

HPD UNIQUE IDENTIFIER: 1545753600

CLASSIFICATION: 03 30 00 Cast-in-Place Concrete

PRODUCT DESCRIPTION: These are the specifications for Vertua as screened in this HPD: In English: Weight of the mixture- 2,016 to 2,387 [kg/m3]; Flexural Strength to 28 days- 14.83-45.89 [MPa]/ 2,151 to 6,655 [psi]; Nominal Slump: 10-24 [cm]; Nominal air content: 2-3 [%]; Water % in cement- 89-109%; Maximum size Gravel (limestone)- 10- 40[mm]; Size of sand: No.4.75[mm]; Shrink Limit [%] @ 56 days: 0.002 En Español: Peso Volumétrico- 2,016 y 2,387 [kg/m3]; Resistencia a Compresión a 28 days- 14.83-45.89 [MPa]/ 2,151 to 6,655 [psi]; Revenimiento Nominal- 10-24 [cm]; Contenido de Aire Nonimal-Menor al 2-3 [%]; Agua:Cemento-89-109%; Tamaño Máximo de Agregado (limestone)- 10 a 40[mm]; Tamaño de Arena- No. 4.75[mm]; Contracción máxima [%] @ 56 days- 0.002

Section 1: Summary

Nested Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format	Threshold Level	Residuals/Impurities Evaluation	
<input checked="" type="radio"/> Nested Materials Method <input type="radio"/> Basic Method	<input type="radio"/> 100 ppm <input checked="" type="radio"/> 1,000 ppm <input type="radio"/> Per GHS SDS <input type="radio"/> Other	Completed in 5 of 5 Materials Explanation(s) provided for Residuals/Impurities? <input checked="" type="radio"/> Yes <input type="radio"/> No	<i>For all contents above the threshold, the manufacturer has:</i> Characterized <input checked="" type="radio"/> Yes <input type="radio"/> No <i>Provided weight and role.</i> Screened <input checked="" type="radio"/> Yes <input type="radio"/> No <i>Provided screening results using HPDC-approved methods.</i> Identified <input type="radio"/> Yes <input checked="" type="radio"/> No <i>Provided name and CAS RN or other identifier.</i>
Threshold Disclosed Per	<input type="radio"/> Material <input checked="" type="radio"/> Product		

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.

NESTED MATERIAL | MATERIAL OR SUBSTANCE | RESIDUAL OR IMPURITY

GREENSCREEN SCORE | HAZARD TYPE

ANDESITE [FELDSPAR LT-UNK | MAM QUARTZ BM-1 | CAN | MAM | GEN] GRAVEL [LIMESTONE BM-3dg] CEMEX CEMENT (GENERAL PROFILE) [UNDISCLOSED BM-2 | SKI | MAM | EYE UNDISCLOSED BM-1 | CAN | MAM UNDISCLOSED BM-2 | MAM UNDISCLOSED BM-2 | MAM UNDISCLOSED BM-3dg | CAN | MAM UNDISCLOSED BM-1 | CAN | MAM UNDISCLOSED BM-2] WATER [WATER BM-4] ADDITIVE 1 [WATER BM-4 POLIGNATE SODIUM LT-UNK]

Number of Greenscreen BM-4/BM3 contents ... 4

Contents highest-concern GreenScreen score(s) (BM-1, LT-1, LT-P1) ... BM-1

Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

This HPD lists all the ingredients/substances that exceed the declared threshold i.e. (1000 ppm). Ingredients below the declared threshold do not need to be reported on the HPD. This inventory was made with primary information from Cemex CTCC (Mexico). Actual material was not tested therefore any information about residuals and impurities is listed simply as a reference based on scientific literature in Pharos and the Toxnot databases. The presence of the residual or impurity substance can not be confirmed through the listing in this HPD. Cemex CTCC has made its best effort to collect product substance information and comply with the HPD format. Any errors are simply mistakes and notification of the Cemex contact should be made.

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: Inherently non-emitting source per LEED EPD: Type III Environmental Product Declaration (EPD) by Labeling Sustainability

CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4 Option 1.
Pre-checked for LEED v4.1 Option 1.

