

HPD UNIQUE IDENTIFIER: 28160

CLASSIFICATION: 03 01 30 Maintenance of Cast-in-Place Concrete

PRODUCT DESCRIPTION: RAPID SET® CEMENT is a high-performance, rapid hardening hydraulic cement. Use RAPID SET CEMENT to create concretes, mortars, and grouts that achieve structural strength in one hour. Engineered for low shrinkage and superior resistance to chemical attack, Rapid Set Cement maximizes service life and minimizes maintenance. **USES:** Use RAPID SET CEMENT to replace ordinary portland cement for projects where fast return to service, high strength, and increased durability are desired. Rapid Set cement-based materials are ideal for a diverse range of interior and exterior projects including highway pavements, bridges, runways, tunnels, tilt-up, precast, sidewalks, floors, and many other applications. For larger jobs, RAPID SET CEMENT mixtures may be batched using conventional ready mix or volumetric mixer equipment. Many state and local municipalities throughout the United States specify RAPID SET CEMENT in their concrete mix designs when speed and durability are important.

Section 1: Summary

Nested Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format	Threshold Level	Residuals/Impurities	
☒ Nested Materials Method	☒ 100 ppm	Considered in 3 of 3 Materials	<i>All Substances Above the Threshold Indicated Are:</i>
☐ Basic Method	☐ 1,000 ppm		Characterized ☐ Yes Ex/SC ☒ Yes ☐ No
Threshold Disclosed Per	☐ Per GHS SDS	Explanation(s) provided for Residuals/Impurities?	<i>% weight and role provided for all substances.</i>
☐ Material	☐ Other	☒ Yes ☐ No	Screened ☐ Yes Ex/SC ☒ Yes ☐ No
☒ Product			<i>All substances screened using Priority Hazard Lists with results disclosed.</i>
			Identified ☐ Yes Ex/SC ☒ Yes ☐ No
			<i>All substances disclosed by Name (Specific or Generic) and 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.

MATERIAL | SUBSTANCE | RESIDUAL OR IMPURITY
GREENSCREEN SCORE | HAZARD TYPE
CALCIUM SULFOALUMINATE CEMENT [LIMESTONE BM-3dg
PHOSPHOGYPSUM BM-3dg **BAUXITE** NoGS **KAOLIN** LT-UNK | CAN
QUARTZ BM-1 | CAN **QUARTZ** BM-1 | CAN **FLUORITE** NoGS]
GYPSUM [PHOSPHOGYPSUM BM-3dg] **ANHYDRITE (SYNTHETIC) [**
CALCIUM SULFATE LT-UNK]

Number of Greenscreen BM-4/BM3 contents ... 0

Contents highest concern GreenScreen Benchmark or List translator Score ... BM-1

Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

Every effort has been made to report the substances in this product by the manufacturer to the listed threshold. This is a voluntary, self-reported effort. Any errors or omissions shall be considered human error and therefore reported to the manufacturer. The manufacturer shall not be liable for omissions.

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: Non-emitting

CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4 Material Ingredients Option 1

Third Party Verified?	PREPARER: Labeling Sustainability	SCREENING DATE: 2022-03-04
☐ Yes	VERIFIER:	PUBLISHED DATE: 2022-04-11
☒ No	VERIFICATION #:	EXPIRY DATE: 2025-03-04

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

CALCIUM SULFOALUMINATE CEMENT %: 81.0000

PRODUCT THRESHOLD: 100 ppm RESIDUALS AND IMPURITIES CONSIDERED: Yes MATERIAL TYPE: Polymeric Material

RESIDUALS AND IMPURITIES NOTES: 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.

