



EnviroFluff®

Product Data Sheet

Playground Protective Cushion Layer

EnviroFluff®
Product Data Sheet
rev 091226

PRODUCT DESCRIPTION

EnviroFluff® is an energy absorbing thermoplastic foam that is recycled and granulated into particles ranging in size from 9 – 15mm. EnviroFluff® is designed to provide high resistance to environmental degradation and is highly chemical resistant to most chemicals.

When mixed with a polyurethane binder, EnviroFluff® produces a cushioned layer designed for use in playground safety surfaces and has been tested to pass ASTM F1292, impact attenuation requirements. EnviroFluff® is an alternative to conventional SBR cushion systems and is formulated without the characteristics associated with SBR materials that may be harmful to children, athletes, and the environment.

With its patented design, EnviroFluff® can also be used as a cushion base layer beneath Water Flecks® wear course in water-play applications due to its high resistance to chlorinated water when mixed with Flecks® two-component aliphatic urethane binder.

SYSTEM COMPONENTS

Component	Product	Description
Wear Course	Flecks® TPR	1-2mm granulated thermoplastic rubber (TPR)
Wear Course Binder	*Refer to the Flecks® Systems Product Data Sheet of the system specified.	
Primer (Cushion Layer & Hard Substrates)	Flecks® Primer	Single Component Aromatic primer applied to hard substrates and EnviroFluff® cushion base layer
Cushion Layer	EnviroFluff®	Thermoplastic foam cushion base
Cushion Layer Binder	*Refer to the Flecks® Systems Product Data Sheet of the system specified.	

PHYSICAL PROPERTIES

Property	Listed Value
Elongation (EnviroFluff® Particle)	400 % (MD)
Tensile Strength (MD)	700 kPa
25% Compressive Hardness	55 kPa
Density (Wear Course Only)	67 kg/m3

MECHANICAL PROPERTIES

- Compression Set: Excellent
- Rebound Rating: Excellent
- Flexural, Crack Resistance: Excellent
- Shrinkage Resistance: Excellent
- Abrasion Resistance: Excellent
- Tear Resistance: Excellent
- Impact Resistance: Excellent
- Flame Resistance: Fair

Flecks Systems, Inc.

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TECHNICAL PROPERTIES

Property	Specification / Value
Particle Size	9mm – 15mm
Composition	TPO (Thermoplastic Olefin)
EnviroFluff® Mixing Ratio	*Refer to the Flecks® Systems Product Data Sheet of the system specified.
EnviroFluff® Spread Rate	1 lb. per sq. ft. at 1-inch thickness

ENVIRONMENTAL RESISTANCE

- | | | | |
|------------------------------------|-----------|-------------------------|-----------|
| • Thermal Shock: | Excellent | • Chemical Resistance: | Excellent |
| • Ozone Resistance: | Excellent | • Radiation Resistance: | Excellent |
| • UV Resistance / Light Stability: | Moderate | • Moisture Resistance: | Excellent |
| • Chlorinated Water Resistance: | Excellent | • Non-Leaching: | Excellent |
| • Oxidization Resistance: | Good | | |

INSTALLATION

The buyer and/or installer is solely responsible for determining the suitability of EnviroFluff® for the intended application and for establishing the appropriate system configuration, including but not limited to:

- Substrate preparation and condition;
- Binder selection and compatibility;
- EnviroFluff® mix and design;
- Installation thickness;
- Installation method and equipment;
- Cure conditions and curing procedures;
- Finished wear-course materials and compatibility;
- Drainage and elevation requirements;
- Environmental and site conditions; and
- Applicable building codes, safety requirements, standards, specifications, and project requirements.

The correct Flecks® Systems binder must be used when specifically required by Flecks Systems, Inc. product documentation or written instructions. Any deviation from Flecks Systems, Inc. published installation requirements or written recommendations is the responsibility of the buyer and/or installer.

PERFORMANCE OF USER-CONFIGURED SYSTEMS

The performance of EnviroFluff® as a component does not establish or guarantee the performance of any finished system constructed by another party.