Third Party Verified?

- Yes
- No

PREPARER: Self-Prepared

VERIFIER:
VERIFICATION #:

SCREENING DATE: 2024-02-09

PUBLISHED DATE: 2024-03-07

EXPIRY DATE: 2027-02-09

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 2.3, available on the HPDC website at: www.hpd-collaborative.org/hpd-2-3-standard

ANDESITE

%: 33.8000 - 58.9000

PRODUCT THRESHOLD: 1000 ppm RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes MATERIAL TYPE: Geologically Derived Material

RESIDUALS AND IMPURITIES NOTES: "The threshold applied to Residuals and Impurities (R/I) is the same as the threshold applied to intentionally added substances, in terms of level, i.e., 1000 ppm. Residuals and impurities present below the declared Inventory Threshold do not need to be reported on the HPD." For this product, no actual material has been tested therefore residuals and impurities are for informational purposes only and are not a guarantee of presence in the actual building material. The main databases used for researching potential residuals and impurities are Pharos and PubChem (formerly Toxnot).

OTHER MATERIAL NOTES: Andesite is the name of a family of fine-grained, extrusive igneous rocks that are usually light to dark gray in color. They have a mineral composition that is intermediate between granite and basalt. Andesite is a rock typically found in volcanoes above convergent plate boundaries between continental and oceanic plates.

FELDSPAR

ID: 68476-25-5

HAZARD DATA SOURCE: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2024-02-09 13:32:52

%: 70.0000 - 90.0000 GreenScreen: LT-UNK RC: UNK NANO: No SUBSTANCE ROLE: Filler

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
MAM	GHS - New Zealand	Specific target organ toxicity - repeated exposure category 1

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES: Feldspar is "an inorganic substance that is the reaction product of high temperature calcination in which aluminum oxide, barium oxide, calcium oxide, magnesium oxide, silicon oxide, and strontium oxide in varying amounts are homogeneously and ionically interdiffused to form a crystalline matrix." (EPA SRS)

Brosnan and Sanders identify "several types of feldspar" used in whitewares, including soda feldspar, potash feldspar, and lime feldspar. (I)t is found as mixtures of these major types. ... Feldspar usually contains quartz as an impurity." They identify components of three feldspar mixtures:

Silicon dioxide (60.7-68.3%)

Aluminum oxide (18-23.3%)

Ferrous oxide (0.1%)

Calcium oxide (0.7 to 1.4%)

Magnesium oxide (trace to 0.1%)

Sodium oxide (3% to 98%)

Potassium oxide (0.1-0.7%)

QUARTZ

ID: 14808-60-7

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2024-02-09 13:32:52**

#: **20.0000**

GreenScreen: **BM-1**

RC: **UNK**

NANO: **No**

SUBSTANCE ROLE: **Filler**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
CAN	US CDC - Occupational Carcinogens	Occupational Carcinogen
CAN	CA EPA - Prop 65	Carcinogen - specific to chemical form or exposure route
CAN	US NIH - Report on Carcinogens	Known to be Human Carcinogen (respirable size - occupational setting)
CAN	MAK	Carcinogen Group 1 - Substances that cause cancer in man
CAN	IARC	Group 1 - Agent is carcinogenic to humans - inhaled from occupational sources
CAN	IARC	Group 1 - Agent is Carcinogenic to humans
CAN	US NIH - Report on Carcinogens	Known to be a human Carcinogen
CAN	GHS - Japan	H350 - May cause cancer [Carcinogenicity - Category 1A]
CAN	GHS - Australia	H350i - May cause cancer by inhalation [Carcinogenicity - Category 1A or 1B]
CAN	GHS - New Zealand	Carcinogenicity category 1
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]
GEN	GHS - Japan	H341 - Suspected of causing genetic defects [Germ cell mutagenicity - Category 2]
MAM	GHS - Australia	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organ toxicity - repeated exposure - Category 1]
MAM	GHS - New Zealand	Specific target organ toxicity - repeated exposure category 1
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES: Andesite is an extrusive rock intermediate in composition between rhyolite and basalt. Andesite lava is of moderate viscosity and forms thick lava flows and domes. The word andesite is derived from the Andes Mountains in South America, where andesite is common. Andesite is the volcanic equivalent of diorite.

