

THERMAL & ACOUSTICAL SPRAY-APPLIED FINISHES

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k-13®

Ure-k®

SonaKrete®

SonaSpray "fc"®

THE CUSTOM SPRAY SYSTEM

K-13 insulation is a thermal and acoustical commercial cellulose insulation typically used as an exposed ceiling finish requiring no additional materials. K-13 meets project requirements for insulation (R-value), noise reduction (NRC), condensation control, texture, and color. Additionally, K-13 usually provides these features at lower installed prices than many common alternatives.

A TOTAL SYSTEM: FIBER, BINDER, APPLICATION

K-13 is a total system of recycled natural fibers, chemical treatment, binding system, and application method. The K-13 system begins in a strict quality-controlled manufacturing process using specially prepared cellulose fibers that are chemically treated to add resistance to fire, mold, and mildew.

K-13 is then applied by an international network of licensed applicators through approved fiber machines and nozzles for control of the fiber/binder ratio. During application, the K-13 fibers combine with a patented water-based adhesive. This unique adhesive adheres to virtually any properly prepared substrate and standard material such as metal, wood, concrete, or glass. The finished product is a strong, durable monolithic coating of a predetermined thickness.

NATURALLY TOUGH – NATURALLY ATTRACTIVE

Available in a variety of colors, K-13 is an ideal surface finish in both new construction and renovation projects.

K-13 is available in five standard colors and can also be specified in specially matched custom colors. Please contact us for more information on customizing your K-13 application.



Color selection will affect the final price.

THERMAL PERFORMANCE

K-13 insulates by creating dead air spaces between and within its hollow fibers. Because K-13 fibers are sprayed-in-place, the material fills cracks, seams, and voids, forming a monolithic coating over the substrate reducing air infiltration. Unlike prefabricated insulations, K-13 has no voids or compressed areas to reduce thermal efficiency. The result is a more effective in-place product with exceptionally low heat transfer characteristics and an R-value of 3.7 per inch.

The patented adhesive utilized in the installation of K-13 provides unequalled strength allowing applications from ¾" up to 5" thick without mechanical support. For an even higher R-value, we recommend the K-13 High-R System, a mechanically supported system for R-values exceeding R-19. For more information about the advantages of the K-13 High-R System, please visit www.spray-on.com/info/highr.

SURFACE BURNING CHARACTERISTICS

K-13 has a Class 1, Class A flame spread rating per ASTM E-84, UL-723, NFPA-255 and UBC-42.

Flame spread - 5

Smoke developed - 5

Underwriters' Laboratories – Ref. #R5499

ENVIRONMENTAL

We manufacture our finishes from 80% recycled material and may contribute to satisfying credits under the LEED® green building program. Additionally, our low emission adhesive provides superior bond strength without compromising indoor air quality. As a UL GREENGUARD Gold Certified product, K-13 complies and surpasses emission standards set by the California Department of Public Health (CDPH) / CA Section 01350, Collaborative for High-Performance Schools (CHPS). K-13 does not contain silica.

ACOUSTICAL PERFORMANCE

The resilient fibers of K-13 absorb sound energy instead of reflecting it, reducing reverberation and excessive noise often present in modern design, greatly improving ambient sound quality and intelligibility.

K-13 Sprayed Thermal and Acoustical Insulation on Solid Backing | ASTM C-423

Inches	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	NRC
1"	.11	.32	.84	.99	1.01	.98	.80
1.5"	.21	.46	1.06	1.13	1.02	1.00	.90
1.75"	.30	.74	1.14	1.06	.99	.98	1.00
2"	.47	.90	1.06	1.06	1.08	1.07	1.00
3"	.57	.99	1.04	1.03	1.00	0.98	1.00
4"	.84	1.06	1.01	1.03	1.00	.98	1.05
5"	.99	.89	1.05	1.03	1.00	1.00	1.00

K-13 Sprayed Thermal and Acoustical Insulation Applied on 1.5" Metal Deck

Inches	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	NRC
1.5"	.36	.89	1.26	1.07	1.01	1.00	1.05
3"	.97	1.04	1.13	.99	.95	.98	1.05

