

Multi-Layered System (MLS)

INSULATION VENTILATION SYSTEM (IVS)
AND PTFE SPACER WRAP

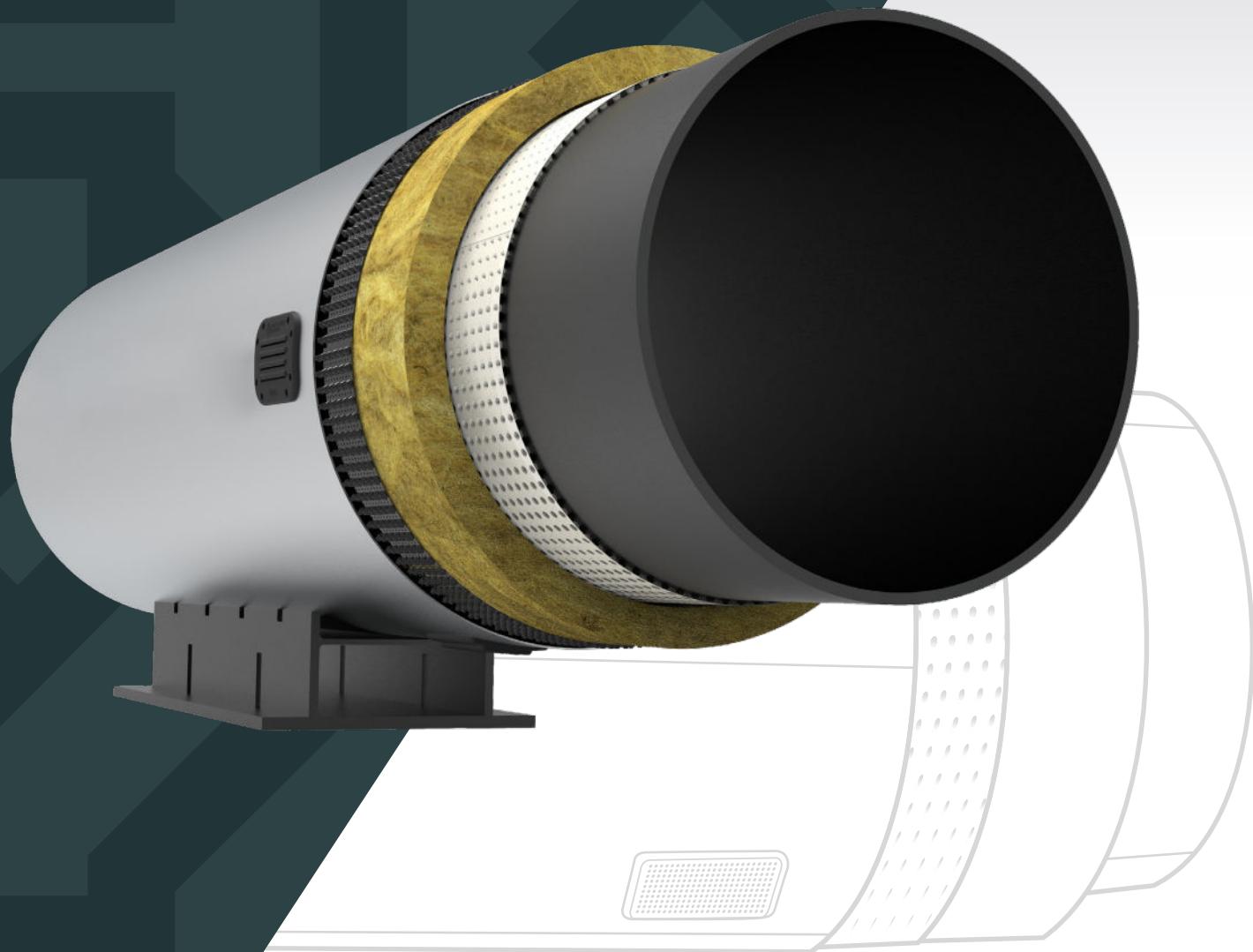




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MULTI-LAYERED SYSTEM (MLS)

COMPONENTS

The Multi-Layered System is engineered to address Corrosion Under Insulation (CUI) and Stress Corrosion Cracking (SCC), while also providing enhanced heat conservation.