GRAVEL

%: 28.1000 - 50.2000

PRODUCT THRESHOLD: 1000 ppm	RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes	MATERIAL TYPE: Geologically Derived Material
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RESIDUALS AND IMPURITIES NOTES: "The threshold applied to Residuals and Impurities (R/I) is the same as the threshold applied to intentionally added substances, in terms of level, i.e., 1000 ppm. Residuals and impurities present below the declared Inventory Threshold do not need to be reported on the HPD." For this product, no actual material has been tested therefore residuals and impurities are for informational purposes only and are not a guarantee of presence in the actual building material. The main databases used for researching potential residuals and impurities are Pharos and PubChem (formerly Toxnot).

OTHER MATERIAL NOTES: A range of >10% was used to hide the actual formula.

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library**HAZARD SCREENING DATE: **2024-02-09 13:32:52**%: **99.0000**GreenScreen: **BM-3dg**RC: **UNK**NANO: **No**SUBSTANCE ROLE: **Filler**

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: All other residuals and impurities are below the threshold.

Residuals and impurities are considered in accordance with the HPD Best Practice Guidance, 10.02.17, version 1

“The threshold applied to Residuals and Impurities (R/I) is the same as the threshold applied to intentionally added substances, in terms of level, i.e., 100 ppm or 1000 ppm. Residuals and impurities present below the declared Inventory Threshold do not need to be reported on the HPD.”

This includes average data as declared in the common product database or in peer-reviewed scientific articles. For this product, no actual material has been tested therefore residuals and impurities are for informational purposes only and are not a guarantee of presence in the actual building material.

The main databases used for researching potential residuals and impurities are Pharos and PubChem (formerly toxnet). Any R/I above the threshold shall be listed on the HPD, otherwise, if none are listed then no residuals or impurities are common in that substance above the threshold.

CEMEX CEMENT (GENERAL PROFILE)%: **7.2000 - 21.1000**

PRODUCT THRESHOLD: 1000 ppm

RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes

MATERIAL TYPE: Other: Inorganic Material

RESIDUALS AND IMPURITIES NOTES: “The threshold applied to Residuals and Impurities (R/I) is the same as the threshold applied to intentionally added substances, in terms of level, i.e., 1000 ppm. Residuals and impurities present below the declared Inventory Threshold do not need to be reported on the HPD.” For this product, no actual material has been tested therefore residuals and impurities are for informational purposes only and are not a guarantee of presence in the actual building material. The main databases used for researching potential residuals and impurities are Pharos and PubChem (formerly Toxnot).

OTHER MATERIAL NOTES: This is based on a general profile of CEMEX, CPC 40 cement. All ingredients may or may not be in this specific mix for CPC 40.

UNDISCLOSEDID: **Undisclosed**HAZARD DATA SOURCE: **Pharos Chemical and Materials Library**HAZARD SCREENING DATE: **2024-02-09 13:32:52**%: **40.0000 - 64.0000**GreenScreen: **BM-2**RC: **UNK**NANO: **No**SUBSTANCE ROLE: **Binder**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
SKI	GHS - Australia	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]
MAM	GHS - Japan	H370 - Causes damage to organs [Specific target organs/systemic toxicity following single exposure - Category 1]
SKI	GHS - New Zealand	Skin corrosion category 1C
EYE	GHS - New Zealand	Serious eye damage category 1
EYE	GHS - Japan	H318 - Causes serious eye damage [Serious eye damage / eye irritation - Category 1]
SKI	GHS - Japan	H315 - Causes skin irritation [Skin corrosion / irritation - Category 2]
EYE	GHS - Australia	H318 - Causes serious eye damage [Serious eye damage/eye irritation - Category 1]

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes Precautionary List Antimicrobials

SUBSTANCE NOTES: This is a basic profile for cement used in CEMEX ready-mix concrete. It is based on the data from multiple formulations and each concrete mixture may or may not contain the exact ingredients listed.