K-13 Sprayed Thermal and Acoustical Insulation Applied on 2" Metal Deck

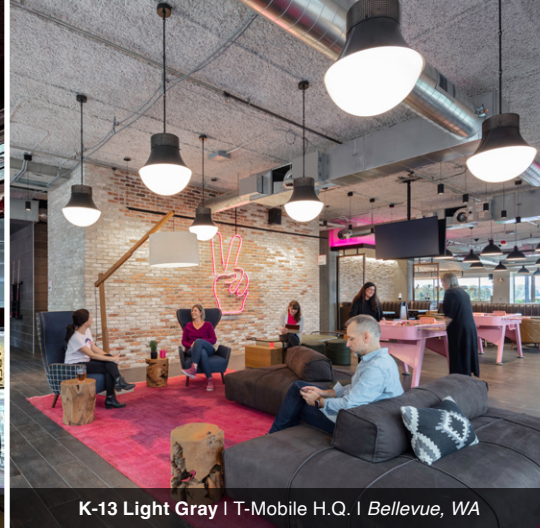
Inches	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	NRC
1"	.39	.63	.96	.99	1.04	1.06	.90
2"	.55	.99	1.13	1.06	1.05	1.10	1.05

K-13 Sprayed Thermal and Acoustical Insulation Applied on 3" Metal Deck

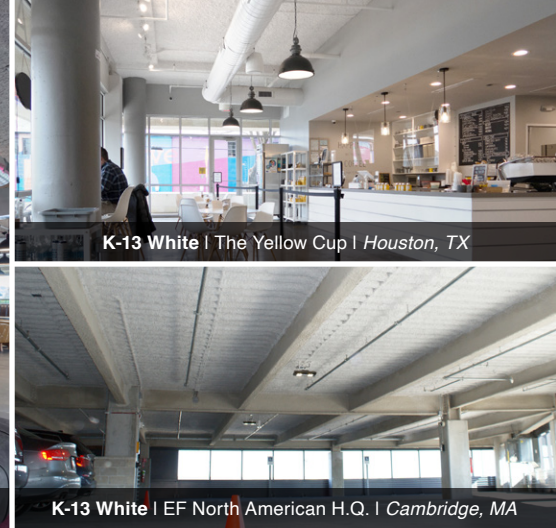
Inches	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	NRC
1"	.50	.66	.97	1.02	1.05	1.03	.95
1.5"	.55	.92	1.11	1.02	.95	.99	1.00
2.75"	.69	.98	1.17	1.03	.97	1.04	1.05



K-13 Black | Nike House of Innovation | Paris



K-13 Light Gray | T-Mobile H.Q. | Bellevue, WA



K-13 White | EF North American H.Q. | Cambridge, MA

UL® DESIGN GUIDE ASSEMBLIES

K-13 and SonaSpray “fc” are UL Approved and listed in (16) UL BXUV Guide Design Assemblies as allowable sprayed fiber for application over spray-applied fire-resistive materials.

Manufacturer	Roof Assembly	Floor Assembly
GCP Applied Technologies Inc.	P725 K-13 over Monokote Metal Deck and Beams	D779 K-13 over Monokote Metal Deck Concrete
	P732 K-13 over Monokote on Metal Deck	D798 K-13 over Monokote Metal Deck Concrete
	P753 K-13 over Monokote Beams and Deck	D925 K-13 over Monokote over 2 Size Beams
	L702 K-13 over Monokote Metal Deck and Bar Joist	D985 K-13 over Monokote on Beams
CAFCO	P719 K-13 over Cafco Metal Deck Beams Optional Mesh	D759 K-13 over Cafco Beams Metal Deck with Concrete
	P723 K-13 over Cafco on Beams Deck Mesh Lath on Beam	D858 K-13 over Cafco Trench Header
	P819 K-13 over Cafco Beams Metal Deck Lath Mesh Optional	D902 K-13 over Cafco Beams
		G705 K-13 over Cafco Beams Metal Deck Concrete over Steel Floor Form Units Mesh Lath Optional
		G801 K-13 over Cafco on Beams Metal Deck

ASTM E 90 (STC)

The ASTM E 90 test measures sound transmitted through walls, floors, windows, doors and other building elements. Results provide Sound Transmission Class (STC) numbers. Data is used by acousticians, architects, and engineers to design and specify appropriate noise isolation between architectural spaces.

