

HPD UNIQUE IDENTIFIER: 28717

CLASSIFICATION: 09 67 23 Resinous Flooring

PRODUCT DESCRIPTION: Flowfresh FC Moisture Mitigation System consists of a cementitious urethane primer/basecoat broadcasted with silica sand, for use as a moisture vapor treatment on concrete floor slabs or elevated lightweight concrete with excessive moisture vapor emission rates or a high internal moisture content. Flowfresh FC Moisture Mitigation System will tolerate moisture vapor emission rates (MVER) up to 20 lbs moisture per 1,000 square feet per 24 hours when tested in accordance with ASTM F1869. When tested in accordance with ASTM F2170 it will tolerate up to 99% internal relative humidity.

Section 1: Summary

Basic Method / Product Threshold

CONTENT INVENTORY

<p>Inventory Reporting Format</p> <p><input type="radio"/> Nested Materials Method</p> <p><input checked="" type="radio"/> Basic Method</p> <p>Threshold Disclosed Per</p> <p><input type="radio"/> Material</p> <p><input checked="" type="radio"/> Product</p>	<p>Threshold Level</p> <p><input type="radio"/> 100 ppm</p> <p><input checked="" type="radio"/> 1,000 ppm</p> <p><input type="radio"/> Per GHS SDS</p> <p><input type="radio"/> Other</p>	<p>Residuals/Impurities</p> <p><input checked="" type="radio"/> Considered</p> <p><input type="radio"/> Partially Considered</p> <p><input type="radio"/> Not Considered</p> <p>Explanation(s) provided for Residuals/Impurities?</p> <p><input checked="" type="radio"/> Yes <input type="radio"/> No</p>	<p><i>All Substances Above the Threshold Indicated Are:</i></p> <p>Characterized <input type="radio"/> Yes Ex/SC <input checked="" type="radio"/> Yes <input type="radio"/> No</p> <p><i>% weight and role provided for all substances.</i></p> <p>Screened <input type="radio"/> Yes Ex/SC <input checked="" type="radio"/> Yes <input type="radio"/> No</p> <p><i>All substances screened using Priority Hazard Lists with results disclosed.</i></p> <p>Identified <input type="radio"/> Yes Ex/SC <input checked="" type="radio"/> Yes <input type="radio"/> No</p> <p><i>All substances disclosed by Name (Specific or Generic) and Identifier.</i></p>
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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

FLOWFRESH FC [PORTLAND CEMENT LT-P1 | CAN | END 4,4'-
DIPHENYLMETHANE DIISOCYANATE LT-UNK | MUL | RES | CAN | SKI
| EYE DIPHENYLMETHANE DIISOCYANATE (MDI) - NON ISOMER
SPECIFIC LT-UNK | MUL | RES | SKI | EYE | CAN CASTOR OIL NoGS
WATER BM-4 POLYMETHYLENE POLYPHENYL ISOCYANATE LT-
UNK | MUL | RES | CAN CALCIUM HYDROXIDE LT-P1 2,4'-
DIPHENYLMETHANE DIISOCYANATE LT-UNK | MUL | RES | SKI | EYE |
CAN QUARTZ BM-1 | CAN ALKYL (C12, C14) GLYCIDYL ETHER LT-P1
| MUL | SKI ETHYLENE GLYCOL LT-1 | END | DEV FERRIC OXIDE BM-
1 | CAN TROLAMINE LT-P1 | END | RES 1,2,4-TRIMETHYLBENZENE
BM-2 | MUL | SKI | EYE | AQU]

Number of Greenscreen BM-4/BM3 contents ... 1

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

Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

This HPD was generated with basic inventory information

VOLATILE ORGANIC COMPOUND (VOC) CONTENT

Material (g/l): 10, compliant to
low VOC Rule 1113 in all 50
states

Regulatory (g/l): 10, compliant to
low VOC Rule 1113 in all 50 states

Does the product contain exempt VOCs: No

Are ultra-low VOC tints available: N/A

CERTIFICATIONS AND COMPLIANCE See Section 3 for additional listings.

