



IR Reflective Coatings for the Construction Industry

Passive Energy-Efficient Technology

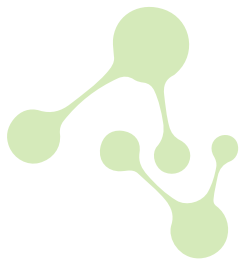
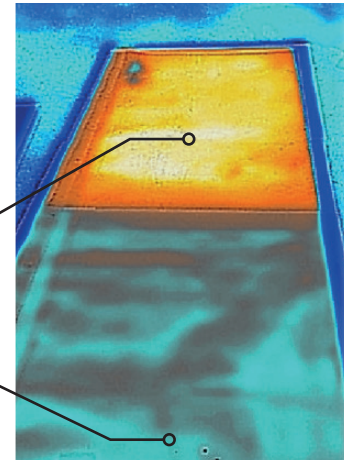
The Egrokor IR reflective paint systems offer several advantages:

- Effectively reflects sunlight thanks to its special microparticles.
- Reduces roof temperature by 12-17°C (lower thermal impact).
- Lowers air temperature directly above the roof by 3-5°C (lower cooling energy consumption).
- Decreases the tendency to malfunction of cooling units (lower operating range).
- Reduces refrigerant loss, resulting in lower carbon dioxide emissions.
- Protects surfaces from UV and helps to reduce heat radiation, ensuring a longer lifespan of the roof.

FLIR thermal imaging sample:

Without protection ☹️

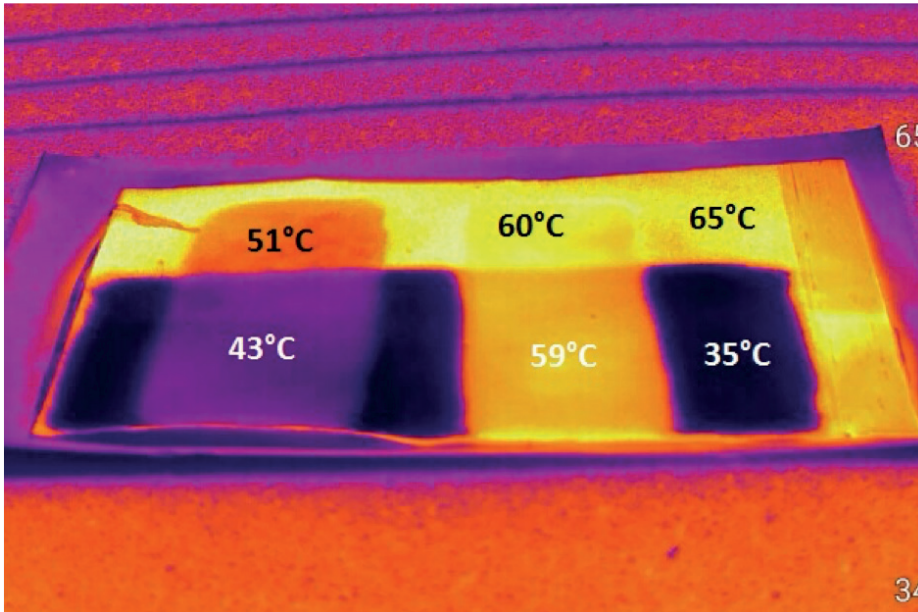
With protection 😊



Applications:

- Supermarkets, hypermarkets
- Industrial facilities
- Logistics and industrial warehouses
- Large roofed facilities (high roof area/internal volume ratio)
- Outdoor machinery, pipeline systems
- Suitable for both old and new surfaces
- EGROKORR IR coatings are suitable for the following roof materials:
 - PVC, plastic, rubber
 - Metal surfaces
 - Ceramic, concrete





Thermal imaging testing of a bitumen roofing sheet with IR reflective coating of different colours on a black and white background. A temperature difference of 30 degrees between the hottest and coldest points has been measured.