50 STC	3" K-13 over metal deck and 6" of lightweight concrete.
51 STC	4" K-13 over metal deck and 6" of lightweight concrete.

ASTM STANDARDS COMPLIANCE

ASTM C 518	Thermal Conductivity
ASTM E 84	Surface Burning Characteristics
ASTM C 423	Noise Reduction Coefficients
ASTM D 2244	Light Reflectance
ASTM E 736	Bond Strength is greater than 150 psf
ASTM E 859	Air Erosion
ASTM C 739	Moisture Absorption
ASTM E 90	Sound Transmission Loss
ASTM E 1042	Acoustical Absorption
ASTM C 1149	Spray-Applied Cellulose Insulation

Test reports available upon request.

MISCELLANEOUS APPROVALS & SPECIFICATIONS

Underwriters Laboratories Classified Code Compliance Report UL ER 5499

Factory Mutual Research

Federal Defense Logistics Agency Cage Code: ONJU2

Corps of Engineers Guide Specifications – CE-201.01

Department of the Navy Guide Specifications – NFGS-07218

EPA 40 CFR Part 248

Meets California Bureau of Home Furnishings Standards

Resource Conservation and Recovery Act

Federal Specification – SS-S-111C

Los Angeles – RR-24311

New York – MEA 65-96-M



PRODUCT DESCRIPTION

SonaSpray "fc" is a spray-applied acoustical texture designed for a wide range of project types. SonaSpray "fc" provides an attractive, high-performance solution to acoustical and lighting design objectives in both new construction and renovation projects. Typical installations include schools, churches, auditoriums, passenger terminals, libraries, detention facilities, cafeterias, offices, hotels, and condominiums.

SonaSpray "fc" is available in Black, Light Gray, White, Arctic White, and specially matched colors.

White	Arctic White	Light Gray	Black	Custom
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Color selection will affect the final price.

ACOUSTICAL PERFORMANCE

As tested by an NVLAP accredited acoustical laboratory per ASTM C-423, SonaSpray "fc" provides an exceptionally high noise reduction coefficient (NRC). A typical installation of 1/2" thick on solid backing has an unequaled NRC of .65.

SONASPRAY "FC" ON SOLID BACKING | ASTM C 423

Inches	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	NRC
.5"	.00	.14	.49	.87	1.00	.99	.65
.75"	.10	.23	.70	.98	1.01	.96	.75
1"	.05	.40	.94	1.04	.97	.99	.85

SONASPRAY "FC" ON 1.5" METAL DECK | ASTM C 423

Inches	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	NRC
.75"	.17	.58	.91	.89	.87	.84	.80
1"	.22	.62	1.02	1.09	1.05	1.00	.95

SONASPRAY "FC" ON 3" METAL DECK | ASTM C 423

Inches	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	NRC
.5"	.51	.48	.80	.88	1.00	1.00	.80
.75"	.55	.55	.94	1.01	1.03	1.00	.90
1"	.63	.73	1.08	1.04	1.01	1.00	.95

SUBSTRATE COMPATIBILITY

SonaSpray "fc" conforms to any surface configuration such as barrel vaults, concrete "T", corrugated decks, pan construction and other complex surfaces. The high-performance adhesive bonds to virtually all construction materials including gypsum board, plaster, wood, metal, and concrete. Some surfaces (water-stained ceilings, wood, and oxidized metal) require sealing to prevent migratory staining of the SonaSpray "fc".

DURABILITY AND MAINTENANCE

The strong, resilient bond of the adhesive used to apply SonaSpray "fc" provides a remarkably durable surface. SonaSpray "fc" resists impact and abrasion without the cracking or spalling typical of many cementitious or plaster-based materials.

In areas where even higher abrasion resistance may be desirable, SonaSpray "fc" Dura-K is specified. This product provides even greater bond and compressive strength without reducing the acoustical performance.