The Integrity Products Insulation Ventilation System (IVS) with PTFE Spacer Wrap consists of four key components: Integrity Perforated Dimple Wrap™, Integrity Vents™, Integrity Drains™, and PTFE Spacer

Wrap™. The PTFE Spacer Wrap offers exceptional thermal performance, significantly exceeding that of insulation systems. It is engineered to create a 6mm air gap, serving as a barrier that prevents moisture and leachate from contacting insulated assets. The PVC, Vents, and Drains are specifically designed to facilitate moisture drying in saturated insulation systems, enhancing overall longevity and efficiency.

VENTS

Made from a high-quality EPDM (Ethylene-propylene diene monomer) material

Louvered design to enhance airflow and protect insulation from water ingress

Design with an embedded metal skeleton to conform to irregular surfaces



DRAINS

Made from a high-quality EPDM (Ethylene-propylene diene monomer) material

Designed for effective drainage of accumulated moisture in the insulation system

Design with an embedded metal skeleton to conform to irregular surfaces

• PTFE SPACER WRAP

Made from virgin PTFE (Polytetrafluoroethylene) material—free from perfluorosulfonic acids (forever chemicals)

Acts as an impermeable barrier against moisture and leachates

Extensively verified in field and lab settings for CUI and thermal performance

6mm air gap to minimize the risk of localized corrosion and pitting