The finished system's impact attenuation, durability, resilience, water resistance, drainage characteristics, adhesion, cracking resistance, service life, and other performance characteristics may be affected by the complete system configuration and installation.

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Flecks Systems, Inc. does not warrant or guarantee the performance of a finished system designed, engineered, configured, mixed, installed, or modified by another party unless Flecks Systems, Inc. has expressly agreed in writing to provide such warranty or guarantee.

TESTING AND CERTIFICATION

The purchaser, system designer, manufacturer, contractor, or installer is solely responsible for determining whether its specific system configuration satisfies applicable testing, certification, regulatory, project, or performance requirements.

Any testing or performance data relating to EnviroFluff® or a particular configuration should not be interpreted as a representation or guarantee that another system configuration will achieve the same results.

Where ASTM F1292 or other impact attenuation testing is required, the party responsible for the finished system is responsible for obtaining testing of the actual completed system configuration under the applicable test conditions and requirements.

Changes to any component of the system, including binder, mix ratio, particle size, thickness, substrate, wear course, installation method, or other materials, may affect test results and system performance.

INDEPENDENT EVALUATION

Before commercial use or installation on a project, the buyer and/or system designer should evaluate EnviroFluff® within the proposed system configuration and determine its suitability for the intended application.

Flecks Systems, Inc. may provide product information, technical data, recommendations, or sample materials; however, such information does not constitute engineering, architectural, design, testing, certification, or approval of a system independently designed or configured by another party.

WARRANTY DISCLAIMER

EXCEPT AS EXPRESSLY PROVIDED IN A WRITTEN WARRANTY ISSUED BY FLECKS SYSTEMS, INC., ENVIROFLUFF® IS SOLD AS A COMPONENT MATERIAL AND NOT AS A GUARANTEED FINISHED SURFACING SYSTEM.

Flecks Systems, Inc. makes no warranty or guarantee, express or implied, regarding the performance of any finished system in which EnviroFluff® is incorporated when that system is designed, engineered, configured, mixed, installed, or modified by another party.

To the fullest extent permitted by applicable law, Flecks Systems, Inc. disclaims responsibility for failures, deficiencies, injuries, property damage, testing failures, non-compliance, or loss of performance resulting from the design, configuration, installation, modification, maintenance, or use of EnviroFluff® by another party.

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This includes, without limitation, failures resulting from improper substrates preparation, improper binder selection or mixing, incorrect installation thickness, improper curing, incompatible materials, inadequate drainage, environmental conditions, failure to follow published instructions, or the use of EnviroFluff® in a system configuration not approved in writing by Flecks Systems, Inc.

RESPONSIBILITY OF BUYER AND INSTALLER

The buyer and installer are responsible for:

1. Determining whether EnviroFluff® is suitable for the intended application;
2. Designing and configuring the finished system;
3. Confirming compatibility of all system components;
4. Performing or obtaining required testing;
5. Confirming compliance with applicable standards, codes, specifications, and project requirements;
6. Following applicable installation and safety requirements; and
7. Maintaining the completed system in accordance with the system manufacturer's or designer requirements.

Use of EnviroFluff® in a user-designed or user-configured system constitutes acceptance of responsibility for that system's design, installation, testing, performance, and compliance, except to the extent expressly agreed otherwise in writing by Flecks Systems, Inc.

NO IMPLIED APPROVAL

The sale or shipment of EnviroFluff®, the provision of technical information, or assistance provided by Flecks Systems, Inc. does not constitute approval, certification, engineering review, or acceptance of a third party's proprietary system design or configuration.

Any approval, testing assistance, system recommendation, performance guarantee, or warranty provided by Flecks Systems, Inc. must be **expressly stated in writing** and signed or authorized by Flecks Systems, Inc.

IMPORTANT NOTICE

The technical information, product properties, performance data and coverage rates stated in this Product Data Sheet are based on manufacturer product information. Actual field performance may be affected by substrate conditions, training, installation, environmental conditions/exposure, maintenance, use and other site-specific factors. Always use the most current Flecks Systems, Inc. installation instructions and technical documentation.