UNDISCLOSED

ID: **Undisclosed**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2024-02-09 13:32:53**

%: **10.0000 - 15.0000** GreenScreen: **BM-1** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Filler**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
CAN	GHS - Japan	H350 - May cause cancer [Carcinogenicity - Category 1A]
CAN	GHS - Australia	H350i - May cause cancer by inhalation [Carcinogenicity - Category 1A or 1B]
MAM	GHS - Japan	H335 - May cause respiratory irritation [Specific target organ toxicity - Single exposure - Category 3]
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]
MAM	GHS - Australia	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organ toxicity - repeated exposure - Category 1]

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes Precautionary List Antimicrobials

SUBSTANCE NOTES: This is a basic profile for cement used in CEMEX ready-mix concrete. It is based on the data from multiple formulations and each concrete mixture may or may not contain the exact ingredients listed.

UNDISCLOSED

ID: **Undisclosed**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2024-02-09 13:32:53**

#: **3.3800** GreenScreen: **BM-2** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Processing regulator**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
MAM	GHS - Japan	H335 - May cause respiratory irritation [Specific target organ toxicity - Single exposure - Category 3]
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Biological and Environmentally Released Materials
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Children's Products

SUBSTANCE NOTES: This is a basic profile for cement used in CEMEX ready-mix concrete. It is based on the data from multiple formulations and each concrete mixture may or may not contain the exact ingredients listed.

UNDISCLOSED

ID: **Undisclosed**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2024-02-09 13:32:53**

#: **1.9600** GreenScreen: **BM-2** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Processing regulator**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
MAM	US EPA - EPCRA Extremely Hazardous Substances	Extremely Hazardous Substances

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES: This is a basic profile for cement used in CEMEX ready-mix concrete. It is based on the data from multiple formulations and each concrete mixture may or may not contain the exact ingredients listed.

UNDISCLOSED

ID: **Undisclosed**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2024-02-09 13:32:53**

%: **0.6400** GreenScreen: **BM-3dg** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Stabilizer**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
CAN	MAK	Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels
MAM	GHS - Japan	H335 - May cause respiratory irritation [Specific target organ toxicity - Single exposure - Category 3]
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES: This is a basic profile for cement used in CEMEX ready-mix concrete. It is based on the data from multiple formulations and each concrete mixture may or may not contain the exact ingredients listed.

UNDISCLOSED

ID: **Undisclosed**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2024-02-09 13:32:54**

%: **0.1800** GreenScreen: **BM-1** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Processing regulator**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
CAN	MAK	Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]
MAM	GHS - Japan	H370 - Causes damage to organs [Specific target organs/systemic toxicity following single exposure - Category 1]
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES: This is a basic profile for cement used in CEMEX ready-mix concrete. It is based on the data from multiple formulations and each concrete mixture may or may not contain the exact ingredients listed.

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2024-02-09 13:32:54**

%: **0.1200** GreenScreen: **BM-2** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Processing regulator**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
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	EC - CEPA DSL	Persistent
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ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
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None found	No listings found on Additional Hazard Lists	
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SUBSTANCE NOTES: This is a basic profile for cement used in CEMEX ready-mix concrete. It is based on the data from multiple formulations and each concrete mixture may or may not contain the exact ingredients listed.

WATER %: **8.1000 - 10.2000**

PRODUCT THRESHOLD: 1000 ppm RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes MATERIAL TYPE: Other: Water

RESIDUALS AND IMPURITIES NOTES: No impurities are registered for water per the Pharos database.

OTHER MATERIAL NOTES: Basic chemistry for ground water.

WATER ID: **7732-18-5**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2024-02-09 13:32:53**

%: **100.0000** GreenScreen: **BM-4** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Diluent**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
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None found	No warnings found on HPD Priority Hazard Lists	
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ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
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EXEMPT	European Union / European Commission (EU EC)	EU - REACH Exemptions Exempted from REACH Annex IV listing due to intrinsic safety
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SUBSTANCE NOTES:

ADDITIVE 1 %: **0.1000 - 0.2000**

PRODUCT THRESHOLD: 1000 ppm RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes MATERIAL TYPE: Polymeric Material

RESIDUALS AND IMPURITIES NOTES: "The threshold applied to Residuals and Impurities (R/I) is the same as the threshold applied to intentionally added substances, in terms of level, i.e., 1000 ppm. Residuals and impurities present below the declared Inventory Threshold do not need to be reported on the HPD." For this product, no actual material has been tested therefore residuals and impurities are for informational purposes only and are not a guarantee of presence in the actual building material. The main databases used for researching potential residuals and impurities are Pharos and PubChem (formerly Toxnot).

