

DESIGNER SNOWMELT SYSTEM

Installation Types

- pedestals
- engineered framing (steel or wood beam)
- concrete & steel deck substrates

Customizable Surfaces & Textures

- Electrical Heat Trace**
- enveloped in polymer
 - varying watt densities

- Cold Lead Connection**
- sealed within polymer
 - exit from any side, top or bottom

DESCRIPTION

ARCTIC TILE is a sophisticated heated tile system for rooftops, patios, balconies, plazas, walkways, treads and more. This innovative and stylish solution combines a high-performance snow & ice melting capability with energy efficiency and modern finishes.

ARCTIC TILE is a resilient, heated floor surface that encompasses:

- self-regulating heating cable
- structurally load bearing
- high coefficient of friction values
- resistance to wear, stains, chemicals, impacts and abrasion
- vast selection of designer finishes, textures, and color palettes
- high thermal mass = minimizes heat loss and reduces energy consumption
- automated, manual, and/or remote activation
- cycling capabilities (energy savings of 25-50%)

This customizable system arrives onsite for a plug and play install. There is no cutting or labor-intensive installation needed. Simply lay in place or atop pedestals then connect to a power supply.

Options include lighting, branding, underside cable trays, varying watt densities, penetrations, load bearing and much more.

SPECIFICATIONS

Application	For exterior use in ordinary and hazardous areas.
Surface Installation	Atop pedestals, concrete, inset in steel or wood framing, etc. ARCTIC TILES can easily be installed atop most surfaces.
Waterproof	IP67
Resistance	Withstand salt, sea water, cleaning solvents, oil, fungus, certain chemicals, and UV stable.
Supply Voltage	208-277 Vac (*110-120 also available)
Approvals	ARCTIC TILE utilizes self-regulating heat cables approved for use in ordinary and hazardous areas.



Canadian Standards Association
Ordinary Locations
Hazardous (Classified Locations)
Class I, Divisions 1 & 2, Groups A, B, C, D
Class II, Divisions 1 & 2, Groups E, F, G
Ex eb IIC
Ex tb IIIC



FM Approvals
Ordinary Locations
Hazardous (Classified Locations)
Class I, Division 2, Groups A, B, C, D
Class II, Division 2, Groups E, F, G
Class III, Divisions 1 & 2
Class I, Zone 1 & 2, AEx eb IIC Gb;
Zn 21 AEx bt IIIC Db
Class I, Zone 2 Group IIC, Zn 22 Group IIIC



International Electrochemical Commission
IEC Certification Scheme for Explosive
UL 06.004 / FMG 12.0004X

Certified ANSI/NFSA B101.1-2009
Certified ANSI/NFSA B101.3-2012

Additional Hazardous Approvals: DNV, JIS,
CCE/CMR, GGTN, TIIS, CCE/CSIR, TRCU



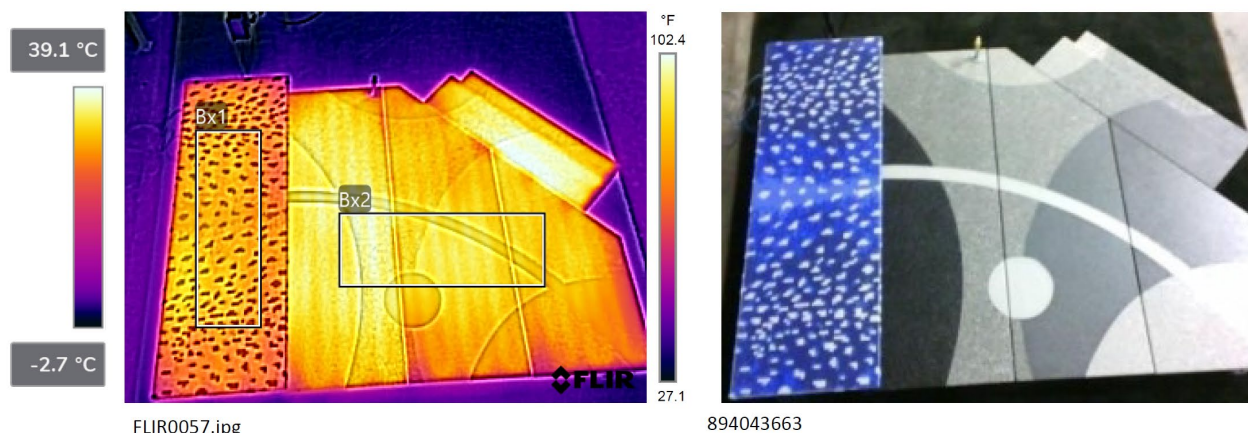
Underwriters Laboratories Inc
Hazardous (Classified Locations)



