Project:
Heat Resistant Thermal Insulating Coating for Ferrous Metallic Surfaces

Industry:
Building & Construction
Industrial thermal insulation
Heat exchangers
Transportation

Product:
SurfaPaint® ThermoDry Metals Heat Resistant

Benefits:
- Conserves energy
- Thermal insulation
- Self priming Direct-to-Metals Paint
- Excellent adhesion/elasticity
- Withstands temperatures up to 450°C
- Prevents corrosion
- Extended lifetime
- Low VOC water-based paint
- Easy application on surface
- Excellent opacity and coverage

Applications:
- Ferrous metal surfaces
- Industrial buildings
- Tubular heat exchangers
- Metal tanks
- Boilers
- Metal pipelines
- Personnel protection

Packaging:
10L plastic pails

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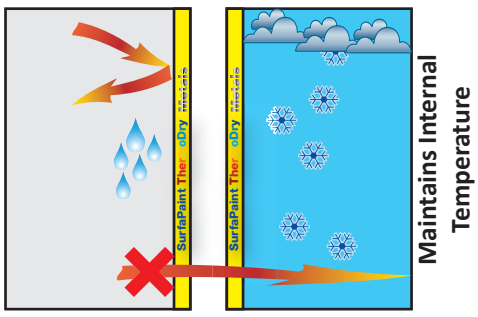
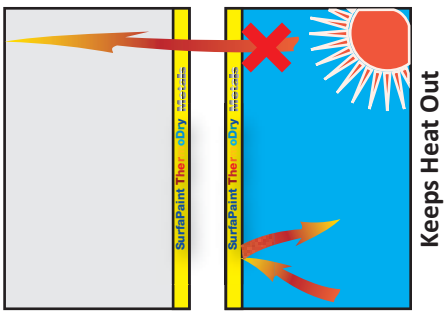
SurfaPaint®ThermoDry Metals Heat Resistant

Industrial Heat Resistant Thermal Insulating Coating for Metals

Since thermal energy “travels” easily through metal surfaces, large amounts of energy are required for cooling or heating metal structures. SurfaPaint ThermoDry Metals Heat Resistant has a thermal conductivity 5 times less (<0,1 W/(mK), EN 12667) than convensional paints.
Since it is a water repelling paint, its decreased water uptake increases its thermal insulating ability. The result is improved energy efficiency and a reduced CO_2 footprint with tangible savings. SurfaPaint ThermoDry Metals Heat Resistant can be applied on ferrous metal surfaces without a primer. It also contains the ideal quantity of SurfaPore ThermoDrythat assures all the benefits of a superior thermally insulating paint. It is recommended wherever maximum resistance to heat, humidity and weather is required like LNG pipelines and vessels, power plants, refineries, warehouses, oil and chemical installations and in Military Installation. It is ideal for protection of heaters, boilers, mufflers, storage tanks, steam lines etc.
SurfaPaint ThermoDry Metals Heat Resistant is available in light grey shade.





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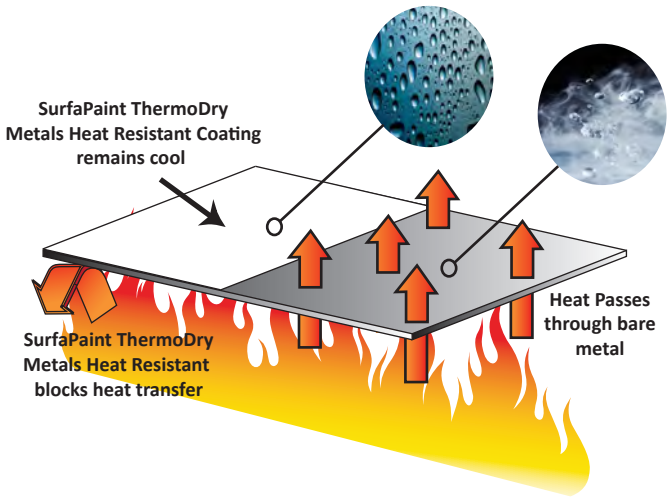
NanoPhos
Pioneering Nanotechnology

SurfaPaint ThermoDry Metals Heat Resistant Description

SurfaPaint ThermoDry Metals Heat Resistant can be directly applied on metal surfaces for thermal insulation and corrosion prevention. Powered by SurfaPore ThermoDry blended with premium silicon resins, it provides substantial temperature differentials in relatively thin films, which can protect the surfaceto temperatures up to 450 ^{O}C. The coating provides an insulating barrier, protects personnel and helps to prevent or reduce condensation formation, all in one product. It is a self-priming paint and is characterizes by its excellent adhesion, opacity and high coverage.