OTHER MATERIAL NOTES: This information is covered by strict intellectual property rights and will not be disclosed by the manufacturer. To complete this HPD peer-reviewed quality data has been used to fill in the gaps. Per the SDS there are no substances listed as hazardous in the additive. The Quartz database and the European Federation of Concrete Admixtures Association (EFCA)- Plastizicer EPD have been used for primary information. Per the EPD:

“Plasticizers and superplasticizers essentially contain either lignosulphonate, naphthalene sulphonate, melamine sulphonate and polycarboxylate/polycarboxylic or mixtures thereof.

Defoaming agents and preservatives are added as minor components and auxiliaries. Active substance concentration lies between 10 and 40% by mass. The typical dosage of plasticizers lies between 0.2 and 1.6% (referred to the finished product) by mass in relation to the cement weight. The typical dosage of superplasticizers lies between 0.4 and 2.0% by mass in relation to the cement weight. The products covered by this EPD typically contain the following proportions by mass of constituent materials and auxiliaries referred to:

Lignosulphonate*: max. 40 %

Naphthalene sulphonate*: max. 40 %

Melamine sulphonate*: max. 45 %

Polycarboxylate*: max. 45 %

Polyarylether max. 35 %

Na-gluconate max. 35 %

Additives: max. 5 %

Water: approx. 55 - 75 %”

WATER

ID: 7732-18-5

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2024-02-09 13:32:53**

%: **50.0000 - 70.0000** GreenScreen: **BM-4** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Diluent**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
EXEMPT	European Union / European Commission (EU EC)	EU - REACH Exemptions Exempted from REACH Annex IV listing due to intrinsic safety

SUBSTANCE NOTES: The manufacturer maintains rigorous intellectual property rights over this additive. The actual material used may not necessarily match the exact ingredient listed. This information is intended for screening purposes only.

POLIGNATE SODIUM

ID: 8061-51-6

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2024-02-09 13:32:54**

%: **30.0000 - 40.0000** GreenScreen: **LT-UNK** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Dispersant**

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: The manufacturer maintains rigorous intellectual property rights over this additive . It's important to note that the actual material used may not necessarily match the exact ingredient listed. This information is intended for screening purposes only.

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

Inherently non-emitting source per LEED

CERTIFYING PARTY: Self-declared

ISSUE DATE: 2024-03-07 00:00:00

CERTIFIER OR LAB: None

APPLICABLE FACILITIES: This is not a facility (location-based) certification.

EXPIRY DATE:

CERTIFICATE URL:

CERTIFICATION AND COMPLIANCE NOTES: Per the LEED v4.1 standard, concrete is a non-emitting source.

EPD

Type III Environmental Product Declaration (EPD) by Labeling Sustainability

CERTIFYING PARTY: Third Party

ISSUE DATE: 2024-03-06 00:00:00

CERTIFIER OR LAB: Labeling

APPLICABLE FACILITIES: This product is produced at multiple facilities, please check the registry at <https://www.labelingsustainability.com/epd-registry> for the exact facility's EPD.

EXPIRY DATE:

Sustainability

CERTIFICATE URL:

CERTIFICATION AND COMPLIANCE NOTES: This product is produced at multiple facilities, please check the registry at <https://www.labelingsustainability.com/epd-registry> for the exact facility's EPD.

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.

No accessories are required for this product.

