SPRAY POLYURETHANE FOAM ALLIANCE

SPFA-145

Surface Texture of Spray Polyurethane Foam

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ABOUT SPRAY POLYURETHANE FOAM ALLIANCE (SPFA)

Founded in 1987, the Spray Polyurethane Foam Alliance (SPFA) is the voice, and educational and technical resource, for the spray polyurethane foam industry. A 501(c)6 trade association, the alliance is composed of contractors, manufacturers, and distributors of polyurethane foam, related equipment, and protective coatings; and who provide inspections, surface preparations, and other services. The organization supports the best practices and the growth of the industry through a number of core initiatives, which include educational programs and events, the SPFA Professional Installer Certification Program, technical literature and guidelines, legislative advocacy, research, and networking opportunities. For more information, please use the contact information and links provided in this document.

DISCLAIMER

This document was developed to aid building construction and design professionals in choosing spray-applied polyurethane foam systems. The information provided herein, based on current customs and practices of the trade, is offered in good faith and believed to be true to the best of SPFA's knowledge and belief.

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DOCUMENT HISTORY

Date	Sections Modified	Description of Changes
August 2015	All	Administrative changes
January 2021	Front Cover and Header	New SPFA Logo
February 2021	Six foam surface photos	Added approximate scale for each photo.

TECHNICAL OVERSIGHT COMMITTEE

Mission Statement

The mission of the Technical Committee is to provide a wide range of technical service to the SPF (spray polyurethane foam) industry such as, but not limited to:

(1) Review existing documents and serve as a clearing house to ensure the "Continuity of Value" of technical information published by SPFA and others concerning the products and services to the SPF industry;

(2) Review, research, develop, and issue documents concerning new products, systems and services; and

(3) To identify, explore, develop, and communicate an understanding of technical issues facing to the SPF industry.

Participating Members	
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SPF (spray polyurethane foam) surface texture is the resulting surface from the final pass of SPF. The following terms are used to describe the types of SPF surfaces: smooth, orange peel, coarse orange peel, verge of popcorn, popcorn, and treebark.

In SPF roofing applications, the texture of the sprayed foam is important in the performance of the roofing system. The rougher the texture, the more coating is required to provide the minimum dry-film thickness specified. When the surface becomes too rough or uneven, it is difficult to successfully provide the minimum specified coating thickness to all surface areas of the foam.

SURFACE TEXTURE OR FINISH

(1) The SPF surface must be free of moisture, frost, dust, debris, oils, tars, grease, or other materials that will impair adhesion of the protective coating.
(2) Any damage or defects to the SPF surface must be repaired prior to the application of the protective covering.
(3) The final SPF surface texture will fall under one of the following labels:

1. Smooth
2. Orange peel
3. Coarse orange peel
4. Verge of popcorn
5. Popcorn
6. Treebark

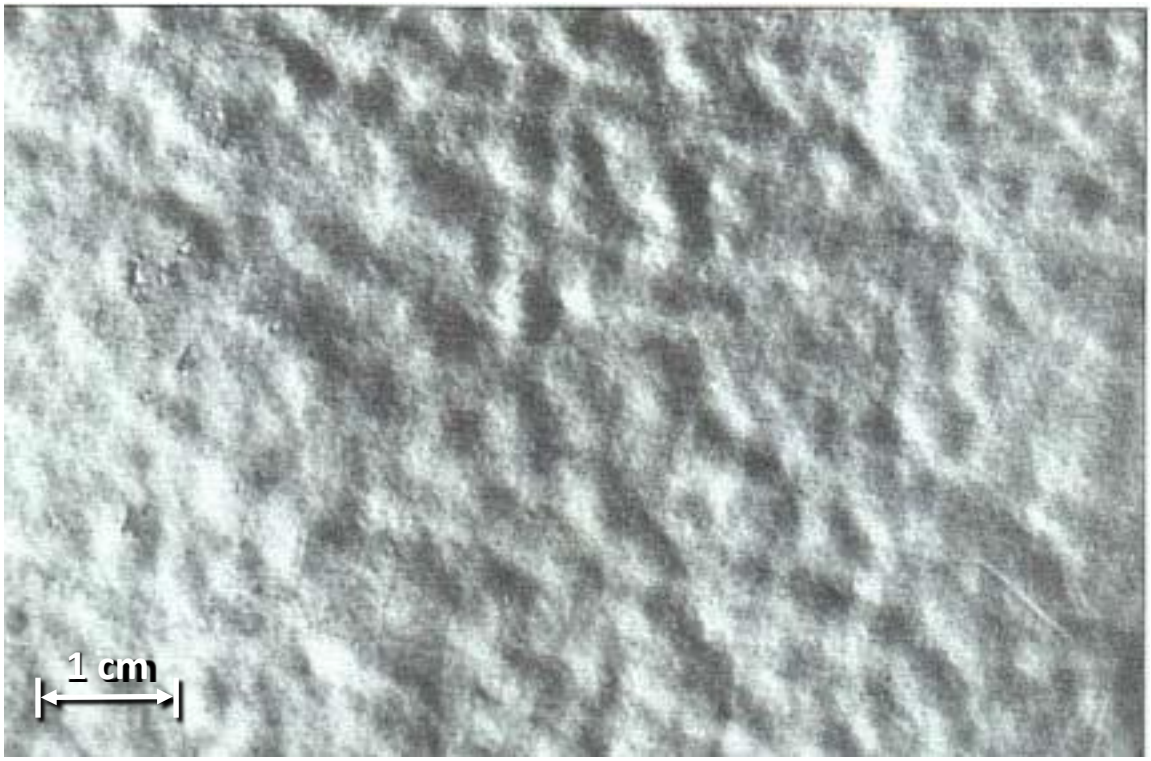
(4) Textures numbered 1–3 are acceptable for the application of a protective coating. Number 4, verge of popcorn, is acceptable if properly coated. Textures numbered 1–4 are acceptable for aggregate covered surfaces. Numbers 5–6 are not acceptable. They must be removed and refoamed to an acceptable surface.

