Diamon-Fusion® Chemical Vapor Deposition Coating
by Diamon-Fusion International

CLASSIFICATION: 09 96 00 Finishes: High-Performance Coatings

PRODUCT DESCRIPTION: Diamon-Fusion® low-maintenance protective coating provides a high-performing, water repellent barrier to the glass surface and other silica-based substrates. Surfaces treated with DFI’s Diamon-Fusion are easier to clean, require less frequent cleanings, are 100% optically clear, and UV stable. When using a DFI coating machine, Diamon-Fusion is applied via a chemical vapor deposition (CVD) process which consists of a two-part system mechanically applied. This HPD covers the Diamon-Fusion application using DFI’s CVD application system, including CVD part 1 and CVD part 2. Diamon-Fusion is professionally applied by a fabricator, and thus is fully bonded with the substrate prior to delivery to the job site.

Section 1: Summary

CONTENT INVENTORY

Inventory Reporting Format
- Nested Materials Method
- Basic Method

Threshold Disclosed Per
- Material
- Product

Threshold level
- 100 ppm
- 1,000 ppm

Residuals/Impurities
- Considered in 1 of 1 Materials

All Substances Above the Threshold Indicated Are:
- Characterized Yes Ex/SC
- Screened Yes Ex/SC
- Identified Yes Ex/SC

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
DIAMON-FUSION® CHEMICAL VAPOR DEPOSITION COATING |
UNDISCLOSED | LT-P1 | PHY | SKI | EYE | MAM | UNDISCLOSED | LT-P1 | MAM | UNDISCLOSED | BM-2 | RES | SKI | MAM |

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: CDPH Standard Method – Not tested

CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4 Material Ingredients, Option 1

Third Party Verified?
- Yes
- No

PREPARER: Self-Prepared

VERIFIER:

VERIFICATION #:

SCREENING DATE: 2019-04-03
PUBLISHED DATE: 2019-04-04
EXPIRY DATE: 2022-04-03

Number of Greenscreen BM-4/BM3 contents ... 0
Contents highest concern GreenScreen Benchmark or List translator Score ... LT-P1
Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

This Health Product Declaration (HPD) was completed in accordance with the HPD Standard version 2.1.1, and discloses hazards associated with all substances present at or above 1000 parts per million (ppm) in the finished product, along with the role and percent weight. Substances not "Identified" are those considered proprietary to the manufacturer, and thus are "Undisclosed" on this HPD.
**Diamon-Fusion® Chemical Vapor Deposition Coating**  
\[\%: 100.0000\]

<table>
<thead>
<tr>
<th>MATERIAL THRESHOLD: 1000 ppm</th>
<th>RESIDUALS AND IMPURITIES CONSIDERED: Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RESIDUALS AND IMPURITIES NOTES:</strong></td>
<td>Residuals and Impurities were “Considered”, as outlined in Emerging Best Practices. No residuals or impurities are known or expected to be present at or above the Content Inventory Threshold indicated that have a GS score of BM-1, LT-1, LT-P1 or NoGS based on information provided in supplier SDS and as predicted by process chemistry (Pharos CML).</td>
</tr>
<tr>
<td><strong>OTHER MATERIAL NOTES:</strong></td>
<td>When using a DFI coating machine, Diamon-Fusion is applied via a chemical vapor deposition (CVD) process which consists of a two-part system mechanically applied. This HPD covers the Diamon-Fusion application using DFI’s CVD application system, including CVD part 1 and CVD part 2. Diamon-Fusion is professionally applied by a fabricator, and thus is fully bonded with the substrate prior to delivery to the job site.</td>
</tr>
</tbody>
</table>

| UNDISCLOSED |
|--------------------------------------|-----------------|
| **HAZARD SCREENING METHOD:** | Pharos Chemical and Materials Library |
| **HAZARD SCREENING DATE:** | 2019-04-03 |
| **\%:** | 45.0000 - 55.0000 |
| **GS:** | LT-P1 |
| **RC:** | None |
| **NANO:** | No |
| **ROLE:** | Hydrophobic Coating |

<table>
<thead>
<tr>
<th>HAZARD TYPE</th>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYSICAL HAZARD (REACTIVE)</td>
<td>EU - GHS (H-Statements)</td>
<td>H225 - Highly flammable liquid and vapour</td>
</tr>
<tr>
<td>SKIN IRRITATION</td>
<td>EU - GHS (H-Statements)</td>
<td>H315 - Causes skin irritation</td>
</tr>
<tr>
<td>EYE IRRITATION</td>
<td>EU - GHS (H-Statements)</td>
<td>H319 - Causes serious eye irritation</td>
</tr>
<tr>
<td>MAMMALIAN</td>
<td>US EPA - EPCRA Extremely Hazardous Substances</td>
<td>Extremely Hazardous Substances</td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** This substance is held as proprietary by the manufacturer. Substance has been screened against HPD Priority Lists using the HPD Builder with results disclosed. Substance is not included on the Living Building Challenge (LBC) Red List Chemical Guide (Version 3.1).
**HAZARD TYPE** | **AGENCY AND LIST TITLES** | **WARNINGS**
--- | --- | ---
MAMMALIAN | US EPA - EPCRA Extremely Hazardous Substances | Extremely Hazardous Substances

**SUBSTANCE NOTES:** This substance is held as proprietary by the manufacturer. Substance has been screened against HPD Priority Lists using the HPD Builder with results disclosed. Substance is not included on the Living Building Challenge (LBC) Red List Chemical Guide (Version 3.1).