Provides a strong thermal barrier, reducing heat transfer in insulated systems

Offers acoustic benefits
further testing is currently underway

Compatible with all insulation materials

PERFORATED DIMPLE WRAP

Made from high-quality PVC (polyvinyl chloride) material

Features perforations and standoffs for in-situ drying of thermal insulation

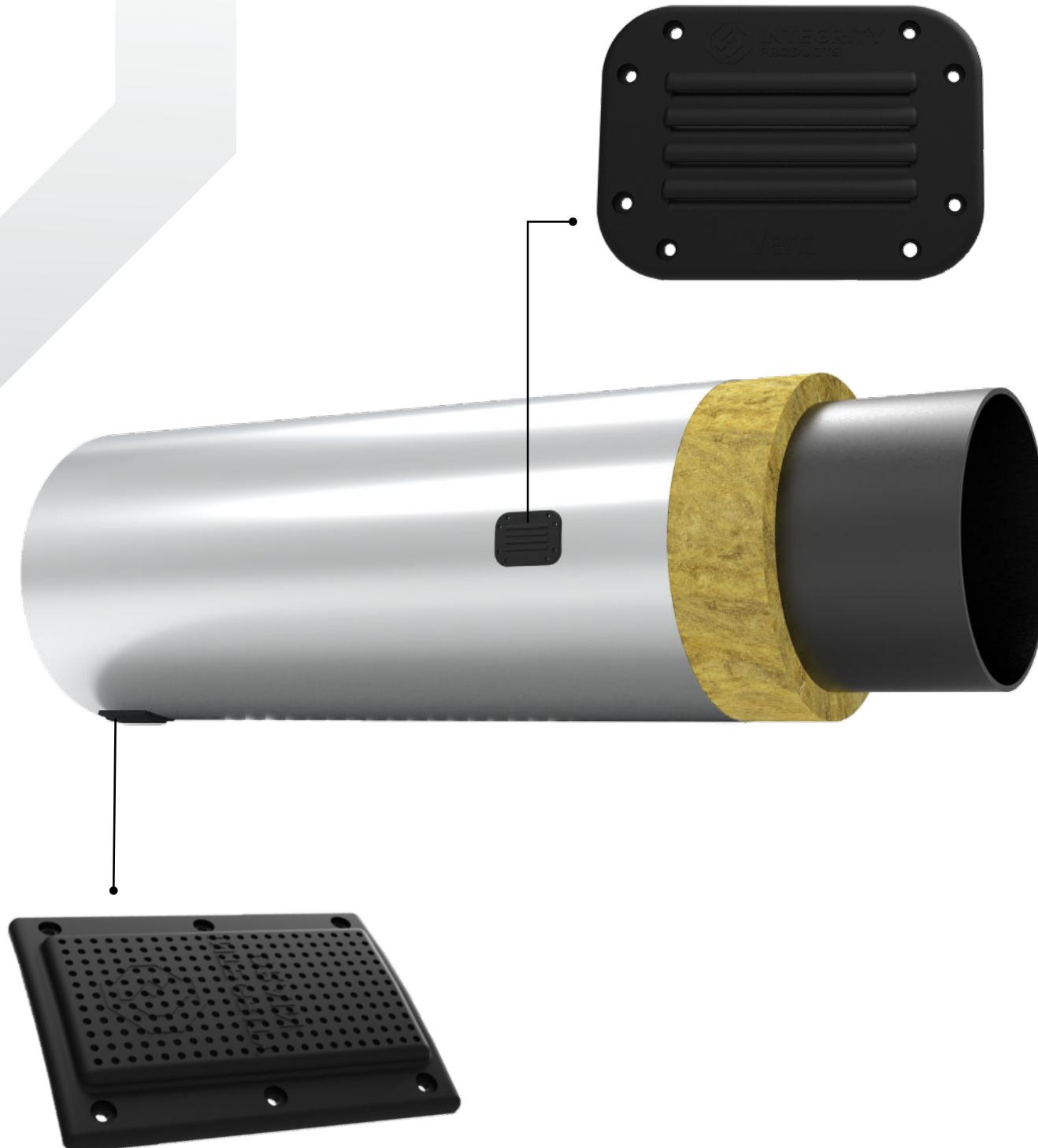
Exceptional compressive strength, Perforated with 8 holes per square inch

Enhances thermal performance by removing moisture and creating a convection air gap

Compatible with all insulation materials

Suitable for both new and existing insulation systems

INTEGRITY DRAINS™ AND VENTS™



INTEGRITY DRAINS™

Integrity Products Integrity Drains™ are designed to create a drainage point for moisture while also promoting airflow along the insulation system. These are gravity-assisted and as such are installed at the 6 O'clock position in the metal cladding. They make use of the air gap created by the Integrity Perforated Dimple Wrap™.

INTEGRITY VENTS™

Integrity Products Integrity Vents™ provide ventilation to the insulation system. The louvered design protects the insulation from water ingress while promoting airflow along the insulation system. These are installed every 3m at the 3 and 9 O'clock positions. They make use of the air gap created by the Integrity Perforated Dimple Wrap™.

MATERIAL SPECIFICATIONS

MATERIAL(S)

