



### CONTACT

**INSULCON B.V.** – The Netherlands  
+31 (0) 167 565750  
info@insulcon.com

**INSULCON N.V.** – Belgium  
+32 (0) 3 711 02 78  
insulconnv@insulcon.com

**INSULCON GmbH** - Germany  
+49 (0) 2131 408548-0  
insulcongbh@insulcon.com

**INSULCON PROJECTS S.A.** - Switzerland  
+41 (0) 91 911739  
infoch@insulcon.com

**INSULCON**

LEADER IN HIGH TEMPERATURE SOLUTIONS

### General

The production of asphalt has a typical way of producing, which has found its way in most plants where asphalt is being prepared.

The drying drum, in which the mineral aggregate mixture is dried and heated to a temperature suitable for asphalt production is an important part. This applies for all manufacturers with a mixing plant.

The drying drum is a so-called rotary kiln. In terms of process technology, it is necessary for the production of asphalt to remove the moisture from the base material in order to ensure a bond with the bitumen. In order to keep heat losses during the drying process as low as possible, the drum tube is always insulated.

### Application

Traditionally, mineral wool with a metal cladding is used for insulation. However, high temperatures between 600 °C and 700 °C are being reached during the manufacturing process. Mineral wool contains organic binders (phenolic resin) that burn away when heated at approximately 235 °C. The vibrations of the drying drum create spaces between the metal cladding and can therefore blow the (non-bonded) fibre particles away from the insulation. All this can lead to cracks in the insulation, which again results in heat loss.

### Solution

To avoid all this, we have developed a special insulation or lining. To prevent heat loss, the drum is insulated with prefabricated Insulair insulation mattresses.

Insulair is a high temperature insulation mat made of silica aerogel and stiffening fibre structure. Silica aerogels have the lowest thermal conductivity of all known solids (highest insulation value).



In addition, the material is water-repellent and contains no organic binders. A glass fabric with a silicone coating is used as the outer layer. The glass fabric protects the insulation against dust and makes the lining not only super-insulating but also weather-resistant.

### The case

A high valued customer issued us usefull data which shows the saving on energy by using our Insulair Insulation Mattresses. In comparison to no insulation or one that will disappear after a short period, the following data is valid:

|   |                                     |
|---|-------------------------------------|
| Kiln zones  | <b>8 m length / 2.95 m diameter</b> |
| Temperature of the asphalt before leaving the kiln:           | <b>300-350 °C</b>                   |
| Average Temperature of the (white) drum to heat the asphalt:  | <b>600-700 °C</b>                   |
| Outside temperature with Insulation                           | <b>49.6 °C</b>                      |
| Asphalt production per year :                                 | <b>80.000 ton</b>                   |
| <b>Energy saving</b> by using Insulair Insulation mattresses: | <b>3.7%</b>                         |
| Energy saving combining the heating and middle zone:          | <b>280 MWh</b>                      |
| <b>Total saving anual in GBP:</b>                             | <b>48.700 GBP</b>                   |

with gas price of 174 GBP (per 10-08-2022)

Our engineers always calculate the best solution in partnership with the customer, in order to get the best results.

### Advantages Insulair Insulation Mattresses:

- Better insulation values and thus lower heating costs
- Shorter heating times
- Less CO<sub>2</sub> emissions
- No metal cladding (lower maintenance/installing costs)
- More stable production process

### CONTACT

**INSULCON B.V.** – The Netherlands  
+31 (0) 167 565750  
info@insulcon.com

**INSULCON N.V.** – Belgium  
+32 (0) 3 711 02 78  
insulconnv@insulcon.com

**INSULCON GmbH** - Germany  
+49 (0) 2131 408548-0  
insulcongbh@insulcon.com

**INSULCON PROJECTS S.A.** - Switzerland  
+41 (0) 91 911739  
infoch@insulcon.com