

# OSNALINE® ANTISTATIC

Safe tube bundles for the operation in explosion proof areas



KME Germany GmbH & Co. KG  
OSNALINE® ANTISTATIC  
[EN]



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*KME as one of the largest manufacturers of copper and copper alloy products offers best possible product and engineering solutions in the various fields of industrial applications. KME's Special Products Division includes a variety of specialised tube bundles known as OSNALINE®. These products are pre-fabricated tube-runs consisting of a small diameter tube or group of tubes stranded in an extruded outer jacket.*

Safe tube lines in extraordinary endangered areas within the chemical and petrochemical industry are essential for the absolute reliable function of equipment and the safety of humans and environment by avoiding breakdowns and disasters.

Especially in explosion proof areas (EX-Zones) an antistatic outer jacket is a strong protection to avoid the danger of ignition resulting from electrostatic charge, as clearly required by the TRBS (technical rules for operating safety).

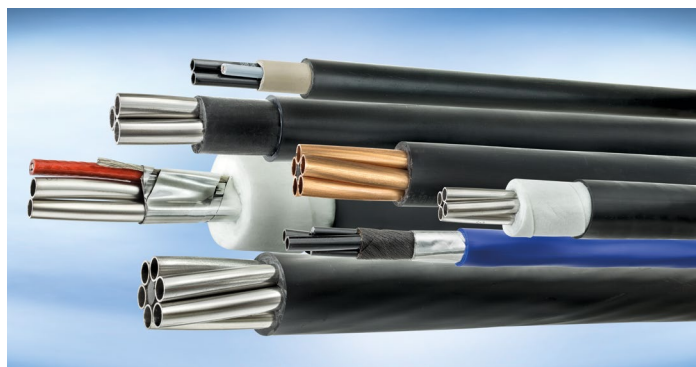
Reason enough for KME to design and patent an antistatic outer jacket for its highly recommended OSNALINE® tube bundles which is already available for the range for OSNALINE® heat traced bundles.

So far it was common practice to use completely pre-assembled lines with a corrugated outer jacket made of polyamide (PA) which were only available in short lengths and could not be cut to size even when only slight modifications appeared on site.

**OSNALINE®** ANTISTATIC tube bundles as a ready-to-use solution are available in long lengths including all necessary connection accessories as per customer request and can easily be adapted on-site.

Another decisive advantage of the new **OSNALINE®** ANTISTATIC tube bundles is a significant reduction of the common practice of individual acceptance by technical experts.

KME's **OSNALINE®** ANTISTATIC tube bundles with their outer jacket of highly discharging TPU (Thermo-plastic Polyurethane) and a specific resistance  $< 10^9 \Omega m$  fit perfectly in installations in complex explosion proof areas (EX-Zones).



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Electrically traced **OSNALINE®** ANTISTATIC tube bundles are available with a different number of inner tubes, in different sizes and with different options of electrical heat tracers.

The excellent properties of the TPU jacket regarding bend ability during installation and temperature stability remain unchanged in comparison to KME's range of other **OSNALINE®** tube bundles with a standard outer jacket.

## OSNALINE® ANTISTATIC

are available in long lengths including all necessary

### Applications

- heat traced lines for sample extraction and process lines
- transportation lines

### Size Ranges [mm]

Stainless Steel 6 x 0.5 - 12.7 x 1.65

PTFE/PFA 6 x 1.0 - 12.0 x 2.0

### Materials

Tubes Stainless Steel, PTFE, PFA

Insulation thermo-, fibreglass-fleece

Outer jacket TPU

### Advantages

- self-regulating heaters (ex-proof)

### Special Designs

- pre-assembling heating cable end fitting
- frost protection: electrical heat tracing: up to 150°C
- temperature maintenance: steam tracing: up to 500°C
- spring wire armoring
- tube in tube system

## OSNALINE® FLEX

Apart from this working with **OSNALINE®** is nowadays much more easy as the outer jacket can be bend in more tighter and flawless curves than ever before. Bending radii were reduced from 10 times outer diameter to 5 times outer diameter, which means a reduction of 100% whilst the outer diameter of the tube bundle is still round and shows no crinkles.

Dismantling with a standard cutter is easy to be done without damaging the insulating layer, thus no special tools are necessary. Last but not least we improved the strength of the new jacket by further 30% adding another substantial safety benefit to **OSNALINE®** tube bundles.

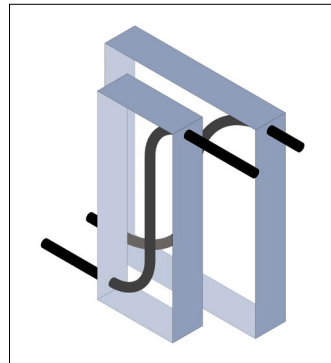


Figure left side:

This figure shows the different needed space (grey border) of an S-curve bending of tube bundles.

In front, the new **OSNALINE®** FLEX tube bundle needs 100% less space - compared to a common tube bundle.



**KME Germany GmbH & Co. KG**  
*Marine Applications / Tube Bundles*  
P.O. Box 3320  
49023 OSNABRÜCK  
Klosterstraße 29  
49074 OSNABRÜCK  
GERMANY  
Fon +49 54 1 321-3220  
info-maritime@kme.com  
www.kme.com

Marine Applications



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