Certificate FM12 ATEX 0014X in
accordance with the EU ATEX Directive 94/9/EC

Temperature class	T3 to T6
Construction materials	Carbon steel, bar grating, polyurethane.
Cold lead	Standard length: 10ft (3m). Connection encapsulated in polymer. Meets NEK 606 mud oil resistance and UL 2225 crush and impact requirements of Type MC-HL cables. Temperature rated @ 257°F (125°C). Meets cold bend test at -67°F (-55°C) and cold impact test at -40°F (-40°C). Exit point from any side, top and bottom.
Configuration Capabilities	Standard sizes are 2'x4', 2x8', 3x6'. Custom manufactured sizes available.
Thickness	1-3/8" (35mm) and 1-5/8" (41mm) are the standard. Other thickness can be accommodated from 1" (25mm) and up.
Weight	Average at 1-3/8" (35mm) thickness = 13.5 lbs./ft ² (145.3 kg/m ²) and 1-5/8" (41mm) thickness = 15 lbs./ft ² (161.5 kg/m ²)
Surface Options-Finishes	Resinous flake, quartz, metallic, terrazzo flake, vinyl chip, mosaic, wood, ceramic, stone, high gloss and more.
Surface Options-Single Color	Standard colors options and RAL color matching.
Surface Options	Penetrations, text, symbols, logos, and more.

HEATING PERFORMANCE



MEASUREMENTS

Bx1	6mm Sintered Glass Mosaic Tile
Avg	30.0 °C (86°F)
Bx2	Sherwin Williams Resinous Finish
Avg	34.4 °C (93.9°F)

FILE INFORMATION

Minimum temperature	-3.3 °C (26.1°F)
Maximum temperature	39.3 °C (102.7°F)

The ARCTIC TILE system increases snow and ice melting capabilities:

- customized heat output with varying watt densities
- heat distribution, positioning heat precisely where needed
- improved energy efficiency with a high thermal mass, which reduces energy consumption
- easily operated with smart controls and monitoring, allowing for cycling. Cycling can reduce 25-50% of power usage.
- eliminate labor intensive heat trace installations as ARCTIC TILE is a plug and play system.

SURFACE FINISH PROPERTIES – QUARTZ, VINYL CHIPS OPTIONS

Physical Property	Test Method	Quartz	Vinyl Chip / FLake
Hardness, Shore D	ASTM D2240	75-80	75-80
Compressive Strength	ASTM D695 ASTM C579	17,500 psi 12,500 psi	16,000 psi 10,500 psi
Tensile Strength	ASTM D638	4,000 psi	3,700 psi
Abrasion Resistance	ASTM D4060	10 mg loss no grit 4 mg loss with Armor Top Gloss with Grit	10 mg loss no grit 4 mg loss with Armor Top Gloss with Grit
Impact Resistance	ASTM D2794	>160 in-lb	>160 in-lb
Slip Resistance Dry – single grout coat over broadcast	ANSI 326.3 -LAB DRY	≥0.8 without anti-slip additives*	≥0.8 without anti-slip additives*
Slip Resistance Wet – single grout coat over broadcast	ANSI 326.3 -LAB WET	≥0.65 without anti-slip additives*	≥0.42 without anti-slip additives*

* AMS flooring systems can be built to meet or exceed the requirements of Static or Dynamic Coefficient of Friction testing per installation by using broadcast aggregates or non-slip additives at various rates. Contact your technical representative for more information on alternative textures, grit / grip additives, or smooth coatings for your specific environment.

UNGLAZED PORCELAIN PROPERTIES – 1" TILE MOSAIC

Physical Property	Test Method	Results
Breaking Strength	ASTM C648	>300 lb
Scratch Hardness	MOHS	N/A
Chemical Resistance	C650	Resistant
Coefficient of Friction Exterior Floor Applications	DCOF wet	≥0.55

Artaic mosaics have recurrent grout joints and reflect a DCOF of ≥0.55 wet making them suitable for these applications.