OTHER MATERIAL NOTES:

LIMESTONE

ID: 1317-65-3

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2022-03-04 12:30:06

%: 53.0000 GS: BM-3dg RC: UNK NANO: No SUBSTANCE ROLE: Filler

HAZARD TYPE AGENCY AND LIST TITLES WARNINGS

None found No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: Per Pharos: NOTES
"Building materials, such as concrete and dimension stone (sandstone, granite, and limestone are examples) contain crystalline silica in the form of quartz." (USGS Crystalline Silica Primer) Limestone typically contains between 0.1% and 1% quartz. (MSHA MSDS & Specialty MSDS)

PHOSPHOGYPSUM

ID: 13397-24-5

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2022-03-04 12:30:07

%: 20.0000 GS: BM-3dg RC: UNK NANO: No SUBSTANCE ROLE: Filler

HAZARD TYPE AGENCY AND LIST TITLES WARNINGS

None found No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: "In addition to the radiation health hazards covered by Subpart R, phosphogypsum contains some trace metals in concentrations that EPA believes may pose a chemical hazard to human health and the environment. Analysis of samples from various facilities contained arsenic, lead, cadmium, chromium, fluoride, zinc, antimony, and copper at concentrations that may pose significant health risks. The concentrations of these contaminants vary by more than three orders of magnitude among samples taken from various locations. These trace metals may also be leached from phosphogypsum and migrate to nearby surface and groundwater resources." (EPA phosphogypsum webpage)

BAUXITE

ID: 1318-16-7

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2022-03-04 12:30:08

%: 17.0000 GS: NoGS RC: UNK NANO: No SUBSTANCE ROLE: Filler		
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists
SUBSTANCE NOTES: NOTES "Bauxite is a naturally occurring, heterogeneous material primarily composed of one or more aluminum hydroxide minerals and various mixtures of aluminum silicate (clay, etc.), iron oxide, silica, titania, and other impurities in minor or trace amounts. It is principally used for the production of alumina (Al2O3), the oxide of aluminum, which is consumed chiefly in the production of primary aluminum metal. The other major uses of bauxite are in refractories, abrasives, chemicals, proppants, and aluminous cements." (US Geological Survey)		

KAOLIN					ID: 1332-58-7
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-03-04 12:30:09			
%: 8.0000	GS: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Filler	
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS			
CAN	MAK	Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification			
SUBSTANCE NOTES: 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.					

QUARTZ				ID: 14808-60-7
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-03-04 12:30:10		
%: Impurity/Residual	GS: BM-1	RC: UNK	NANO: No	SUBSTANCE ROLE: Impurity/Residual

HAZARD TYPE	AGENCY AND LIST TITLES	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	GHS - New Zealand	6.7A - Known or presumed human carcinogens
CAN	GHS - Japan	H350 - May cause cancer [Carcinogenicity - Category 1A]
CAN	GHS - Australia	H350i - May cause cancer by inhalation [Carcinogenicity - Category 1A or 1B]

SUBSTANCE NOTES: NOTES

"Building materials, such as concrete and dimension stone (sandstone, granite, and limestone are examples) contain crystalline silica in the form of quartz." (USGS Crystalline Silica Primer) Limestone typically contains between 0.1% and 1% quartz. (MSHA MSDS & Specialty MSDS)

The Quartz database list Quartz as an impurity in cement at 0.11%

QUARTZ

ID: 14808-60-7

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-03-04 12:30:11		
%: 0.5000	GS: BM-1	RC: UNK	NANO: No	SUBSTANCE ROLE: Filler

HAZARD TYPE	AGENCY AND LIST TITLES	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	GHS - New Zealand	6.7A - Known or presumed human carcinogens
CAN	GHS - Japan	H350 - May cause cancer [Carcinogenicity - Category 1A]
CAN	GHS - Australia	H350i - May cause cancer by inhalation [Carcinogenicity - Category 1A or 1B]
SUBSTANCE NOTES: As sandstone		

FLUORITE

ID: 14542-23-5

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-03-04 12:30:12		
%: 0.5000	GS: NoGS	RC: UNK	NANO: No	SUBSTANCE ROLE: Filler
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS		
None found		No warnings found on HPD Priority Hazard Lists		

SUBSTANCE NOTES: 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.

GYPSUM

%: 3.5000

PRODUCT THRESHOLD: 100 ppm RESIDUALS AND IMPURITIES CONSIDERED: Yes MATERIAL TYPE: Geologically Derived Material

RESIDUALS AND IMPURITIES NOTES: 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.