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

VOC content: EPA Method 24 - Volatile Matter Content (EPA 24)

CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4 Material Ingredients Option 1

<p>Third Party Verified?</p> <p><input type="radio"/> Yes</p> <p><input checked="" type="radio"/> No</p>	<p>PREPARER: Self-Prepared</p> <p>VERIFIER:</p> <p>VERIFICATION #:</p>	<p>SCREENING DATE: 2022-06-16</p> <p>PUBLISHED DATE: 2022-06-16</p> <p>EXPIRY DATE: 2025-06-16</p>
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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 2.2, available on the HPDC website at: www.hpd-collaborative.org/hpd-2-2-standard

FLOWFRESH FC

PRODUCT THRESHOLD: 1000 ppm

RESIDUALS AND IMPURITIES CONSIDERED: Yes

RESIDUALS AND IMPURITIES NOTES: The product is estimated to have no residuals/impurities over 1000 ppm based on raw material supplier information

OTHER PRODUCT NOTES:

PORTLAND CEMENT

ID: 65997-15-1

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2022-06-16 9:25:42

#: 26.2980 - 35.0640

GS: LT-P1

RC: None

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
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor

SUBSTANCE NOTES:

4,4'-DIPHENYLMETHANE DIISOCYANATE

ID: 101-68-8

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2022-06-16 9:25:42

#: 14.7590 - 20.6620

GS: LT-UNK

RC: None

NANO: No

SUBSTANCE ROLE: Curing agent

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
MUL	US EPA - PPT Chemical Action Plans	EPA Chemical of Concern - Action Plan published
RES	AOEC - Asthmagens	Asthmagen (G) - generally accepted
CAN	MAK	Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels
RES	AOEC - Asthmagens	Asthmagen (Rs) - sensitizer-induced
RES	MAK	Sensitizing Substance Sah - Danger of airway & skin sensitization
RES	US EPA - PPT Chemical Action Plans	Inhalation sensitizer causing asthma and lung damage
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H317 - May cause an allergic skin reaction [Skin sensitization - Category 1]
EYE	EU - GHS (H-Statements) Annex 6 Table 3-1	H319 - Causes serious eye irritation [Serious eye damage/eye irritation - Category 2A]
RES	EU - GHS (H-Statements) Annex 6 Table 3-1	H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled [Respiratory sensitization - Category 1]
CAN	EU - GHS (H-Statements) Annex 6 Table 3-1	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]

SUBSTANCE NOTES:

DIPHENYLMETHANE DIISOCYANATE (MDI) - NON ISOMER SPECIFIC

ID: 26447-40-5

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-06-16 9:25:43**

#: **8.8550 - 14.7590** GS: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Curing agent**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
MUL	US EPA - PPT Chemical Action Plans	EPA Chemical of Concern - Action Plan published
RES	US EPA - PPT Chemical Action Plans	Inhalation sensitizer causing asthma and lung damage
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H317 - May cause an allergic skin reaction [Skin sensitization - Category 1]
EYE	EU - GHS (H-Statements) Annex 6 Table 3-1	H319 - Causes serious eye irritation [Serious eye damage/eye irritation - Category 2A]
RES	EU - GHS (H-Statements) Annex 6 Table 3-1	H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled [Respiratory sensitization - Category 1]
CAN	EU - GHS (H-Statements) Annex 6 Table 3-1	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]

SUBSTANCE NOTES:

CASTOR OIL

ID: 8001-79-4

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-06-16 9:25:43**%: **8.8550 - 14.7590** GS: **NoGS** RC: **None** NANO: **No** SUBSTANCE ROLE: **Binder**

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

SUBSTANCE NOTES:

WATER

ID: 7732-18-5

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-06-16 9:25:44**%: **7.3790 - 10.3310** GS: **BM-4** RC: **None** NANO: **No** SUBSTANCE ROLE: **Solvent**

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

SUBSTANCE NOTES:

POLYMETHYLENE POLYPHENYL ISOCYANATE

ID: 9016-87-9

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-06-16 9:25:44**%: **5.9040 - 14.7590** GS: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Curing agent**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
MUL	US EPA - PPT Chemical Action Plans	EPA Chemical of Concern - Action Plan published
RES	AOEC - Asthmagens	Asthmagen (G) - generally accepted
CAN	MAK	Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels
RES	AOEC - Asthmagens	Asthmagen (Rs) - sensitizer-induced
RES	MAK	Sensitizing Substance Sah - Danger of airway & skin sensitization
RES	US EPA - PPT Chemical Action Plans	Inhalation sensitizer causing asthma and lung damage

