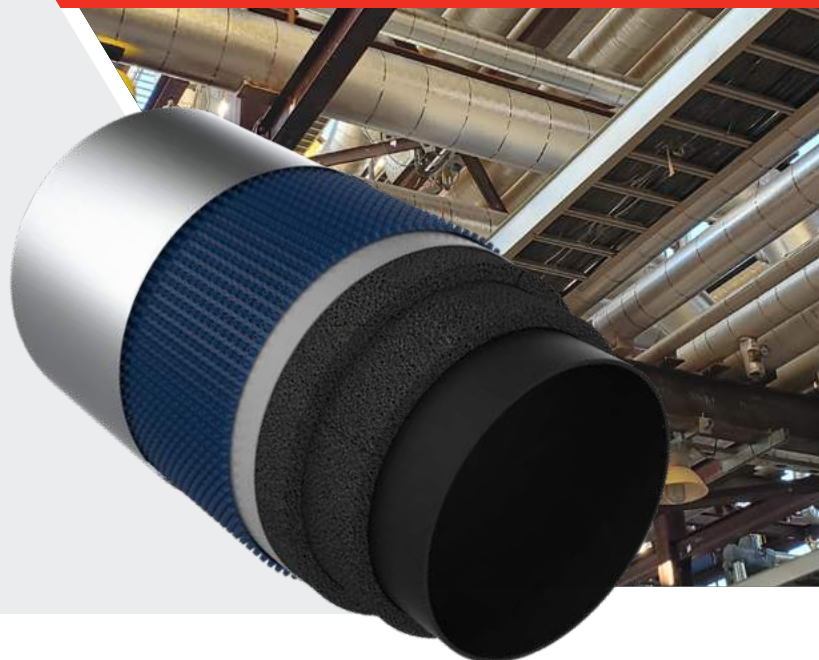


INTEGRITY CRYO VAPOR SHIELD



FEATURES

- **Reduced Thermal Bridging.** The nominal 13.25mm standoff reduces direct contact between the vapour barrier and outer metal jacketing, creating a thermal break that helps limit conductive heat transfer and ambient heat gain.
- **Perforated design** reduces trapped moisture
- **Mechanical Damage Protection.** Durable, flexible PP material helps safeguard the insulation system from sharp cladding edges, fasteners, impact and other installation, mechanical or service-related damage.
- **Compatible** with all pipe sizes, insulation systems, tanks, and vessel applications.

DESCRIPTION

Cryo Vapor Shield is a durable, low absorption polypropylene layer engineered for cold service and cryogenic insulation systems. Installed over the primary vapour barrier and beneath the metal cladding, its nominal 13.25 mm (0.5217 in) dimples create a consistent standoff between the vapour barrier and cladding. This separation reduces direct contact and helps limit conductive thermal bridging and ambient heat gain.

When installed as a continuous layer with sealed seams and penetrations, the wrap functions as a sacrificial layer while shielding the primary barrier from punctures, abrasion, fasteners and impact. Its flexible, mechanically robust construction helps protect the insulation and cladding, supporting long-term performance and system reliability.

APPLICATION

Cryo Vapor Shield™ Dimple Wrap is designed for cold service and cryogenic insulation systems on piping, pipelines, tanks, pressure vessels, heat exchangers, and other insulated equipment. It is suitable for new construction, expansion, and retrofit projects requiring supplemental vapor barrier protection and a consistent standoff beneath the cladding.

Install Cryo Vapor Shield™ over the completed primary vapor barrier with the dimples facing outward. Butt each section securely against the adjacent section to maintain a continuous and uniform standoff between the vapor barrier and metal cladding. Install the metal cladding over the Cryo Vapor Shield™ in accordance with project specifications.

CLADDING SIZING NOTE: The nominal 13.25 mm (0.5217 in) dimple height increases the finished system diameter by approximately 26.5 mm (1.043 in). The metal cladding should therefore be oversized accordingly to accommodate the additional outer diameter used with Cryo Vapour Shield.



MATERIAL PROPERTIES

PROPERTIES	VALUE
MATERIAL(S)	Durable Polypropylene (PP)
COLOR	Blue
DENSITY	0.89 to 0.91 g/cm ³ (55.6 to 56.8 lb/ft ³)
COMPRESSIVE STRENGTH	29 MPa (approximately 4,206 psi)
ELONGATION	200 to 700%
SHRINKAGE	1 to 2.5%
WORKING TEMPERATURE	-50°C to 120°C (-58°F to 248°F)
MELTING POINT	165°C (329°F)
OTHER SPECIFICATIONS	
Fire Resistance:	ASTM E84 Class A
CUI Testing:	ASTM G189

TEMPERATURE NOTE: The working range applies to the PP material at its installed location, not to the process temperature. Confirm the expected temperature at this layer for each cold or cryogenic system.

COMPLIANCE TO INDUSTRY STANDARDS & BEST PRACTICES

INDUSTRY ASSOCIATION APPLICABLE STANDARDS

INDUSTRY ASSOCIATION	APPLICABLE STANDARDS
American Petroleum Institute (API)	API 583
Committee Industrial Insulation (CINI)	CINI 6.2.2.2

COMMENT: Cryo Vapor Shield acts as a sacrificial layer to protect the vapor retarder from screws/pop-rivets

NOTE 1: 3.1.27 insulation drying wrap. API 583 (see note 1, 2, 3) A wrap installed between the insulation and jacketing designed to make the insulation system breathable and self-drying.

NOTE 2: 10.1 Maintenance to Mitigate CUI/CUF Issues. Preventing water ingress and/or retention due to inadequacy of design by: "using insulation drying wraps". Preventing insulation/jacketing damage due to operations or maintenance activities by: "providing jacketing and insulation systems that are rigid and resistant to mechanical damage and/ or designs/ measures for reinforcement such as an insulation drying wrap".

NOTE 3: 10.5.5 Protective Wraps. Another type of unbonded system is an insulation drying wrap. Insulation drying wraps, incorporating strategically placed vents and drains, can allow moisture-soaked insulations to dry out by being breathable. Accelerated drying allows insulations to regain their thermal properties. In addition, the wraps can impart compressive strength to the jacketing that otherwise can get crushed and deformed from external loading and foot-traffic.

NOTE 4: CINI 5.1.01 (2019-01-01): Cold Insulation — insulation/ finishing details for piping, piping insulation, single layer. Illustrates a protective layer positioned between the vapour barrier and exterior metal cladding in a cold-insulation assembly

NOTE 5: API 583 6.2.2.2: The installation and use of screws/ pop-rivets can damage underlying vapor retarders, coating and the base metal



Scan the QR code to view step-by-step installation instructions.



t. 1.800.673.0925
sales@integrity-products.com

56 Liberty Road, Sherwood Park,
Alberta, Canada, T8H 2J6

integrity-products.com