International Standards Testing

Thermal Conductivity: *< 0,1 W/(mK), (EN 12667:2004). The corresponding value for a conventional paint is 0,50 W/(mk).*

Applicability: SurfaPaint ThermoDry Metals Heat Resistant can be used directly on all types of ferrous metals, by airless spray. Brush and roller are suitable only for small touch-up work. **Preparation:** Surface preparation should be carried out according to good painting practices. All dirt, grease, oil, wax or other foreign matter must be removed before applying SurfaPore ThermoDry Metals Heat Resistant . For carbon steel commercial blast cleaning is the preferred method for longest service life. SurfaPaint ThermoDry Metals Heat Resistant may be applied directly to existing paint that is tightly adherent and in good condition. All glossy surfaces should be dulled with sandpaper. **Application note:** Stir well before application. If thinning is required add up to 5% water by volume. Apply 2 to 3 even coats. Ensure corners and edges are adequately covered. Additional coats should be applied 2 hours after the previous application. **Curing tempereture and time:** minimum curing temperature 250 ^{o}C. Minimum curing time 30 min. **Spreading Rate:** 6-8 m^2/L per coat. **Cleaning of tools:** All tools and equipment should be cleaned immediately after use with water and detergent. **Storage:** Store in a cool, dry, well ventilated area away from heat and direct sunlight. Carefully reseal partly used containers. Protect from frost. To avoid risk of spillage, always store and transport in a secure and upright position. The shelf life of the product in airtight containers is 18 months post production date. **Safety:** Keep out of reach of children. Do not use empty container for storing food. Avoid contact with skin and eyes. After contact with skin wash immediately with soap and water. Do not use solvent thinners. In case of contact with eyes, rinse immediately with plenty of water and if necessary seek medical advice. If swallowed seek medical advice immediately and show this container or label. Do not empty into drains or watercourses. Dispose of empty container responsibly and according to local legislation. **VOC (Volatile Organic Compounds):** Maximum EU VOC content limit value (Directive 2004/42/CE) of the product in a ready to use condition (category A/i “one-pack performance coating”, Type WB): 140 g/L (2010). **Maximum VOC content of this product is 10 g/L.**

What is Nanotechnology?

Nanotechnology refers to the scientific field, which deals with very small structures, usually sized below 100 nm. One nanometer (nm) is one billionth of a meter (10^{-9} m) - it is so small that if earth were one meter in diameter, then one nanometer would have been the size of an apple! Nanosized materials reveal unique properties when compared to ordinary, bulk materials or even molecules.

NanoPhos at a Glance...

At NanoPhos, we take advantage of the unique properties of nanotechnology and invent clever materials that solve every day problems. By harnessing nanotechnology, we seek to create a more comfortable, safe and trouble-free living environment. We transfer innovations out of our lab into the hands of consumers. Our vision is clear: “Tune the nanoworld to serve the macroworld” – in simple terms we make nanoparticles solve common problems. NanoPhos was recognized in January of 2008 by Bill Gates as one of the most innovative companies and also received the 1st prize for innovation at the prestigious 100% Detail Show in London. SurfaShield technology, received the prestigious GAIA award at the 2010 International Building and Construction Show BIG5 in Dubai for its environmentally friendly and innovative profile.NanoPhos is a rapidly growing company that is actively expanding its distribution network. Currently, the company is present in the UK, Ireland, Norway, Sweden, Finland, Denmark, Portugal, Italy, Greece, Cyprus, Japan, K. of Saudi Arabia, K. of Bahrain, China, New Zealand, Australia and Mexico.

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NanoPhos SA has been approved by Lloyd’s Register Quality Assurance to follow the EN ISO 9001:2008 Quality Management System and EN ISO 14001:2004 Environmental Management System for the production and sales of chemical products for cleaning and protection of surfaces and nanotechnology products.