60 Durometer
EPDM Rubber Cover/Cap
Mild Steel Skeleton

COLOR

Black

CHEMICAL DEFINITION

Ethylene Propylene
Diene Monomer

UV RESISTANCE

Excellent

OZONE RESISTANCE

Excellent

WEATHER RESISTANCE

Excellent

TENSILE STRENGTH

1600 PSI

ELONGATION

470%

TEMPERATURE RANGE

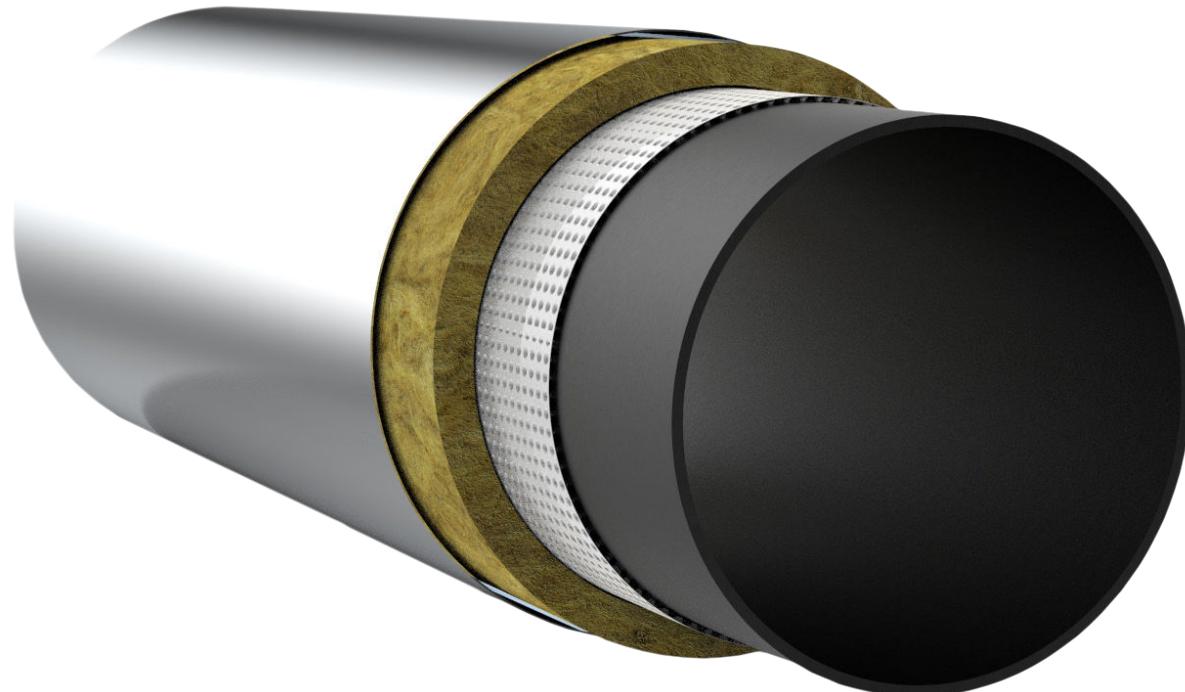
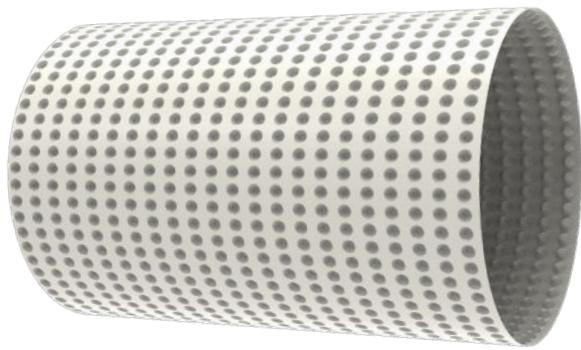
-58°F to 300°F (-50°C to 149°C) Constant Temperature

OTHER SPECIFICATIONS

ASTM D2000 Classification

PTFE SPACER WRAP

POLYTETRAFLUOROETHYLENE (PTFE)



PRODUCT DESCRIPTION

Integrity Products' PTFE Spacer Wrap allows you to establish a non-contact insulation system by creating a unified and consistent 6mm air gap between the insulation and the process pipe. This system separates the insulation system (a common source of water infiltration) and the process pipe. The air gap prevents soaked/wet insulation from coming into direct contact with the pipe. Made from high performing polytetrafluoroethylene, the PTFE Spacer Wrap works with all types of insulation and in various applications.

PRODUCT APPLICATION

To optimize pipe and equipment protection, the Integrity Products' PTFE Spacer Wrap fully encompasses the pipe surface area and is installed prior to the insulation. This forms a unified and consistent air gap between the insulation and the process pipe ensuring that there is never direct contact between the two.