**UNDISCLOSED**

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library

**HAZARD SCREENING DATE:** 2019-04-03

<table>
<thead>
<tr>
<th>%: 0.1000 - 1.0000</th>
<th>GS: BM-2</th>
<th>RC: None</th>
<th>NANO: No</th>
<th>ROLE: Reactant</th>
</tr>
</thead>
</table>

**HAZARD TYPE** | **AGENCY AND LIST TITLES** | **WARNINGS**
--- | --- | ---
RESPIRATORY | AOEC - Asthmagens | Asthmagen (Rr) - irritant-induced
SKIN IRRITATION | EU - GHS (H-Statements) | H314 - Causes severe skin burns and eye damage
MAMMALIAN | EU - GHS (H-Statements) | H331 - Toxic if inhaled
MAMMALIAN | US EPA - EPCRA Extremely Hazardous Substances | Extremely Hazardous Substances

**SUBSTANCE NOTES:** This substance is held as proprietary by the manufacturer. Substance has been screened against HPD Priority Lists using the HPD Builder with results disclosed. GreenScreen Benchmark® assessment score of BM-2 was provided by the HPD Builder Tool. Substance is not included on the Living Building Challenge (LBC) Red List Chemical Guide (Version 3.1).
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.

<table>
<thead>
<tr>
<th>VOC EMISSIONS</th>
<th>CDPH Standard Method – Not tested</th>
</tr>
</thead>
<tbody>
<tr>
<td>CERTIFYING PARTY:</td>
<td>Self-declared</td>
</tr>
<tr>
<td>APPLICABLE FACILITIES:</td>
<td>N/A</td>
</tr>
<tr>
<td>CERTIFICATE URL:</td>
<td></td>
</tr>
<tr>
<td>ISSUE DATE:</td>
<td>2019-02-20</td>
</tr>
<tr>
<td>EXPIRY DATE:</td>
<td></td>
</tr>
<tr>
<td>CERTIFIER OR LAB:</td>
<td>N/A</td>
</tr>
</tbody>
</table>

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

Protect the glass on commercial buildings from environmental damage, while reducing maintenance costs up to 50% by applying Diamon-Fusion protective coating. One application yields multiple benefits. Similar in functionality to a non-stick cooking pan, Diamon-Fusion is an ultra-thin transparent barrier that adheres to the surface of the glass which repels dirt, water, and debris for an easy-to-clean solution. Diamon-Fusion keeps glass looking cleaner for longer and provides protection again wear and tear for entrance doors and storefronts. Additionally, treating shower glass with Diamon-Fusion eliminates the need for any harsh chemical cleaners, the glass stays cleaner for longer, and can easily be cleaned with water and a simple wipe down.
MANUFACTURER INFORMATION

MANUFACTURER: Diamon-Fusion International
ADDRESS: 9361 Irvine Boulevard
Irvine CA 92618, USA
WEBSITE: www.dfisolutions.com

CONTACT NAME: Syndi Sim
TITLE: Vice President, Marketing
PHONE: 1.888.344.4334
EMAIL: ssim@diamonfusion.com

KEY

OSHA MSDS Occupational Safety and Health Administration Material Safety Data Sheet
GHS SDS Globally Harmonized System of Classification and Labeling of Chemicals Safety Data Sheet

Hazard Types

- AQU Aquatic toxicity
- CAN Cancer
- DEV Developmental toxicity
- END Endocrine activity
- EYE Eye irritation/corrosivity
- GEN Gene mutation
- GLO Global warming
- MAM Mammalian/systemic/organ toxicity
- MUL Multiple hazards
- NEU Neurotoxicity
- OZO Ozone depletion
- PBT Persistent Bioaccumulative Toxic
- PHY Physical Hazard (reactive)
- REP Reproductive toxicity
- RES Respiratory sensitization
- SKI Skin sensitization/irritation/corrosivity
- LAN Land Toxicity
- NF Not found on Priority Hazard Lists

GreenScreen (GS)

- BM-4 Benchmark 4 (prefer-safer chemical)
- BM-3 Benchmark 3 (use but still opportunity for improvement)
- BM-2 Benchmark 2 (use but search for safer substitutes)
- BM-1 Benchmark 1 (avoid - chemical of high concern)
- BM-U Benchmark Unspecified (insufficient data to benchmark)

- LT-P1 List Translator Possible Benchmark 1
- LT-1 List Translator Likely Benchmark 1
- LT-UNK List Translator Benchmark Unknown (insufficient information from List Translator lists to benchmark)
- NoGS Unknown (no data on List Translator Lists)

Recycled Types

- PreC Preconsumer (Post-Industrial)
- PostC Postconsumer
- Both Both Preconsumer and Postconsumer
- Unk Inclusion of recycled content is unknown
- None Does not include recycled content

Other Terms

- 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.