Section 5: General Notes

A range of percentage of product composition was used in this HPD to hide the actual product composition for proprietary reasons. This is a list of plants that produce the Vertua Concrete:

ZONA PACIFICO

CD. GUZMÁN: PD0152 CD.GUZMAN, PD0500 AUTLAN; CD. OBREGÓN: PD0214 CD.OBREGON, PD0342 CONSTELLATION CD.OBREGON 2, PD0447 CONSTELLATION CD.OBREGON; COLIMA: PD0147 COLIMA; CULIACAN: PD0135 CULIACAN, PD0420 CULIACAN II; ENSENADA: PD0340 EL SAUZAL, PD0445 ENSENADA; GUADALAJARA: PD0083 GUADALAJARA I III, PD0123 TLAJOMULCO, PD0127 MANANTIAL, PD0149 GDL.MATRIZ, PD0150 PLANTA 2 PERIFERICO, PD0154 PLANTA OCOTLAN, PD0174 TESISTAN, PD0280 PLANTA COLOTLAN, PD0339 EL SALTO, PD0406 PLANTA PONIENTE, PD0423 LA PERLA, PD0452 ZAPOPAN III, PD0454 CD. LA GRANJA II, PD0494 PLANTA PONIENTE II, PD0518 TONALA; GUAYMAS: PD0146 GUAYMAS I; HERMOSILLO: PD0196 HERMOSILLO AEROPUERTO, PD0212 HERMOSILLO CENTRO, LA PAZ: PD0272 EOLICO COROMUEL, PD0427 LA PAZ 1, LAGOS DE MORENO: PD0156 LAGOS DE MORENO, PD0418 PARQUE COLINAS; LOS CABOS: PD0428 RIU LOS CABOS, PD0429 SAN JOSE DEL CABO; LOS MOCHIS: PD0179 LOS MOCHIS; MANZANILLO: PD0151 MANZANILLO, PD0278 EL TAMARINDO; MAZATLÁN: PD0195 MAZATLÁN, PD0275 MAZATLAN 2; MEXICALI: PD0170 MEXICALI PALACO, PD0197 MEXICALI PALACO II, PD0290 CONSTELLATION MEXICALI; TEPATITLÁN: PD0131 TEPATITLAN; TEPIC: PD0130 TEPIC, PD0302 CANAL CENTENARIO 2, PD0988 TROYA CANAL CENTENARIO 2; TIJUANA: PD0161 TIJ.VALLE SUR, PD0163 TIJ.GARCIA, PD0167 TIJ.OTAY, PD0220 VIA RAPIDA TIJUANA, PD0341 ALAMAR II, PD0419 SAN PEDRO-TECATE; VALLARTA: PD0159 PUERTO VALLARTA, PD0244 PLANTA CAPOMO, PD0432 TRONCAL SAN PANCHO, PD0434 PLANTA MAYAN, PD0446 TUNELES GUAMUCHIL, PD0563 PUNTA DE MITA

ZONA CENTRO

ACAPULCO: PD0076 ACAPULCO (MORTEROS), PD0397 PLAN DE LOS AMATES, PD0983 TROYA ACAPULCO; CUAUTLA: PD0430 CUAUTLA II; CUERNAVACA: PD0193 TEZOYUCA; CDMX: PD0063 CENTRAL, PD0065 CEYLAN, PD0067 LOS REYES, PD0071 XOCHIMILCO, PD0081 HUEHUETOCA V, PD0086 VALLEJO, PD0088 ARMAS, PD0099 MINAS, PD0186 IZTAPALAPA, PD0189 ROJO GOMEZ, PD0190 XALOSTC, PD0237 LA ESTRELLA, PD0282 DF ARMAS II, PD0284 LA ESTRELLA III, PD0293 TLAHUAC, PD0315 CUAUTITLAN II, PD0317 SANTA FE, PD0331 NAUCALPAN II, PD0426 MINAS III, PD0458 ECATEPEC II, PD0464 NAUCALPAN III, PD0495 ECATEPEC IV, PD0556 ZUMPANGO, PD0625 ESTRELLA II, CTCC; LÁZARO CÁRDENAS: PD0526 LÁZARO CÁRDENAS 2; MORELIA: PD0117 MORELIA; PACHUCA: PD0037 TULA V, PD0091 TULA IV, PD0178 HUEJUTLA 2, PD0208 SAHAGUN, PD0481 EMILIANO ZAPATA, PD0481 PACHUCA, PD0482 TIZAYUCA, PD0527 TEPEJI; QUERÉTARO: PD0192 AEROPUERTO QRO, PD0255 CASAS ARA 2, PD0283 LA ESTANCIA, PD0497 QUERÉTARO, PD0498 PARQUE INDUSTRIAL, PD0499 CASAS ARA,

