IN INDUSTRY/ENERGY:

- ✓ we increase efficiency / reduce heat loss up to 80% (average 40-50%) (furnaces, boilers, pipelines, etc.),
- ✓ we reduce energy consumption (energy, gas, etc.) by 5-20% per year, can be even more..,
- ✓ we reduce temperatures on appliances by up to 70% (40-50% on average),
- ✓ we increase safety against burns (we reduce temperatures to safe health and safety limits),
- ✓ return on investment of a few to several months,
- ✓ we carry out audits after 3 months of the completed investment to confirm the parameters,
- ✓ operating temperatures for thermal insulation from -60ºC to +600ºC depending on the product.
- ✓ eliminates condensation to 100% and protects against corrosion.

APPLICATION:

- ✓ in construction: indoors and outdoors, walls, roofs, floors, terraces under tiles, facades, underground garages, pipelines, shafts, etc.
- ✓ in industry, e.g. pipelines, furnaces, boilers, vats, dryers, ventilation ducts, recuperation, machines, moulds, appliances, tanks, silos, etc.
- ✓ All steel, aluminium, glass, wooden, concrete surfaces.

SFEROLIT® PERFORMANCE:

- ✓ min 0.5L/1m2/1 layer 0.5mm thick (WFT) - eliminate condensation or improve energy efficiency
- ✓ 1L/1m2/1 layer 1mm thick each (WFT)
- ✓ 2L/1m2/2 layers of 1mm thickness each (WFT)
- ✓ 3L/1m2/3 layers of 1mm thickness each (WFT)
- ✓ 4L/1m2/4 layers of 1mm thickness each (WFT)
- ✓ Max 5L/1m2/5 coats of 1mm thickness each (WFT)

When the wet film (WFT) dries, it evaporates water and reduces its volume by approximately 1/3.
For energy efficiency calculations, always specify the WFT thickness, not the other way around. SFEROLIT can be overcoated with other coatings, such as epoxy, latex paints, plasters and facade paints for increased exploitation and high chemical resistance. The product has hygienic approvals for indoor and outdoor use and a complete set of tests and documentation (below). It also meets and even exceeds LEED standards (point 2 below).

nanoTermoinsulation is used in the industrial, construction, district heating, energy and transport sectors, among others. Liquid thermal insulation (water-based, eco-friendly) that is spray-painted inside and outside. Application layers from 0.5mm to 5mm increasing energy efficiency. It is a breathable/vapour permeable coating with flammability class Bs1d) according to the building standard. During thermal upgrading, can be applied to cold surfaces and to hot surfaces up to a maximum of 90ºC. Durable and elastic coating, eliminates thermal bridges 100%.

APPLICATION

- ✓ in construction: indoor and outdoor, roofs, walls, floors, ceilings, facades, etc.
- ✓ in industry: pipelines, furnaces, boilers, ventilation and recuperation ducts, machinery, moulds, appliances, tanks, silos, etc.
- ✓ All steel, aluminium, glass, wood, concrete, ceramic, plastic surfaces (except PP and PE surfaces).

This is what SFEROLIT looks like when magnified 1140 times (pictured) - it looks like polystyrene only more than 1100 times smaller and environmentally friendly:

SFEROLIT® DOCUMENTS TO DOWNLOAD (IN ENGLISH).