ASTM STANDARDS COMPLIANCE

Flame Spread Index	5	ASTM E 84/UL 723
Smoke Developed	5	ASTM E 84/UL 723

BOND STRENGTH

SonaSpray "fc"	Greater than 600 psf	ASTM E 736
SonaSpray "fc" Dura-K	Greater than 900 psf	ASTM E 736

COMPRESSION STRENGTH

SonaSpray "fc"	Greater than 400 psf	ASTM E 761
SonaSpray "fc" Dura-K	Greater than 600 psf	ASTM E 761



SonaSpray "fc" Arctic White | Minges Aquatic Center | Greenville, NC



SonaSpray "fc" Arctic White | Insmed H.Q. | Bridgewater, NJ



SonaSpray "fc" Arctic White | LinkedIn H.Q. | Omaha, NE



SonaSpray "fc" White | Zeppelin Station | Denver, CO



SonaSpray "fc" Custom Color | Del Frisco's | Houston, TX

PRODUCT DESCRIPTION

SonaKrete is a premium ceiling acoustic finish with a very refined, plaster texture. SonaKrete is spray-applied, then troweled for a seamless finish making it ideal for historic renovation and domed or arched ceilings. SonaKrete is specified in interior spaces to reduce excessive noise and improve intelligibility without compromising aesthetic objectives. Additionally, SonaKrete typically provides these features at a more competitive install cost than alternative acoustical plaster systems.

SonaKrete is available in Black, Light Gray, White, Arctic White, and specially matched colors.

White	Arctic White	Light Gray	Black	Custom
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Color selection will affect the final price.

ACOUSTICAL PERFORMANCE

As tested by an NVLAP accredited acoustical laboratory per ASTM C-423, SonaKrete provides an exceptionally high noise reduction coefficient (NRC). Instead of reflecting sound, SonaKrete reduces reverberation and excessive noise often present in modern design, and greatly improves ambient sound quality and intelligibility.

SONAKRETE ON SOLID BACKING | ASTM C 423

Inches	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	NRC
.25"	.01	.07	.39	.69	.83	.87	.50
.375"	.06	.11	.46	.77	.84	.89	.55
.5"	.01	.16	.49	.89	1.03	.97	.65
.75"	.25	.48	.81	.85	.85	.94	.75

SUBSTRATE COMPATIBILITY

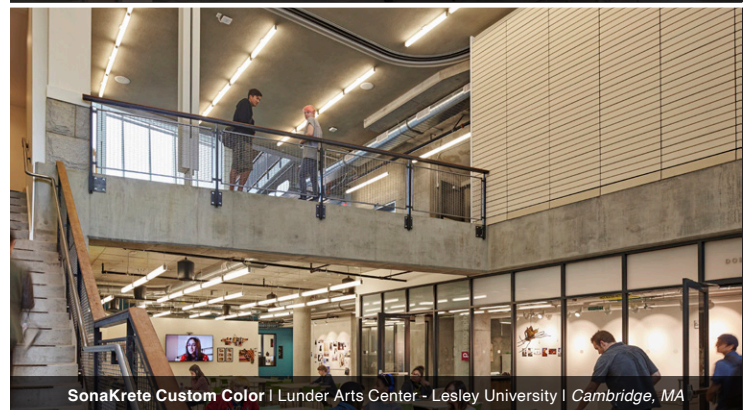
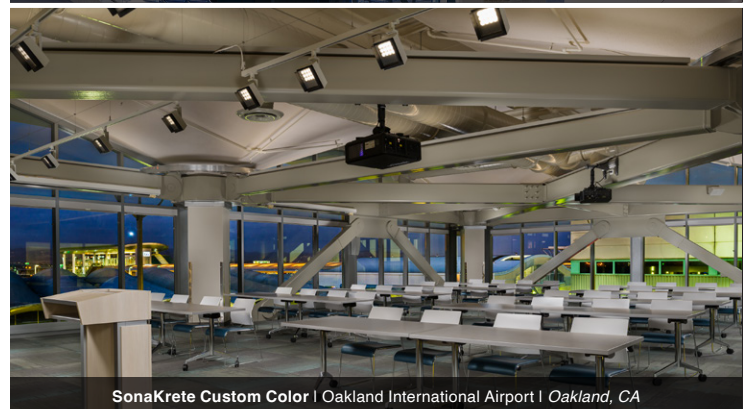
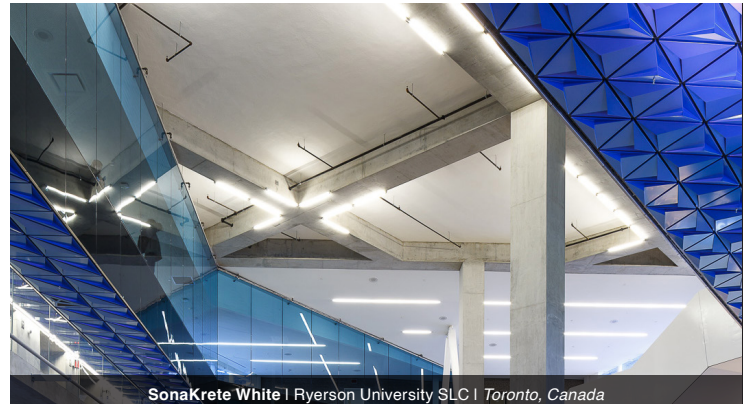
SonaKrete conforms to any surface configuration such as barrel vaults, concrete "T", pan construction and other complex surfaces. The high-performance adhesive bonds to virtually all construction materials including gypsum board, plaster, wood, and concrete. Some surfaces (water-stained ceilings, wood, and oxidized metal) require sealing to prevent migratory staining of the SonaKrete.

