

CryoTape® AIF Technical Datasheet

Cryogenic Adhesive Tape — Aluminum Foil Tape with Modified Acrylic Adhesive
High-Performance Cryogenic Tape for Extreme Temperature Applications

Document: TDS-CryoTape_AIF-2026

Revision: 1.03

Date: March 2026

PRODUCT DESCRIPTION

CryoTape® series from East Far are a family of cryogenic-temperature, lightweight adhesive tapes engineered to secure and bond CryoMLI® series insulation materials in cryogenic environments, including liquid helium (4K) applications. Drawing on thermal control expertise and manufacturing excellence, combined with extensive field experience in aerospace, transport cryogenic vessels, and medical applications, East Far delivers customized solutions to ensure optimal performance under the most demanding conditions. CryoTape® AIF features an aluminum foil substrate with a cryogenic-grade modified acrylic adhesive, offering the highest temperature resistance in the CryoTape series with a service range up to 573K (300°C).

PRODUCT CONSTRUCTION

Structure	Aluminum Foil / Modified Acrylic Adhesive (Cryo)
Substrate Thickness	0.08 ±0.005 mm
Adhesive Thickness	0.025 ±0.005 mm
Total Thickness	0.105 ±0.01 mm
Length	50 m
Width	10 / 15 / 20 / 25 / 30 / 50 mm
Custom Width	Available (MOQ 2,000 rolls)
Adhesive Type	Modified Acrylic (Cryo)

Service Temperature: 4K (–269°C) - 573K (300°C)

FEATURES

- ✓ High quality material — Liquid Helium (4K) compatible
- ✓ High temperature resistance up to 573K (300°C)
- ✓ Solvent resistance
- ✓ Aging resistance
- ✓ Excellent chemical stability
- ✓ Stable performance across extreme thermal cycling

TYPICAL PHYSICAL PROPERTIES

Note: The following technical information should be considered representative only and should not be used for specification purposes.

Test	Typical Value	Test Method
Tensile Strength	95 N/25mm	PSTC-131
Elongation at Break	7%	ASTM D-3759
Adhesion to Steel	5.0 N/cm	ASTM D-3330
Water Vapour Transmission Rate	0.15 g/m²/24hr	ASTM D-3833
Shelf Life	24 months from date of manufacture	Internal
Application Temperature Range	4K (–269°C) - 573K (300°C)	Application test
Recommended Constant Temp	Within 300°C	Application test
Initial Tack (Rolling Ball)	Steel Ball No. 14-16	PSTC-6
Instantaneous Initial Tack	>8.8 N/25mm (>900g)	PSTC-101
Low-Temp Performance (–30°C / –196°C)	No embrittlement, no delamination	Internal
Liquid Helium (4K) Field Proven	Confirmed reliable performance in actual LHe applications	Field

APPLICATION MARKETS

- ✓ Aerospace, aircraft and rocket parts
- ✓ Cryogenic vessels and transfer lines
- ✓ Liquid helium applications
- ✓ Superconducting cables
- ✓ Nuclear fusion cryogenic modules

Recommendation: To mitigate detachment risk from vibration during cryogenic tank transportation, it is recommended to wrap CryoTape® FiG as the outermost layer for additional mechanical protection.

CLASSIFICATIONS & COMPLIANCE

Fire Safety Properties	
Flame Spread Index (ASTM E84 / UL 723)	≤ 25
Smoke Developed Index (ASTM E84 / UL 723)	≤ 50
UL Classification	Class A (ASTM E84 / UL 723)
Backing Flammability	Non-combustible (Aluminum Foil)
Adhesive Flammability	Flame Retardant (Modified Acrylic)
UL 746C	Conforms to requirements
UL 510 (PSA Tape)	Compliant
DIN 4102	B1 (DIN 4102)

Standards: Compliant with GB/T 31480-2015 · GB/T 31481-2015 (ISO 201010:2014) · NB/T 47059-2017

STORAGE & SHELF LIFE

Storage: Store in a clean, dry place. Recommended conditions: 4 – 26°C (40 – 80°F) and 40 – 50% relative humidity.
Shelf Life: 12 months from date of manufacture when stored under recommended conditions.

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