Acceptable (1, 2, 3)	If Properly Coated (4)	Unacceptable (5 and 6)

See the following pages for photos and a complete description of the surface textures. The 1 cm scale shown in each image is approximate.

SMOOTH SURFACE TEXTURE (1)

Description: The surface shows spray undulation and is ideal for receiving a protective coating.



ORANGE PEEL SURFACE TEXTURE (2)

Description: The surface shows a fine texture and is compared to the exterior skin of an orange. This surface is considered acceptable for receiving a protective coating.

COARSE ORANGE PEEL SURFACE TEXTURE (3)

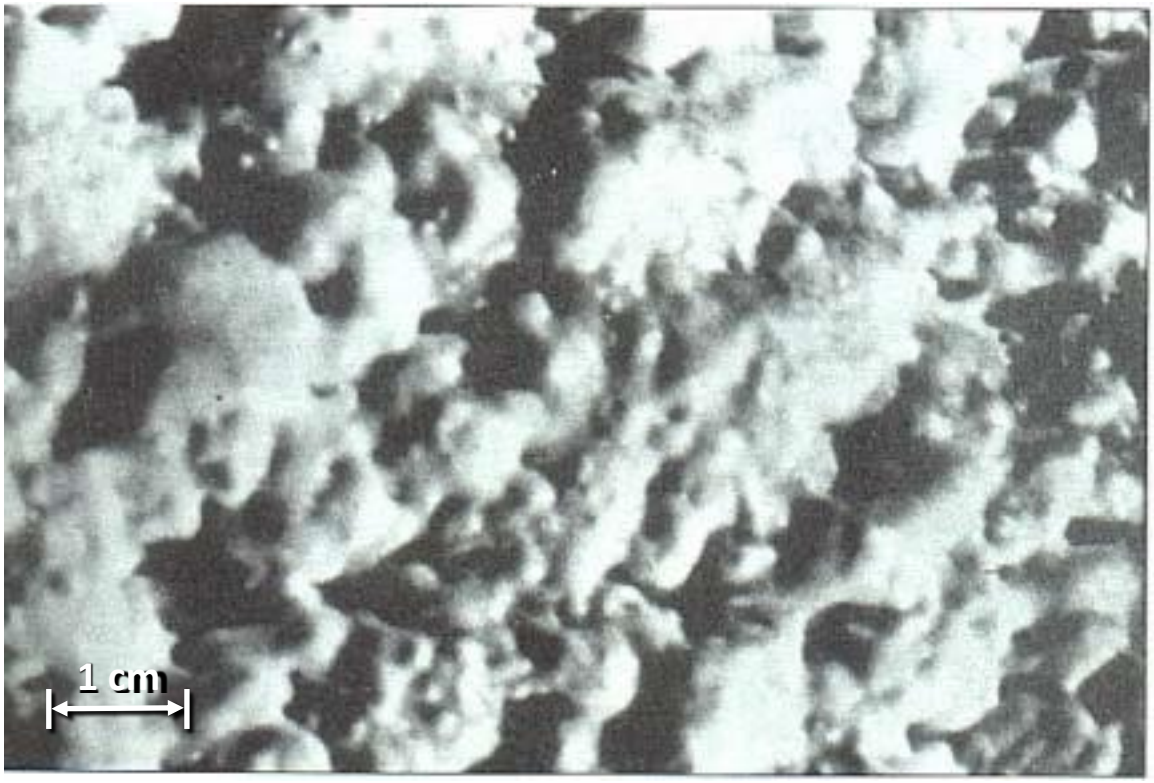
Description: The surface shows a texture where nodules and valleys are approximately the same size and shape. This surface is acceptable for receiving a protective coating because of the roundness of the nodules and valleys.

VERGE OF POPCORN TEXTURE (4)

Description: The verge of popcorn surface texture is the roughest texture suitable for receiving the protective coating. The surface shows a texture where nodules are larger than valleys, with the valleys relatively curved. This surface is acceptable for receiving a protective coating only because of the relatively curved valleys. However, the surface is considered undesirable because of the additional amount of coating material required to protect the surface properly.

POPCORN SURFACE TEXTURE (5)

Description: The surface shows a coarse texture where valleys form sharp angles. This surface is unacceptable for proper coating and protection.



TREEBARK SURFACE TEXTURE (6)

Description: The surface shows a coarse texture where valleys form sharp angles. This surface is unacceptable for proper coating and protection.