The product works on all pipe sizes and with all insulation types. It forms a complete barrier between the insulation material and the process pipe, protecting the pipe from direct contact with wet or damaged insulation. This protects the process pipe from moisture damage and from Corrosion Under Insulation (CUI) as well as damage from leaching agents and other contaminants contained in the insulation material.

INSTALLATION

The Integrity Products' PTFE Spacer Wrap comes in rolls of 36" x 75". It is placed over and around the process pipe (dimple side in) and held in place with tape or wire. We recommend a minimum of 1.5" or 2 dimples interlocked on the circumferential joints and 0-1.5" overlap or 2 dimples interlocked on longitudinal joints depending on your particular application and preference. The longitudinal joint shall be at the low point or 6 O'clock position of the pipe. The insulation material is then placed over the PTFE Spacer Wrap and installed as normal.

MATERIAL SPECIFICATIONS

MATERIAL(S)

PTFE (Polytetrafluoroethylene)

COLOR

White

UV RESISTANCE

Excellent

OZONE RESISTANCE

Excellent

TENSILE STRENGTH

255 PSI

ELONGATION

350%

TEMPERATURE RANGE

-200°F to 500°F
(-128.9°C to 260°C)

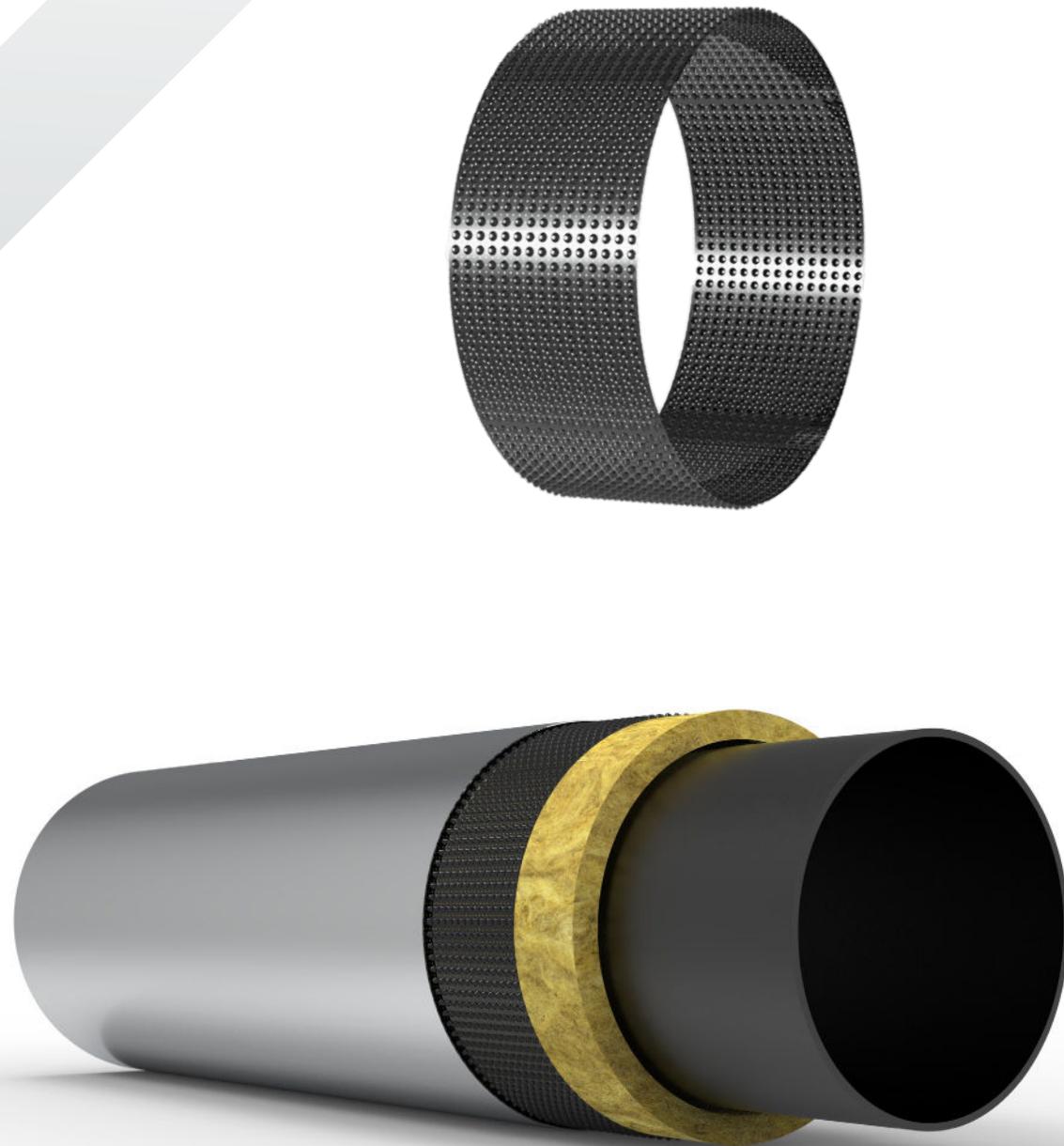
ASTM STANDARDS E84

Class A || Flame spread

NOTE: Please ensure to oversize the insulation as required in order to accommodate the PTFE Spacer Wrap which adds 12mm to the Diameter.

PERFORATED **DIMPLE WRAP**

PATENTED
POLYVINYL CHLORIDE (PVC)



PRODUCT DESCRIPTION

Integrity Products' Perforated Dimple Wrap is designed to create a consistent 6mm air gap between the insulation and the metal cladding. Used in conjunction with our vents and drains, this 3-part system creates the Integrity Products' Insulation Ventilation System. This high-quality Polyvinyl Chloride (PVC) material is design for flexibility and strength