DURABILITY AND MAINTENANCE

The strong, resilient bond of the adhesive used to apply SonaKrete provides a remarkably durable surface. SonaKrete resists impact and abrasion without the cracking or spalling typical of many cementitious or plaster-based materials.

ASTM STANDARDS COMPLIANCE

ASTM E 84	Surface Burning Characteristics	Flame Spread 10 Smoke Development 5
ASTM E 736	Bond Strength	Greater than 800psf



SYSTEM DESCRIPTION

Ure-K is a true 15-Minute thermal barrier approved to go over polyurethane foam. Foam insulation systems are developed from polyurethane and polyisocyanurate. If foam is left exposed on the interior of a building, it can create a life threatening possibility in the event of a fire.

Ure-K 15-Minute Thermal Barrier is spray-applied over exposed applications of polyurethane foam in existing buildings and new construction projects as a combination system to meet mandatory code requirements.

Ure-K is available in Black, Gray, Light Gray, White, and specially matched colors.

Black	Gray	Lt. Gray	White	Custom
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Color selection will affect the final price.

INSTALLATION & ENVIRONMENTAL

Ure-K fibers and a low-emissions patented adhesive are applied to foam applications through equipment engineered to control the adhesive/fiber mixture. The Ure-K adhesive provides superior adhesion to all types of foam insulations without compromising indoor air quality.

Ure-K is manufactured from 80% recycled materials and may contribute to satisfying credits under the LEED® green building program. Ure-K is a UL GREENGUARD Gold Certified product.

THERMAL BARRIER

Ure-K is tested and approved as a 15-minute thermal barrier over foam. Ure-K covers interior applications to maintain a sufficiently low surface temperature for a minimum of 15-minutes to prevent ignition and the rapid spread of fire. The average installed thickness of Ure-K is 1.25".

THERMAL INSULATOR

The combination of Ure-K and polyurethane has the highest efficiency of all available insulations. Ure-K is specified at 1.25" adding R-4.5 to the overall insulation package.

NOISE REDUCTION

Ure-K reduces reverberation and excessive noise improving sound quality and overall intelligibility. This is an important benefit in controlling noise levels to meet OSHA and other requirements.

Ure-K over Closed-Cell Polyurethane Foam | ASTM C 423

Inches	125 Hz	250 Hz	500 Hz	1,000Hz	2,000 Hz	4,000 Hz	NRC
1.25"	0.38	0.57	1.00	1.07	1.06	1.07	0.95



Ure-K White | Strong Museum | Rochester, New York

TYPICAL APPLICATIONS

Restaurants/ Bars
Freezers/ Coolers
Refrigerated Warehouses
Curtain Wall High-Rise Buildings
Tilt-up, Pre-cast, & Poured-in-place Concrete Construction
Underground Parking Decks
Metal Buildings
Projects requiring a high R-Value
Projects concerned with Energy Efficiency

TESTING

Ure-K has been tested according to NFPA 275 Part 1 & Part 2 and is approved to be used as a 15-Minute Thermal Barrier over Polyurethane Foam.

