

HPD UNIQUE IDENTIFIER: 1764137984

CLASSIFICATION: 07 81 00 Applied Fire Protection

PRODUCT DESCRIPTION: A decorative thin film intumescent coating designed for the fire protection of interior steel columns for up to a 3 hour fire rating, depending on the design.

Section 1: Summary

Basic Method / Product Threshold

CONTENT INVENTORY

<b>Inventory Reporting Format</b>	<b>Threshold Level</b>	<b>Residuals/Impurities Evaluation</b>	<i>For all contents above the threshold, the manufacturer has:</i>
<input type="radio"/> Nested Materials Method	<input checked="" type="radio"/> 100 ppm	<input type="radio"/> Completed	<b>Characterized</b> <input checked="" type="radio"/> Yes <input type="radio"/> No
<input checked="" type="radio"/> Basic Method	<input type="radio"/> 1,000 ppm	<input type="radio"/> Partially Completed	<i>Provided weight and role.</i>
<b>Threshold Disclosed Per</b>	<input type="radio"/> Per GHS SDS	<input checked="" type="radio"/> Not Completed	<b>Screened</b> <input type="radio"/> Yes <input checked="" type="radio"/> No
<input type="radio"/> Material	<input type="radio"/> Other	<b>Explanation(s) provided :</b>	<i>Provided screening results using HPDC-approved methods.</i>
<input checked="" type="radio"/> Product		<input checked="" type="radio"/> Yes <input type="radio"/> No	<b>Identified</b> <input type="radio"/> Yes <input checked="" type="radio"/> No
			<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**  
**FILM IV | POLYPHOSPHORIC ACIDS, AMMONIUM SALTS BM-3**  
**WATER BM-4 TITANIUM DIOXIDE BM-1 \* | CAN | END | MAM VINYL**  
**ESTER TERPOLYMER Not Screened PENTAERYTHRITOL LT-UNK**  
**MELAMINE LT-1 | END | CAN | MAM CONTINUOUS FILAMENT GLASS**  
**FIBER, NON-RESPIRABLE LT-UNK**

Number of Greenscreen BM-4/BM3 contents ... 2  
Contents highest-concern GreenScreen score(s) (BM-1, LT-1, LT-P1) ...  
LT-1  
Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

None

\*Form-Specific Hazard: This substance's GreenScreen Benchmark or List Translator score and the applicable hazards are related to particulate inhalation, which is expected to occur only during manufacture, installation, maintenance, or demolition, due to activities such as sawing, sanding, grinding, or intensive cleaning. For this reason, this score is intentionally omitted from the "Contents highest concern" line above. See HPDC's Special Conditions policy for more information.

VOLATILE ORGANIC COMPOUND (VOC) CONTENT

Material (g/l): 4 Regulatory (g/l): 4  
Does the product contain exempt VOCs: No  
Are colorants available that do not increase the VOC content of the base paint when tinted: 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: ILFI Declare - Declared  
LCA: Environmental Product Declaration (EPD) by Sustainable Minds

CONSISTENCY WITH OTHER PROGRAMS

No pre-checks completed or disclosed.

Third Party Verified?

- Yes
- No

PREPARER: Self-Prepared

VERIFIER:  
VERIFICATION #:

SCREENING DATE: 2024-08-16

PUBLISHED DATE: 2024-08-16

EXPIRY DATE: 2027-08-16

## 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](http://www.hpd-collaborative.org/hpd-2-3-standard)

### FIREFILM IV

PRODUCT THRESHOLD: 100 ppm

RESIDUALS AND IMPURITIES EVALUATION COMPLETED: No

RESIDUALS AND IMPURITIES NOTES: Firefilm IV has no known residuals or impurities.

OTHER PRODUCT NOTES: N/A

### POLYPHOSPHORIC ACIDS, AMMONIUM SALTS

ID: 68333-79-9

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

HAZARD SCREENING DATE: 2024-08-16 10:58:11

%: 20.0000 - 40.0000

GreenScreen: **BM-3**

RC: **UNK**

NANO: **Unknown**

SUBSTANCE ROLE: **Flame retardant**

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

Cradle to Cradle Products Innovation Institute (C2CPII)

C2C Certified v4.0 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022

Biological and Environmentally Released Materials

SUBSTANCE NOTES: Unknown if substance has recycled content

### WATER

ID: 7732-18-5

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

HAZARD SCREENING DATE: 2024-08-16 10:58:11

%: 20.0000 - 40.0000

GreenScreen: **BM-4**

RC: **UNK**

NANO: **Unknown**

SUBSTANCE ROLE: **Solvent**

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

**TITANIUM DIOXIDE**

ID: 13463-67-7

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2024-08-16 10:58:12**

%: **10.0000 - 25.0000** GreenScreen: **BM-1** RC: **UNK** NANO: **Unknown** SUBSTANCE ROLE: **Pigment**

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	IARC	Group 2B - Possibly carcinogenic to humans - inhaled from occupational sources**
CAN	MAK	Carcinogen Group 3A - Evidence of carcinogenic effects but not sufficient to establish MAK/BAT value**
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor**
CAN	MAK	Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels**
CAN	IARC	Group 2b - Possibly carcinogenic to humans**
CAN	EU - GHS (H-Statements) Annex 6 Table 3-1	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]**
CAN	GHS - Japan	H351 - Suspected of causing cancer [Carcinogenicity - 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]**
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPH)	C2C Certified v4.0 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022  Children's Products
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPH)	C2C Certified v4.0 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022  Formulated Consumer Products
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPH)	C2C Certified v4.0 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022  Cosmetics & Personal Care Products
POSITIVE LIST	US Environmental Protection Agency (US EPA)	US EPA - DfE Safer Chemicals Ingredients list (SCIL)  Colorants - Green Circle (Verified Low Concern)

SUBSTANCE NOTES: Unknown if substance has recycled content

\*\*Form-Specific Hazard: This substance's GreenScreen Benchmark or List Translator score and the applicable hazards are related to particulate inhalation, which is expected to occur only during manufacture, installation, maintenance, or demolition, due to activities such as sawing, sanding, grinding, or intensive cleaning. See HPDC's Special Conditions policy for more information. Manufacturer's Safety Data Sheet (SDS), if applicable, may offer occupational health and safety information.

