Product data sheet
AERO-THERM® industry

BASIC TECHNICAL INFORMATION

Form of material	water-based sealant
Function	heat reflection, thermal insulation
Composition	filler, dispersion, additives
Application thickness	0.8 to 1.0 mm
Minimum lifetime	10 years provided if application technology is followed

Basic characteristics	Properties/class	Harmonized technical specification
Water vapour permeability EN ISO 7783-2	V1 high	EN 15824
Water permeability EN 1062-3	W1 high	EN 15824
Adhesion EN 1542	0,6 MPa	EN 15824
Adherence EN ISO 4624	1,0 MPa	EN 15824
Durability	NPD	EN 15824
Thermal conductivity λ (W/mK) EN 12667	0,035 W/mK	EN 15824
Sensory evaluation of odour ČSN EN 1230-1	grade F#	EN 15824

meets the requirements without testing, the product is not applied as a final coat; it is assumed that a final coating will be applied (paint coat, spray application of paint)

Characteristics	Properties /class	Technical specification
Heat-storage capacity of the material, drop in temperature of contact and evaluation according to ČSN 730540-2	Vyhovuje	ČSN 730540-2
Emissivity ε , spherical emissivity at 20 °C (Taylor method)	**0,83 (-)**	(ČSN) EN 12898
Diffusion equivalent air layer thickness s_d	**0,11 (m)**	(ČSN) EN ISO 7783-2
Density (Specific density) ρ_v Specific surface density with 1-mm thick layer in dry state ρ_S	**0,440 (g/ml)** **0,110 (kg/m^2)**	(ČSN) EN ISO 787-10 (ČSN) EN ISO 1183-1,část B (ČSN) EN ISO 2811-1 Manufacturer's Data Sheet
Density of water vapour diffusion flow rate resistance **V**	**182,3 (g/m2.d)**	(ČSN) EN ISO 7783
Diffusion resistance factor **μ**	**107,80 (-)**	(ČSN) EN ISO 7783
pH value (at 20°C**)**	**7 – 7,5**	Manufacturer's Data Sheet
Sensory evaluation of odour (ČSN) EN 1230-1	**step 1**	(ČSN) EN 1230-1

Further information **Parameters based on comparative measurement of tyre curing presses**	AERO-THERM® industry	
	without applied coating	**with applied coating**
Differences in temperatures and time needed to reach 180 °C of the appliance	**150 K** 42.5 min	**154 K** 42.5 min
Holding time after the device has reached 180 °C	21 min	27 min
Cooling period from 180 °C to 40 °C of the device	482 min	601 min
Power consumption of curing press -saving	**3.63 kWh** **-**	**3.38 kWh** **6.9 %**
Surface temperature drop	**95.6 °C**	**66.8 °C**
Comparative measurement results • **operating temperature rise time** • **holding time** • **cooling** • **surface temperature** • **power consumption**	**X**	**faster (%)** **longer (by 28 %)** **longer (by 24 %)** **lower (by 30 %)** **lower (by 6 % at an average)**

Description of the Product
AERO-THERM® industry is a thermoactive and insulating coating that, thanks to its properties, influences energy demand of manufacturing plants and facilities. In relation to the content of the quality filler, AERO-THERM® industry can be applied to various industrial plants and thus reduce their energy consumption. At the same time, the coating can lower the surface temperature to safe values and reduce the thermal load of the environment where the plant is located. In addition, it can be applied to metal structures where it prevents dampness condensation and subsequent corrosion or condensate dripping.

Range of Application
AERO-THERM® industry can be applied to metal structures, or other technological equipment such as furnaces, presses, tempering chambers, driers, piping and others. Application of the AERO-THERM® industry coating contributes particularly to reduction of the energy demand of plants and to enhancement of occupational health and safety.

Specific Properties
AERO-THERM® industry creates a compact and flexible coating on the surface of technological plants. The structure of the coating is based on its filler and binding agent enriched with other components. The plants surface-treated with the AERO-THERM® industry coating are distinguished by shorter rise time of the operating temperature, they hold this temperature for a longer time and they cool down more slowly. AERO-THERM® industry can be applied on an area-wide basis, evenly to plain as well as to shape-complex surfaces.

Instructions for Use

AERO-THERM® industry needs a cohesive, ripe surface free from grease, dust, impurities and moulds. As for the metal base, the surface must be free from corrosion and old coatings. The base must be coated with a primer.
AERO-THERM® industry cannot be applied to bases that are permanently damp because of rising dampness or leaking water.
AERO-THERM® industry removes condensation of air humidity on cold surfaces of plants and structures.

Preparation of the base before application to metals and other non-absorbent materials
Remove layers of old non-cohesive coatings. As for the metal base, remove the corroded layer, if any, and apply a primer.
Remove dust, grease and impurities.
It is advisable to apply an appropriate adhesive bridge to non-absorbent bases, such as plastic tubes.

AERO-THERM® industry Preparation
At first, always mix AERO-THERM® industry itself properly (the material can separate water if stored for a longer time) and then add clean water gradually until it has reached a thick cream-like consistency; you can mix the coating using high revolutions.

Step 1 – applying

with a notched trowel
When applying the coating to a large flat surface, use a stainless notched trowel with 4–6mm grooves.
At first, apply the coating with the notched side of the trowel and smooth it equally with the straight side of the trowel.
Pay attention to corners, edges and other details, apply the coating to a necessary part of adjacent areas so that it will dwindle away.

with a spraying machine
AERO-THERM® industry must be diluted with water so that the material will have a honey-like consistency when flowing down the whisk you use for mixing; flowing down must not be discontinuous.
Low pressure and high pressure spraying machines can be used for spraying.

Step 2 – smoothing

AERO-THERM® industry can only be smoothed in wet state. If the surface is dry, it is necessary to moisten it with clean water. A mechanical sprayer is suitable for this purpose. Drying time depends on temperature and humidity - no sooner than 18 – 24 hours after application. The dried material is very difficult to file off.
Use a trowel to smooth unevenness and deficiencies, if any, with the mixed material. Before applying, remove dust from the respective spot to be treated, and moisten it with water.

AERO-THERM® industry surface finishing

Coatings
Contact the supplier/manufacturer to consult if the material is suitable for application on the AERO-THERM® industry.

Tiles and cladding
Consult the selection of adhesives with the supplier/manufacturer.

Cleaning tools
Tools can be washed with lukewarm water.

Standard hazard statements
Instruction for safe use:
P102 Keep away from children. **P234** Keep only in original package. **P270** Do not eat, drink or smoke when using this product. **P280** Use protective gloves, protective clothing, goggles, especially when grinding the material. **P284** Use equipment to protect your airways, especially when grinding the material. **P301+312** In case of ingestion: If you do not feel well, call the Toxicology Information Centre or a doctor. **P305+351+338** In case of contact with eyes. Rinse with water carefully for a few minutes. If contact lenses are applied, remove them, if possible. Continue rinsing.

Storage
Store at temperatures from +5 to +25 °C. Protect from direct sunshine.
The guarantee period is 2 years in undiluted state.

Disposal of unused material and packaging
Unused material can be disposed as non toxic waste. Empty containers can be recycled.

In case of doubts, please contact the manufacturer for further information and possible technical support!

Packaging
 5 L , 12 L and 30 L

Logistic convenience
Low weight, approx. 0.4 kg/dm^3
High yield from volume per m^2 of the applied surface
The yield from 1m^3 of the AERO-THERM with 1 mm application thickness is 1000 m^2

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Construction-technical certificate
and product certificate