1. SFEROLIT® - NANO THERMAL INSULATION vs LEED: http://atenapm.pl/wp-content/uploads/2023/05/NANO-THERMAL-INSULATION-vs-LEED-2023.pdf
2. SFEROLIT® - SFEROLIT PRODUCT FOLDER: http://atenapm.pl/wp-content/uploads/2022/11/EN_Q3.pdf
3. SFEROLIT® - SFEROLIT under the microscope 1140 x zoom: http://atenapm.pl/wp-content/uploads/2023/02/222.pdf
4. SFEROLIT® - certified for adhesion, vapour permeability: http://atenapm.pl/wp-content/uploads/2023/01/11.pdf
5. SFEROLIT® - Reflexivity certificate SRI, TSR: http://atenapm.pl/wp-content/uploads/2023/02/555.pdf
6. SFEROLIT® - certified, flammability class (Bs1d0), (in the Polish Language): http://atenapm.pl/wp-content/uploads/2023/01/13.pdf
7. SFEROLIT® - flammability testing). (in the Polish Language): http://atenapm.pl/wp-content/uploads/2023/01/14.pdf
8. SFEROLIT® - hygiene certificate: http://atenapm.pl/wp-content/uploads/2023/02/101010.pdf
9. SFEROLIT® - thermal conductivity coefficient λc (λobl) = 0,0012: http://atenapm.pl/wp-content/uploads/2023/02/444.pdf
10. SFEROLIT® - THERMAL CONDUCTIVITY OF SFEROLIT - Calculation method: http://atenapm.pl/wp-content/uploads/2023/02/666.pdf
11. SFEROLIT® - flyer: http://atenapm.pl/wp-content/uploads/2021/12/8.-EN_SFEROLIT-FOLDER-PROMUJE-LODZKIE.pdf
12. SFEROLIT® - APM100 - declaration of performance, light grey, concrete colour, construction and industry: http://atenapm.pl/wp-content/uploads/2023/02/112.pdf
13. SFEROLIT® -APM 100 - product sheet, light grey, concrete colour, construction and industry: http://atenapm.pl/wp-content/uploads/2023/02/113.pdf
14. SFEROLIT® - APM 100 - safety data sheet, light grey, concrete colour, construction and industry: http://atenapm.pl/wp-content/uploads/2023/02/114.pdf
15. SFEROLIT® - APM FAÇADE - product sheet, white, construction: http://atenapm.pl/wp-content/uploads/2023/02/117.pdf
16. SFEROLIT® - APM FACADE, declaration of performance, white, construction: http://atenapm.pl/wp-content/uploads/2023/02/118.pdf
17. SFEROLIT® - APM 250/300, declaration of performance, white, industry: http://atenapm.pl/wp-content/uploads/2023/02/115.pdf

18. SFEROLIT® - APM 250/300 - product sheet, white, industry: http://atenapm.pl/wp-content/uploads/2023/02/116.pdf

IN CONSTRUCTION:

- ✓ does not alter the architecture (even complex details)
- ✓ we increase the energy efficiency of buildings
- ✓ 100% removal of thermal bridges
- ✓ protects against radiation / solar reflectance index (SRI) up to 114
- ✓ protects against mould and mildew, protects against moisture
- ✓ Protects against micro-cracks (elastic)
- ✓ increases the volume of the building
- ✓ raises the dew point to zero
- ✓ increases volume by replacing traditional thick insulation
- ✓ raises LEED standards in GREEN BUILDING
- ✓ if we paint a structural wall a few mm on the inside and another few mm on the outside of the same wall, we can replace up to 16cm of mineral wool. This is a very good solution for historic buildings as it does not alter the architecture.

SFEROLIT® IMPLEMENTATION REPORTS, REFERENCES (IN ENGLISH).

19. SFEROLIT® - sheet metal roof test report: http://atenapm.pl/wp-content/uploads/2023/02/777.pdf
20. SFEROLIT® - report from SARIA - German company, animal waste plant, hot fat boiler thermal insulation: http://atenapm.pl/wp-content/uploads/2023/02/333.pdf
21. SFEROLIT® - report from German company, CHP boiler manufacturer SENERTEC, boiler thermal insulation and references: http://atenapm.pl/wp-content/uploads/2023/02/999.pdf
22. SFEROLIT® - a report from the Swedish company (SKF), the world's largest bearing manufacturer, thermal insulation of quenching furnaces: http://atenapm.pl/wp-content/uploads/2023/01/10.pdf
23. SFEROLIT® - government portal: POLISH ATOM - describes our implementation in the nuclear sector: https://www.gov.pl/web/polski-atom/polskie-przedsiebiorstwa-wchodza-w-coraz-bardziej-zaawansowane-obszary-sektora-jadrowego
24. SFEROLIT® - product listed in the Polish nuclear catalogue (page 39): https://www.gov.pl/attachment/6084cde1-f1c2-4577-b663-501b59b9ffe4
25. SFEROLIT® - a report from the Polish company: Gdańsk Combined Heat and Power Plant – GPEC - thermo-modernisation of district heating pipes in a thermal power station: http://atenapm.pl/wp-content/uploads/2023/03/120.pdf
26. SFEROLIT® - a report Polish company - thermal modernisation of a steam boiler in a fish factory: http://atenapm.pl/wp-content/uploads/2023/02/test-results-industrial-sector-FISH-2023-09022023.pdf