PHOSPHOGYPSUMID: 13397-24-5

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2022-03-04 12:30:04

%: 100.0000

GS: BM-3dg

RC: UNK

NANO: No

SUBSTANCE ROLE: Binder

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

None found

No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: "In addition to the radiation health hazards covered by Subpart R, phosphogypsum contains some trace metals in concentrations that EPA believes may pose a chemical hazard to human health and the environment. Analysis of samples from various facilities contained arsenic, lead, cadmium, chromium, fluoride, zinc, antimony, and copper at concentrations that may pose significant health risks. The concentrations of these contaminants vary by more than three orders of magnitude among samples taken from various locations. These trace metals may also be leached from phosphogypsum and migrate to nearby surface and groundwater resources." (EPA phosphogypsum webpage)

ANHYDRITE (SYNTHETIC) %: 2.0000

PRODUCT THRESHOLD: 100 ppm

RESIDUALS AND IMPURITIES CONSIDERED: Yes

MATERIAL TYPE: Polymeric Material

RESIDUALS AND IMPURITIES NOTES: 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.

CALCIUM SULFATEID: 7778-18-9

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2022-03-04 12:30:05

%: 100.0000

GS: LT-UNK

RC: UNK

NANO: No

SUBSTANCE ROLE: Filler

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

None found

No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: 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.”

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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.

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	Non-emitting		
CERTIFYING PARTY: Self-declared	ISSUE DATE: 2022-03-	EXPIRY DATE:	CERTIFIER OR LAB: CTS Cement
APPLICABLE FACILITIES: This is not a facility-based designation.	03		Manufacturing
CERTIFICATE URL:			
CERTIFICATION AND COMPLIANCE NOTES: This product is non-emitting; it does not contain any binder or additives. It does not have a current CDPH test certificate.			

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

This product can be used for multiple applications and installed using various methods. Therefore, the actual accessories used are varied.

Preferred installation:

For repairs, application surface must be clean, sound and free from any materials that may inhibit bond, such as oil, asphalt, curing compound, acid, dirt and loose debris. Mechanically abrade surface and remove all unsound material. Apply RAPID SET CEMENT concrete to a thoroughly saturated surface with no standing water.

Most materials made with RAPID SET CEMENT must be water cured. Keep exposed surfaces wet for a minimum of 1 hour. Begin curing as soon as the surface starts to lose its moist sheen. When experiencing extended setting time due to cold temperature or the use of retarder, longer curing times may be required. The objective of water curing shall be to maintain a continuously wet surface until the product has achieved sufficient strength. Alternative curing methods may be suitable in some applications. Methods include, but are not limited to, the use of surface applied curing compounds conforming to ASTM C309. The material formulator is responsible for the mix design and determining the appropriate curing method.

Environmental and material temperatures below 70°F (21°C) may delay setting time and reduce the rate of strength gain. Lower temperatures will have a more pronounced effect. Thinner sections will be more significantly affected. To compensate for cold temperatures, keep material warm, use heated mix water, and follow ACI 306 Procedures for Cold Weather Concreting.

WARM WEATHER: Environmental and material temperatures above 70°F (21°C) may speed setting time and increase the rate of strength gain. Higher temperatures will have a more pronounced effect. To compensate for warm temperatures, keep material cool, use chilled mix water and follow ACI 305 Procedures for Hot Weather Concreting. The use of Rapid Set® SET Control® retarding admixture from the Rapid Set® Concrete Pharmacy® will help offset the effects of high temperatures.

MANUFACTURER INFORMATION

MANUFACTURER: CTS Cement Manufacturing Corporation
ADDRESS: 12442 Knott Street
Garden Grove CA 92841, United States
WEBSITE: <https://www.ctscement.com/>

CONTACT NAME: Grant Kao
TITLE: Vice President of Product Strategy and Compliance
PHONE: 714.793.1040
EMAIL: gkao@ctscement.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)	
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)	NoGS No GreenScreen.

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.