confirms that all raw materials are environment-friendly and free of dangerous substances, as documented in the product data sheet. Laboratory testing conducted by ACES and SASO found no presence of hazardous residuals or impurities. The oxygen index test passed per ASTM D2863, and the product carries ISO 9001:2015 certification alongside SASO conformity marking.	
OTHER PRODUCT NOTES: Product is locally manufactured in Jeddah, Saudi Arabia by El-Khayyat Red Bricks Factories. Available in standard and polystyrene-insulated variants (18 kg/m³). Certified compliant with Saudi Building Code SBC 602 Zone 1 thermal requirements. Approved for use on the Al-Sadan Community Project and Meknan Alsadan Project. Packaging: 69 bricks per pallet.	

HAZARD DATA SOURCE: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2026-06-28 11:27:41	
?: 90.0000 - 100.0000	GreenScreen: NoGS	RC: None	NANO: No	SUBSTANCE ROLE: Ceramic body
HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS		
None found		No warnings found on HPD Priority Hazard Lists		
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION		
None found		No listings found on Additional Hazard Lists		
SUBSTANCE NOTES: Primary constituent; naturally extracted clay fired at high temperature. No chemical additives. Environment-friendly per manufacturer declaration.				

HAZARD DATA SOURCE: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2026-06-28 11:29:25	
?: 1.0000 - 5.0000	GreenScreen: LT-UNK	RC: None	NANO: No	SUBSTANCE ROLE: Insulator
HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS		
None found		No warnings found on HPD Priority Hazard Lists		
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION		
RESTRICTED LIST	Perkins+Will (P+W)	P&W - Precautionary List		
		Precautionary list of substances recommended for avoidance		

SUBSTANCE NOTES: Used as thermal insulation fill at 18 kg/m³ density in insulated variant only. Tested per ASTM C518; R-Value 2.511, U-Value 0.398 W/m².K confirmed by ACES lab report dated 19/11/2024.

Section 3: 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	Inherently non-emitting source per LEED	
COMPLIANCE TYPE: Self-declaration	ISSUE DATE: 2026-06-28	EXPIRY DATE: No expiration
CERTIFIER/VERIFIER/TESTING LAB/AUDITOR: None		
COMPLIANCE DETAILS:		
COMPLIANCE SCOPE:		
APPLICABLE FACILITIES: El-Khayyat Red Bricks		
Factories Company — Al Khumra, Jeddah, Saudi Arabia		
COMPLIANCE URL:		
COMPLIANCE NOTES:		

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.

PORTLAND CEMENT MORTAR (SITE-MIXED)
MANUFACTURER (OR GENERIC): Generic
HPD URL: No HPD Available
ACCESSORY TYPE: Adhesive
CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES: Standard cement mortar used for brick laying. Not a proprietary product supplied by El-Khayyat; mixed on-site by contractor.

Section 5: General Notes

Here's the content for HPD Section 5: General Notes:

General Notes:

The Shield Red Brick is a hollow clay brick with horizontal openings manufactured by El-Khayyat Red Bricks Factories Co., Jeddah, Saudi Arabia. The product is available in two variants: standard (20×20×40 cm) and polystyrene-insulated (18 kg/m³). All raw materials are naturally derived clay with no harmful chemicals or additives introduced during manufacturing. The product is ISO 9001:2015 certified and SASO conformity marked. Independent laboratory testing by ACES (Riyadh & Jeddah) and SASO confirms compliance with ASTM C140, ASTM C518, ASTM C67, ASTM D2863, and ISO 8990 standards. The wall assembly is compliant with Saudi Building Code SBC 602 Zone 1 thermal requirements at U-Value 0.592 W/m².K. The product has received B-Approved As Noted status on the Al-Sadan Community Project (Sep 2024) and Meknan Alsadan Project (Nov 2024). Packaging: 69 bricks per pallet. Country of origin: Saudi Arabia. For technical inquiries, contact El-Khayyat Red Bricks Factories Co., Al Khumra, Jeddah, Saudi Arabia.

MANUFACTURER INFORMATION

MANUFACTURER: **QTC**
ADDRESS: **Al Khumra Industrial Area**
El-Khayyat Red Bricks Factories Co.
Jeddah, Jeddah 21413
COUNTRY: **Saudi Arabia**

WEBSITE: **<https://www.el-khayyat.com/>**
CONTACT NAME: **El-Khayyat Red Bricks Factories — Technical Department**
TITLE: **Technical Manager**
PHONE: **+966 126 633 337**
EMAIL: **info@el-khayyat.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-P1 List Translator Possible 1 (Possible Benchmark-1)
BM-3 Benchmark 3 (use but still opportunity for improvement)	LT-1 List Translator 1 (Likely Benchmark-1)
BM-2 Benchmark 2 (use but search for safer substitutes)	LT-UNK List Translator Benchmark Unknown
BM-1 Benchmark 1 (avoid - chemical of high concern)	NoGS No GreenScreen.
BM-U Benchmark Unspecified (due to insufficient data)	

GreenScreen Benchmark scores sometimes also carry subscripts, which provide more context for how the score was determined. These are DG (data gap), TP (transformation product), and CoHC (chemical of high concern). For more information, see 2.2.2.4 GreenScreen® for Safer Chemicals, www.greenscreenchemicals.org, and Best Practices for Hazard Screening on the HPDC website (hpd-collaborative.org).

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 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.