Complex Technical Solutions with Egrokor Materials:

The peculiarity of bitumen is that it continuously migrates, thus destroying the UV-reflective properties of the paint on it within a short time. For this problem, EGROKORR's water-based dispersion primer is the suitable solution, as it effectively prevents the migration of bitumen





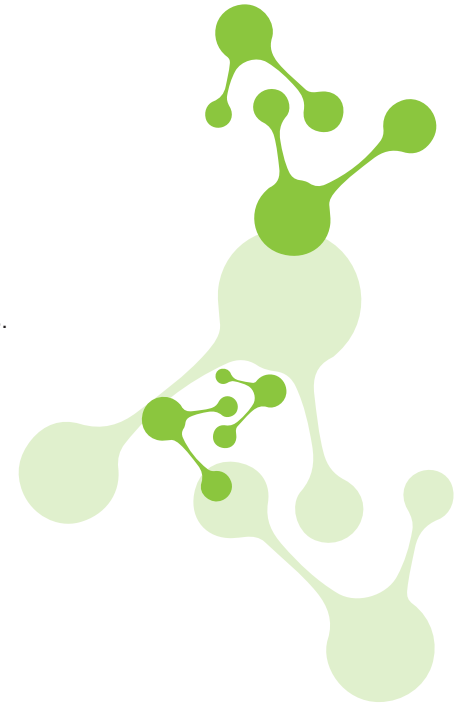
Sample surfaces treated with
Egrokorr IR reflective coating:



Summary:

The Egrokor IR reflective coating:

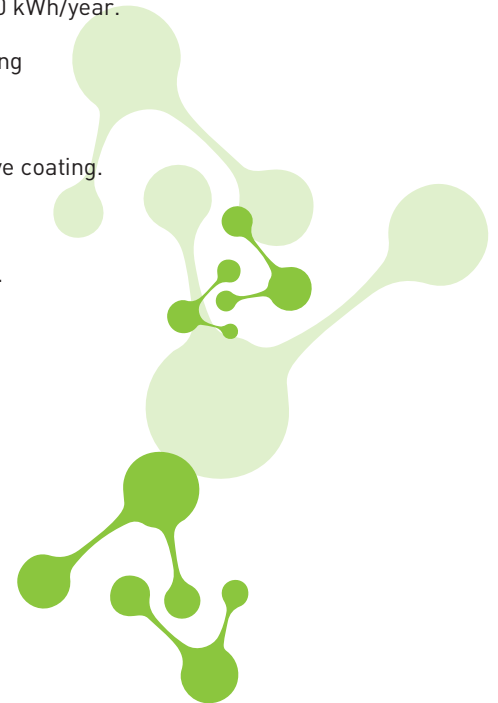
- Saves energy for refrigeration and freezing equipment.
- Increases the lifespan of the given equipments, thus saving money due to less need for servicing.
- Ensures more stable cooling performance.
- Protects surfaces against water, heat, and UV radiation.
- Seals micro-cracks, making the roof watertight again.
- Eliminates the need for additional UV protection of the surface.
- Provides a more comfortable roof environment for maintenance technicians.
- Self-cleaning surface; no need to wash or clean the roof.
- Does not alter the fire classification of the roof.



Let us calculate.

Example:

- A hypermarket with a sales area of 3,000 m² has a roof area of approximately 5,500 m².
The average electricity consumption on warmer days is approximately 60,000 kWh/year.
- The heat-reflective surface has a favourable effect on cooling food and creating a pleasant indoor air temperature.
- Overheating is reduced by 70% thanks to the heat reflection of the IR reflective coating.
- In addition, about 5 kg of refrigerant can be saved annually.
- Return on investment (lower energy consumption/investment cost): 13 years.
- Return on investment with total value added: 5-7 years.





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Note: The provided data is meant for illustrative and informational purposes only, and shall not be used for supporting any claims for compensation or warranty.