PD0528 VIVEICA; SAN JUAN DEL RIO: PD0505 SAN JUAN DEL RIO, TIZAPA: PD0243 TIZAPA; TOLUCA: PD0187 TOLUCA, PD0338
ATLACOMULCO, PD0404 TOLUCA LERMAS; URUAPAN: PD0078 URUAPAN; ZAMORA: PD0153 ZAMORA
ZONA NORESTE
AGUASCALIENTES: PD0401 SUR II, PD0615 AGUASC NORTE, PD0616 AGUASC SUR; CD. VICTORIA, PD0510 CD. VICTORIA; CELAYA: PD0286
SAN MIGUEL DE ALLENDE, PD0444 APASEO, PD0643 CELAYA; COAHUILA NORTE: PD0016 PIEDRAS NEGRAS, PD0032 CASTAÑOS, PD0051
ACUÑA; DURANGO: PD0034 DURANGO; EOLICO SANTIAGO: PD0218 EOLICO SANTIAGO 2, PD0224 EOLICO SANTIAGO 1; IRAPUATO: PD0513
IRAPUATO II, PD0641 IRAPUATO; LAREDO: PD0204 LAREDO; LEÓN: PD0245 SILAO II, PD0407 MICHELLIN, PD0635 LEÓN 1 LIBRAMIENTO,
PD0636 LEÓN 2 HILAMAS, PD0638 LEÓN 5 CEMENTOS, PD0640 SILAO; MATAMOROS: PD0038 MATAMOROS II, PD0048 MATAMOROS;
MONTERREY: PD0002 SANTA ROSA, PD0007 MTY. I ESCOBEDO, PD0011 MORONES PRIETO, PD0017 CADEREYTA, PD0018 LOS LERMAS,
PD0022 INSURGENTES, PD0023 LOS LERMAS A, PD0027 LI-MON, PD0033 RUIZ CORTINEZ, PD0233 SANTA CATARINA, PD0239 TALAVERNA II,
PD0246 MONTERREY II, PD0261 NUEVO APODACA, PD0306 NUEVO APODACA 2, PD0411 ZUAZUA, PD0424 Insurgentes II, PD0466 CIUDAD
MITRAS, PD0484 VIADUCTO STA CATARINA, PD0549 SANTA ROSA 2; PESQUERIA: PD0436 PESQUERIA, PD0453 PESQUERIA 3; POZA RICA:
PD0316 TUXPAN, PD0546 POZA RICA; REYNOSA: PD0052 REYNOSA 1, PD0262 BALCONES II; SALTILLO: PD0029 SALTILLO 1 PERF., PD0232
IKANO SALTILLO, PD0236 ARTEAGA, PD0301 LOMAS LOURDES, PD0405 PLANTA 4 RAMOS ARIZPE; SAN LUIS POTOSÍ: PD0548 S.L.P PLANTA 1,
PD0551 PLANTA CD. VALLES, PD0552 PTA. ZONA INDUSTRI; TAMPICO: PD0506 PLANTA ALTAMIRA; TORREON: PD0035 GOMEZ PALACIOS,
PD0036 AEROPUERTO TORREON, PD0235 PUENTE MIELERAS; ZACATECAS: PD0544 ZACATECAS PLANTA 1; EÓLICO SAN CARLOS: PD0228
SAN CARLOS 1, PD0507 SAN CARLOS 2; EÓLICO FENICIAS: PD0219 EOLICO FENICIAS 2, PD0415 EOLICO FENICIAS 1;