SURFACE FINISH OPTIONS

Name	PN CODE
APT-RESINOUS SURFACE-FLAKE	ATP-RS-FLKE
APT-RESINOUS SURFACE-QUARTZ	ATP-RS-QRTZ
APT-RESINOUS SURFACE-METALLIC	ATP-RS-MTLC
APT-TILE SURFACE-PORCELAIN	ATP-T-PRCLN
APT-TILE SURFACE-MOSAIC	ATP-T-MOSC
APT-TILE SURFACE-CERAMIC	ATP-T-CRMC
APT-SURFACE-STONE	ATP-S-STNE
APT-SURFACE-WOOD	ATP-WD
APT-COLOR-XXX	ATP-CLR-XXX

ACCESSORIES / OPTIONS

Name	PN Code
APT-COLD LEAD	APT-ADD-CL
APT-JUNCTION BOXES	APT-ACC-JB
APT-CONTROL & MONITORING	APT-ACC-CM
APT-CABLE TRAY	APT-ACC-CT
APT-BEVELED EDGE	APT-BE
APT-PENETRATION	APT-PNTRN
APT-PEDESTALS	APT-BIS-PED
APT-LIGHTING	APT-LGT
APT-120 VOLT	APT-120V

TYPICAL STRUCTURAL LOADING CAPACITY FOR ARCTIC TILE

ARCTIC TILE Thickness	U= Uniform load, Psf C= Concentrated load at (mid-span)	SPAN	
		29.53" (750mm)	39.38" (1000mm)
1-3/8" (35mm)	U	626	352
	C	513	385
1-5/8" (41mm)	U	1086	611
	C	1337	1003

ILLUSTRATION

Designer Surface Options

Resinous
- flake / vinyl chip
- quartz
- metallic

Tile
- porcelain
- ceramic
- mosaic tile

Stone

IPE Wood
and more

Integrated Accessories:

- lighting
- gas lines penetrations
- irrigation penetrations
- underside cable trays and more

Resinous Features

- non-slip
- waterproof
- antimicrobial
- UV stable
- VOC compliant
- LEED qualified
- chemical/corrosive resistance

High Thermal Mass

This product stores heat resulting in lower energy use and operating costs



Pedestal Installation Method
(Bison Pedestal System can be supplied)

TYPICAL / COMMON DIMENSIONS

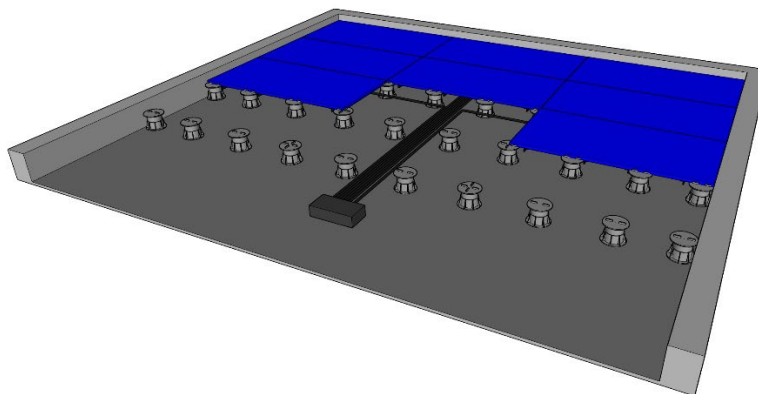
	APT-2X4	APT-2X8	APT-3X6	Custom
Size: L x W (ft)	2 x 4	2 x 8	3 x 6	Available
Thickness (inch)	1-3/8	1-3/8	1-3/8	1 inch and up
Weight (lbs.)	104-128	208-256	234-288	

INSTALLATION INSTRUCTION

Complete panel wiring information and schematics are provided with the product. All electrical installations must be carried out by an approved electrician in compliance the local electrical requirements and norms. The national electrical code requires ground-fault protection of equipment for each branch circuit supplying electric heating equipment. Installation times can vary based upon site conditions, labor, and access.

The ARCTIC TILE is a fully integrated solution built for a precise fit. This greatly reduces the overall installation time, labor costs, piece count and number of components required.

Under ideal conditions an ARCTIC TILE installation could average 15-20 minutes per piece per man using a pedestal system.



SERVICES

AMS® has a wide range of services available to assist in the completion of your successful project. Our experienced personal is ready to help you.

Design Assistance	From concept to production we provide comprehensive design services.
Electrical Engineering	We coordinate with your engineering team, recommend and/or provide electrical engineering services.
Onsite Survey	AMS® trained personnel will decide precise location(s), access, orientation, electrical placements, location of obstacles, and more.
Onsite Installation Support & Supervision	Experienced personnel will lend support by directing the installation process. This will certify the installation is per customer and AMS® requirements.
Onsite Commissioning	The involves the procedures to check, inspect, adjust, test, document and verify a fully functioning system. Commissioning includes verifying electrical connections and full training to your key personnel.

LIMITED WARRANTY

To highlight our confidence in the quality of our products, AMS® also offers a 10-year limited product warranty. The warranty is only valid for products purchased and installed within United States and Canada.

100% made in the U.S.A.

CONTACT

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