SUBSTANCE NOTES:

CALCIUM HYDROXIDE

ID: 1305-62-0

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-06-16 9:25:45**%: **3.5060 - 8.7660** GS: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Accelerator**

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

SUBSTANCE NOTES:

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-06-16 9:25:45**%: **2.9520 - 5.9040** GS: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Curing agent**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
MUL	US EPA - PPT Chemical Action Plans	EPA Chemical of Concern - Action Plan published
RES	US EPA - PPT Chemical Action Plans	Inhalation sensitizer causing asthma and lung damage
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H317 - May cause an allergic skin reaction [Skin sensitization - Category 1]
EYE	EU - GHS (H-Statements) Annex 6 Table 3-1	H319 - Causes serious eye irritation [Serious eye damage/eye irritation - Category 2A]
RES	EU - GHS (H-Statements) Annex 6 Table 3-1	H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled [Respiratory sensitization - Category 1]
CAN	EU - GHS (H-Statements) Annex 6 Table 3-1	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]

SUBSTANCE NOTES:

QUARTZ

ID: 14808-60-7

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-06-16 9:25:46**%: **2.9500 - 4.4260** GS: **BM-1** RC: **None** 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 - 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

SUBSTANCE NOTES:

ALKYL (C12, C14) GLYCIDYL ETHER

ID: 68609-97-2

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-06-16 9:25:46**

#: **0.2950 - 1.4760** GS: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Diluent**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H317 - May cause an allergic skin reaction [Skin sensitization - Category 1]

SUBSTANCE NOTES:

ETHYLENE GLYCOL

ID: **107-21-1**

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-06-16 9:25:47**

#: **0.2950 - 1.4760** GS: **LT-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Diluent**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
DEV	CA EPA - Prop 65	Developmental toxicity
DEV	US NIH - Reproductive & Developmental Monographs	Clear Evidence of Adverse Effects - Developmental Toxicity

SUBSTANCE NOTES:

FERRIC OXIDE

ID: **1309-37-1**

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-06-16 9:25:47**

#: **0.0590 - 0.2950** GS: **BM-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Pigment**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CAN	MAK	Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification

SUBSTANCE NOTES:

TROLAMINE

ID: **102-71-6**

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-06-16 9:25:48**

#: **0.0295 - 0.2950** GS: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Catalyst**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
RES	AOEC - Asthmagens	Asthmagen (Rs) - sensitizer-induced

SUBSTANCE NOTES:

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-06-16 9:25:48**%: **0.0295 - 0.2950**GS: **BM-2**RC: **None**NANO: **No**SUBSTANCE ROLE: **Solvent**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
SKI	EU - GHS (H-Statements) Annex 6 Table 3-1	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
EYE	EU - GHS (H-Statements) Annex 6 Table 3-1	H319 - Causes serious eye irritation [Serious eye damage/eye irritation - Category 2A]
AQU	EU - GHS (H-Statements) Annex 6 Table 3-1	H411 - Toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 2]

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

CDPH Standard Method V1.2 (Section 01350/CHPS) - Classroom & Office scenario

CERTIFYING PARTY: Third Party

ISSUE DATE: 2018-09- EXPIRY DATE:

CERTIFIER OR LAB: UL

APPLICABLE FACILITIES: ALL

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Environment

CERTIFICATE URL:

CERTIFICATION AND COMPLIANCE NOTES: Small Environment Chamber VOC Emissions Test, ASTM D5116

VOC CONTENT

EPA Method 24 - Volatile Matter Content (EPA 24)

CERTIFYING PARTY: Self-declared

ISSUE DATE: 2018-09- EXPIRY DATE:

CERTIFIER OR LAB: Key Resin Lab

APPLICABLE FACILITIES: ALL

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CERTIFICATE URL:

CERTIFICATION AND 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.

No accessories are required for this product.

Section 5: General Notes

The product is estimated to have no residuals / impurities over 1000 ppm based on raw material supplier information.

MANUFACTURER INFORMATION

MANUFACTURER: Key Resin Company
ADDRESS: 4050 Clough Woods Drive
 Batavia, OHIO 45103, United States
WEBSITE: www.keyresin.com

CONTACT NAME: Travis Barkey
TITLE: Technical Director
PHONE: 15139434225
EMAIL: tbarkey@keyresin.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.