ZONA SURESTE

CAMPECHE: PD0061 CAMPECHE, PD0400 CAMPECHE II; CANCUN: PD0055 CANCUN, PD0057 PLAYA DEL CARMEN, PD0188 NIZUC, PD0247
PUERTO MORELOS, PD0270 RIVIERA MAYA, PD0300 PETEMPICH, PD0304 MAYACOBIA II, PD0311 PUERTA DEL MAR II, PD0327 RIVIERA II,
PD0403 PETEMPICH II, PD0410 ARCO VIAL, PD0440 VIVEICA PASEO LAS PALMAS, PD0442 CALINTER 2, PD0455 PAAMUL II, PD0502 ARCO VIAL
II, PD0509 VILLAS DEL SOL II, PD0665 TULUM; CARDEL-POZA RICA: PD0431 CARDEL-POZA RICA, CARRETERA EJUTLA - PUERTO ESCONDIDO:
PD0379 EL GAVILAN; CARRETERA MITLA-TEHUANTEPEC: PD0209 MELITON; CD. DEL CARMEN: PD0326 PUENTE LA UNIDAD 2, PD0440 CD.DEL
CARMEN; CHETUMAL: PD0109 CHETUMAL; COATZACOALCOS: PD0203 COATZACOALCOS II, PD0279 TESECHOACAN, PD0399 NUEVO TEAPA,
PD0471 COATZACOALCOS, PD0553 PLANTA ACAYUCAN, PD0986 SUCHILAPAN; COZUMEL: PD0056 COZUMEL; EOLICAS: PD0328 ESPINAL -
SANTA RITA II, PD0334 4 MILPAS, PD0461 ESPINAL SANTA RITA; EÓLICOS PUEBLA: PD0409 EÓLICOS II; MÉRIDA: PD0058 MERIDA PLANTA II,
PD0059 MERIDA PLANTA I, PD0229 MERIDA III, PD0231 MERIDA III, PD0274 VALLADOLID II, PD0441 DZITYA I, PD0451 DZITYA II, PD0992 CAVA
DZITYA, PD0993 CAVA PERIFERICO; NUEVO NECAXA: PD0470 SAN MARCOS 2; OAXACA: PD0080 SALINA CRUZ, PD0101 OAXACA, PD0298
SALINA CRUZ II; ORIZABA: PD0092 ORIZABA, PD0116 PLANTA ZONGOLICA, PD0491 PLANTA TIERRA BLANCA; PINOTEPA: PD0046 JAMILTEPEC,
PD0389 ZACATEPEC; PUEBLA: PD0316 PLANTA NUEVO NECAXA III, PD0468 PLANTA CHACHAPA, PD0469 ATLIXCO, PD0472 TEPEACA H2,
PD0473 SEDENA PUEBLA, PD0474 VIALIDADES PUEBLA I, PD0475 PUEBLA II, PD0476 SAN MARTIN, PD0601 PLANTA AUDI 1, PD0630 CHIPILO;
SALINA CRUZ: PD0462 SALINA CRUZ II; TAPACHULA: PD0060 TAPACHULA, PD0310 TAPACHULA II; TLAXCALA: PD0435 APIZACO III; TUXTLA
GUTIÉRREZ: PD0200 TUXTLA GUTIERREZ, PD0387 MINI PLANTA CHIAPAS, PD0422 PLANTA ARRIAGA, PD0480 SAN CRISTOBAL, PD0525
TUXTLA GUTIERREZ II, PD0994 PROYECTO TROYA TONALA; VERACRUZ: PD0202 VERACRUZ II, PD0297 PUERTO SECO, PD0336 COYOL I,
PD0433 AMPLIACION LAGUNA VERDE, PD0562 API II, PD0999 PROYECTO TROYA; VILLAHERMOSA: PD0183 VILLAHERMOSA, PD0207 SOL DE
CARDENAS, PD0268 SAMARIA II, PD0294 VILLAHERMOSA II, PD0391 PLANTA BALANCAN, PD0402 PALENQUE II, PD0477 CARDENAS, PD0984
MEZCALAPA, PD0999 CONCRETEC-TROYA; XALAPA: PD0062 FIDELIDAD, PD0110 JALAPA, PD0226 CD. PRIMAVERA, PD0305 LAS TRANCAS II,
PD0386 MISANTLA, PD0987 MADROÑO

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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 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