NFPA 275 - Part 1 & 2

UBC 26-2

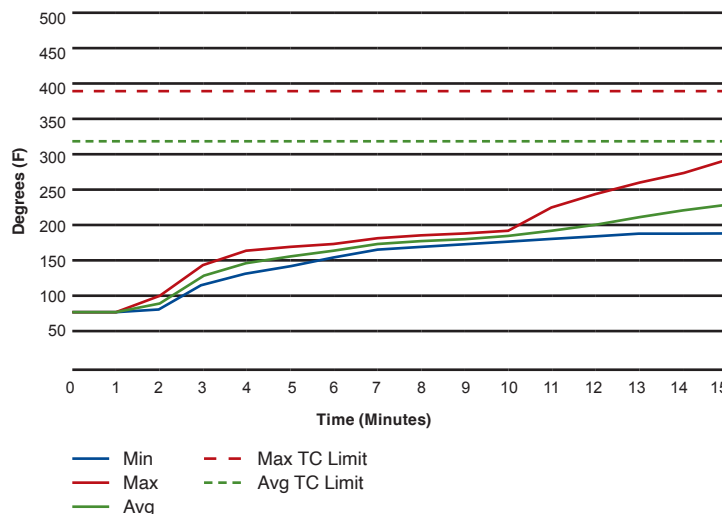
Test method for evaluation of thermal barriers.
In accordance with test procedures set forth in ASTM E119.

NFPA 286 (Testing over 2 pound and 0.5 pound foam)

ASTM E 84 - Class 1 Class A Rated

Flame Spread	5
Smoke Development	5

THERMOCOUPLE DATA



SUSTAINABLE SPRAY ON INSULATION



International Cellulose Corporation’s line of sustainable spray-on insulation systems consist of natural, plant-based fibers and specialty water-based adhesives. In addition to acoustic and thermal performance, our products meet some of the world’s most rigorous and comprehensive standards for low emissions of VOC’s into indoor air. Our finishes are UL GREENGUARD Gold Certified and contribute towards healthier indoor environments.

Manufactured in the United States under the ISO 9001:2015 Quality Management System, and are the natural choice for sustainability and green building initiatives.

SUSTAINABLE CREDIT CATEGORIES

K-13, SonaSpray “fc” and Ure-K contribute towards sustainable design certifications including LEED, Living Building Challenge, WELL Building Standard, BREEAM, and more.

MATERIALS & RESOURCES

RECYCLED CONTENT:

K-13, SonaSpray “fc”, and Ure-K spray-on systems, consisting of natural plant-based fibers, and specialty water-based adhesives, contains 80% Recycled Content.

REGIONAL MATERIALS:

K-13, SonaSpray “fc”, and Ure-K are manufactured in the United States by International Cellulose Corporation (ICC) in Houston, Texas. Adhesives are produced and shipped in concentrated form and are diluted with water sourced from the job site.

RENEWABLE/RAW INGREDIENTS:

Cellulose, the primary raw ingredient in the K-13, SonaSpray “fc” and Ure-K systems contains wood, cotton and other rapidly renewable resources, and rich stores of carbon sequestered within the material for the life of the application.

Environmental Product Declaration (EPD)

Product-specific Environmental Product Declarations to ISO 14025 are available for K-13, SonaSpray “fc” and Ure-K. EPDs are published as Transparency Reports in the Sustainable Minds Transparency Catalog.

MATERIAL INGREDIENT REPORTING

HEALTH PRODUCT DECLARATION (HPD):

K-13, SonaSpray “fc”, and Ure-K spray-on systems have been inventoried to 100 PPM in accordance with the Health Product Declaration Collaborative (HPDC). ICC has provided an ingredient list for 98% of the total product and all proprietary materials chemicals have been disclosed to a third party to verify they are non-hazardous.

INDOOR ENVIRONMENTAL QUALITY (IEQ)

LOW-EMITTING BUILDING MATERIALS:

K-13, SonaSpray “fc”, Ure-K, and SonaKrete spray-on systems are M1 Classified as a Low Emitting Building Material and are compliant with CDPH/CA Section 01350.