which can help protect the insulation and the outer cladding from mechanical damage. Its unique perforations and raised dimples allow any moisture or vapour trapped in the insulation to pass into the gap that has been created, drain to the 6 o'clock position and exit the system through the drains.

PRODUCT APPLICATION

To extend the service life of the insulation and piping equipment, Integrity Products' Perforated Dimple Wrap is installed dimple side out and fully encompasses the exterior of the insulation. It can be installed on all insulation types, on all pipe sizes and in hot and cold applications. Once installed the outer finish cladding is installed over the Perforated Dimple Wrap as normal keeping in mind that the Perforated Dimple Wrap has added a total of 12mm to the outer diameter of the insulation. The product can be utilized on new insulation systems in order to prevent moisture build up and also retrofit on damaged/soaked insulation in order to assist with drying.

INSTALLATION

The Integrity Products' Perforated Dimple Wrap comes in PVC rolls of 3 ft x 50 ft. This product is placed over the insulation (dimple side out) and secured into place with wire, banding, or tape. The metal cladding is placed over the Perforated Dimple Wrap and installed as normal.

MATERIAL SPECIFICATIONS

MATERIAL(S)

Polyvinyl Chloride (PVC)

COLOR

Black

DENSITY

1.4 g/cm³

TENSILE STRENGTH

35 ~ 56 MPa

COMPRESSIVE STRENGTH

39 PSI

ELONGATION

2 ~ 40%

SHRINKAGE

1.25%

UV RESISTANCE

Excellent

WORKING TEMP.

-40°F to 194°F (-40°C to 90°C)

ASTM STANDARDS E84

Class A || Flame spread
Class A || Smoke development

NOTE: Please ensure to oversize the metal cladding as required in order to accommodate the Perforated Dimple Wrap which adds 12mm to the Diameter.



INTEGRITY PRODUCTS

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PRODUCT
CATALOGUE



COMPANY
PROFILE