**VINYL ESTER TERPOLYMER**

ID: **Not Registered**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **Not Screened**

%: **5.0000 - 20.0000** GreenScreen: **Not Screened** RC: **None** NANO: **No** SUBSTANCE ROLE: **Binder**

HAZARD TYPE LIST NAME AND SOURCE WARNINGS

Hazard Screening not performed

ADDITIONAL LISTINGS LIST NAME AND SOURCE NOTIFICATION

Additional Hazard Screening not performed

SUBSTANCE NOTES: Proprietary

**PENTAERYTHRITOL**

ID: **115-77-5**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2024-08-16 10:58:12**

%: **2.5000 - 10.0000** GreenScreen: **LT-UNK** RC: **UNK** NANO: **Unknown** 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: Unknown if substance has recycled content

**MELAMINE**

ID: **108-78-1**

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2024-08-16 10:58:13**

%: **2.5000 - 9.0000** GreenScreen: **LT-1** RC: **UNK** NANO: **Unknown** SUBSTANCE ROLE: **Blowing agent**

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
CAN	IARC	Group 2b - Possibly carcinogenic to humans
CAN	EU - GHS (H-Statements) Annex 6 Table 3-1	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
CAN	GHS - Japan	H351 - Suspected of causing cancer [Carcinogenicity - 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 - Australia	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organ toxicity - repeated exposure - Category 1]
CAN	EU - Annex VI CMRs	Carcinogen Category 2 - Suspected human Carcinogen
CAN	GHS - Australia	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
END	EU - SVHC List	Equivalent Concern - Candidate List
END	EU - SVHC List	Equivalent Concern - Prioritization List: endocrine disrupting properties cause probable serious effects to the environment or human health

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CPII)	C2C Certified v4.0 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022  Children's Products

SUBSTANCE NOTES: Unknown if substance has recycled content

**CONTINUOUS FILAMENT GLASS FIBER, NON-RESPIRABLE**

ID: 65997-17-3

HAZARD DATA SOURCE: <b>Pharos Chemical and Materials Library</b>	HAZARD SCREENING DATE: <b>2024-08-16 10:58:13</b>
%: <b>0.1000 - 2.5000</b>	GreenScreen: <b>LT-UNK</b> RC: <b>UNK</b> NANO: <b>Unknown</b> SUBSTANCE ROLE: <b>Filler</b>

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 V listing due to intrinsic safety



## 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 APPLICABLE FACILITIES: All CERTIFICATE URL: <a href="https://www.carboline.com/products/product-transparency/">https://www.carboline.com/products/product-transparency/</a> CERTIFICATION AND COMPLIANCE NOTES:	ISSUE DATE: 2019-01-23 00:00:00 EXPIRY DATE:	CERTIFIER OR LAB: Berkeley Analytical
VOC CONTENT	ILFI Declare - Declared	
CERTIFYING PARTY: Self-declared APPLICABLE FACILITIES: All CERTIFICATE URL: <a href="https://declare.living-future.org/products/firefilm-iv">https://declare.living-future.org/products/firefilm-iv</a> CERTIFICATION AND COMPLIANCE NOTES:	ISSUE DATE: 2024-04-15 00:00:00 EXPIRY DATE: 2025-05-01 00:00:00	CERTIFIER OR LAB: 3E Exchange
LCA	Environmental Product Declaration (EPD) by Sustainable Minds	
CERTIFYING PARTY: Third Party APPLICABLE FACILITIES: All CERTIFICATE URL: <a href="https://transparencycatalog.com/company/carboline/showroom/firefilm-iv">https://transparencycatalog.com/company/carboline/showroom/firefilm-iv</a> CERTIFICATION AND COMPLIANCE NOTES:	ISSUE DATE: 2023-02-13 00:00:00 EXPIRY DATE: 2028-02-12 00:00:00	CERTIFIER OR LAB: Sustainable Minds

## 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 decorative thin film intumescent coating designed for the fire protection of interior steel columns for up to a 3 hour fire rating, depending on the design.

**MANUFACTURER INFORMATION**

MANUFACTURER: **Carboline**  
 ADDRESS: **2150 Schuetz Rd**  
**St. Louis, Missouri 63026**  
 COUNTRY: **United States**

WEBSITE: **www.carboline.com**  
 CONTACT NAME: **Jamie Valdez**  
 TITLE: **Global Product Support Specialist**  
 PHONE: **314-644-1000**  
 EMAIL: **sustainability@carboline.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**

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

**GreenScreen (GS)**

<b>BM-4</b> Benchmark 4 (prefer-safer chemical)	<b>LT-P1</b> List Translator Possible 1 (Possible Benchmark-1)
<b>BM-3</b> Benchmark 3 (use but still opportunity for improvement)	<b>LT-1</b> List Translator 1 (Likely Benchmark-1)
<b>BM-2</b> Benchmark 2 (use but search for safer substitutes)	<b>LT-UNK</b> List Translator Benchmark Unknown
<b>BM-1</b> Benchmark 1 (avoid - chemical of high concern)	<b>NoGS</b> No GreenScreen.
<b>BM-U</b> 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](http://www.greenscreenchemicals.org), and Best Practices for Hazard Screening on the HPDC website ([hpd-collaborative.org](http://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*



