

## KLON & KLNN

### High performance 2 layer sleeve systems

The KLON and KLNN sleeves are one piece wraparound sleeve designed for corrosion protection of both offshore and onshore steel pipelines. These sleeves are designed using a High Density polyolefin backing for improved mechanical protection and either a thermoplastic hybrid or a high shear mastic adhesive for easy installation and high corrosion protection.

#### Rapid & Reliable Installation

- Engineered for the specific needs of quick applications, the KLON and KLNN sleeves are designed to be suitable for installation onto a minimum 3 surface preparation level.
- Allow for decreased cycle time and increased product rates with excellent product application consistency

#### Unique Adhesive Technology

- Allows for lower installation pre-heat temperatures and superior bonding to many mainline coatings used on both onshore and offshore pipelines
- Engineered to be water quenched to increase productivity rates

#### Long Term Corrosion Protection

- Provides a protective coating with the structural integrity of a seamless tube, providing excellent resistance to Cathodic Disbondment and excellent durability against abrasion and chemical attack.

#### Saves time and Money

- Supplied as a one piece system for easy and faster application to increase field joint production rates
- Lower Pre-heat means less time heating and a faster installation



#### Applications



Offshore Pipelines



Onshore Pipelines



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| Sleeve Operating Characteristics         |                 | KLON                     | KLNN                    |      |
|--|-----------------|--------------------------|-------------------------|------|
| Pipeline Operating Temp. (Offshore)      |                 | Up to 80°C (176°F)*      | Up to 100°C (212°F)*    |      |
| Pipeline Operating Temp. (Onshore)       |                 | Up to 65°C (150°F)*      | Up to 80°C (176°F)*     |      |
| Minimum Installation Temp.               |                 | 75°C (167°F)             | 90°C (195°F)            |      |
| Mainline Coating Compatibility           |                 | PE, PP, FBE, PU, AE, CTE | PE, PP, FBE, AE, CTE    |      |
| Adhesive Properties                      |                 | Test Method              | KLON                    | KLNN |
| Softening Point                          | ASTM E28        | 102°C                    | 124°C                   |      |
| Lap Shear @ 23°C                         | ISO 21809-3     | 15 N/cm <sup>2</sup>     | 40 N/cm <sup>2</sup>    |      |
| Backing Properties                       |                 |                          |                         |      |
| Tensile Strength                         | ASTM D638       | 22 MPa                   | 22 MPa                  |      |
| Elongation                               | ASTM D638       | 600%                     | 600%                    |      |
| Hardness                                 | ASTM D2240      | 55 Shore D               | 55 Shore D              |      |
| Volume Resistivity                       | ASTM D257       | 10 <sup>17</sup> ohm-cm  | 10 <sup>17</sup> ohm-cm |      |
| Sleeve Properties                        |                 |                          |                         |      |
| Adhesion Strength @ 23°C                 | ISO 21809-3     | 15 N/cm                  | 50 N/cm                 |      |
| Impact Resistance                        | ISO 21809-3     | 15 J                     | 15 J                    |      |
| Indentation Resistance                   | ISO 21809-3     | 0.65 mm (Pass)           | 0.65 mm (Pass)          |      |
| Cathodic Disbondment @ 23°C, 28 days     | ISO 21809-3     | < 8 mm                   | < 10 mm                 |      |
| Thickness                                |                 | KLON                     |                         |      |
|  |                 | T                        | L                       | S    |
| Backing (Nominal Thickness as supplied)  | 0.9 mm (0.035") | 0.9 mm (0.035")          | 1.1 mm (0.045")         |      |
| Adhesive (Nominal Thickness as supplied) | 0.9 mm (0.035") | 1.4 mm (0.055")          | 1.5 mm (0.060")         |      |
| Thickness                                |                 | KLNN                     |                         |      |
|  |                 | T                        | L                       | S    |
| Backing (Nominal Thickness as supplied)  | 0.9 mm (0.035") | 0.9 mm (0.035")          | 1.1 mm (0.045")         |      |
| Adhesive (Nominal Thickness as supplied) | 0.9 mm (0.035") | 1.1 mm (0.045")          | 1.5 mm (0.060")         |      |

\* Actual temperature rating is dependant on specific project requirements and conditions. Please consult your local Canusa representative.

Custom thicknesses are also available. Contact your Canusa-CPS representative for details.

Since 1967, Canusa-CPS has been a leading developer and manufacturer of specialty pipeline coatings for the sealing and corrosion protection of pipeline joints and other substrates. Canusa-CPS high performance products are manufactured to the highest quality standards and are available in a number of configurations to accommodate many specific project applications.

The product information shown here is intended as a guide for standard products.

Consult your Canusa representative for specific projects or unique applications.



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**Quality Management system**  
registered to ISO 9001

Canusa warrants that the product conforms to its chemical and physical description and is appropriate for the use stated on the product data sheet when used in compliance with Canusa's written instructions. Since many installation factors are beyond our control, the user shall determine the suitability of the products for the intended use and assume all risks and liabilities in connection therewith. Canusa's liability is stated in the standard terms and conditions of sale. Canusa makes no other warranty either expressed or implied. All information contained in this data sheet is to be used as a guide and is subject to change without notice. This data sheet supersedes all previous data sheets on this product. E&OE

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