INDOOR AIR QUALITY:

K-13, SonaSpray “fc”, Ure-K, and SonaKrete spray-on systems are GREENGUARD Gold Certified per UL Environmental. GREENGUARD Certification ensures that a product has met some of the world’s most rigorous and comprehensive standards for low emissions of volatile organic compounds (VOCs) into indoor air.

LIGHT REFLECTANCE:

K-13 White, SonaSpray “fc” Arctic White, and White, and SonaKrete Arctic White, and White provide high light reflectance values and can be utilized to enhance natural daylighting and contribute towards lighting efficiency.

Light Reflectance Values (LRV) per ASTM D 2244:

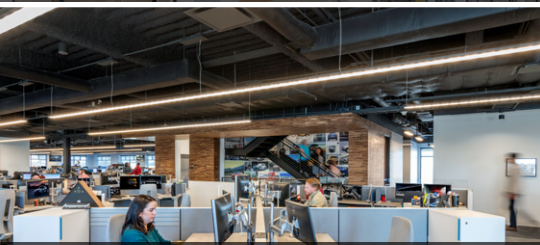
K-13	White	86+
SonaSpray “fc”	White	86+
SonaSpray “fc”	Arctic White	89+
SonaKrete	White	88+
SonaKrete	Arctic White	91+

Acoustic Performance:

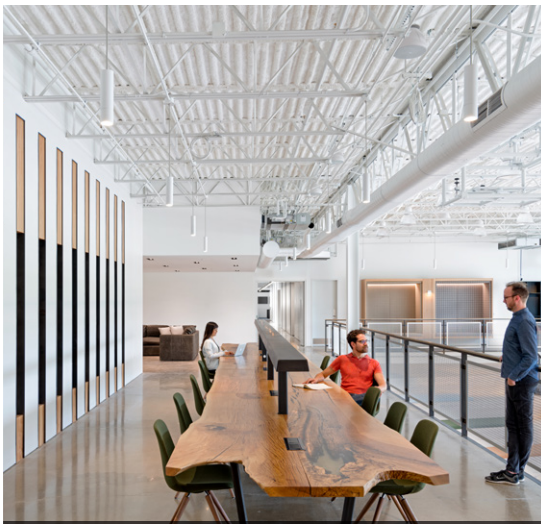
K-13, SonaSpray “fc” and Ure-K reduce excessive noise to promote acoustical comfort and functionality.



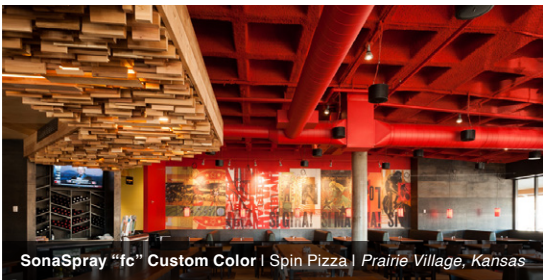
K-13 White | Fintech Company | Tustin, CA



K-13 Custom Color | Mercedes Benz H.Q. | Fort Worth, TX



SonaSpray “fc” Arctic White | Uber ATG Center | Pittsburgh, PA



SonaSpray “fc” Custom Color | Spin Pizza | Prairie Village, Kansas



SonaKrete Custom | Rosewood Hotel - Scarfes Bar | London



WARRANTY

International Cellulose Corporation (ICC) warrants its products to be free from defects in materials and workmanship at the time of shipment. Application warranties are provided by the installing contractor.

It is the responsibility of the user to determine compliance of the product with local building codes and other regulatory bodies.

ICC is herein publishing information and data based on specific and generic tests. ICC believes this data is as reliable as the present state of the art in fire, thermal, and acoustical testing, and can be used only as a guide for design. ICC is not responsible for building design, appearance, or workmanship and makes no guarantee of performance.

ICC specifically disclaims any warranty of merchantability or fitness for a particular purpose. In no event shall ICC be liable for special, indirect or consequential damage.

For further information on limitations and precautions refer to ICC Technical Bulletin 001.

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