



Sustainability Simplified.™
very Simple.

PRODUCT DATA SHEET

Heat Shield™ High Heat Thermal Insulation

USES:

- ✓ Steam Pipes
- ✓ Tanks
- ✓ Heat Exchangers
- ✓ Boilers
- ✓ Industrial Ovens
- ✓ Dyeing Machines
- ✓ Safe Touch Application Valves, Joints and Other Difficult To Insulate Areas
- ✓ Other Heat Process Equipment

BENEFITS:

- ✓ Energy savings
- ✓ Reduces carbon emissions
- ✓ Can be applied while in service
- ✓ Excellent Adhesion
- ✓ Non-toxic, water-based, low VOC
- ✓ Excellent corrosion prevention
- ✓ Outstanding durability and weathering
- ✓ Space Saving
- ✓ Easily applied by brush, roller or paint sprayer.
- ✓ Ideal for equipment that is not easily insulated by rigid or fibrous insulation
- ✓ Can be painted over
- ✓ Direct-to-metal
- ✓ Easy cleanup

Award Winning Energy Saving and Asset Protection Coatings



OVERVIEW:

Thermal insulation, corrosion prevention and moisture resistant coating. Sustainable coating which reduces energy costs and carbon emissions. Indoor and outdoor use. Direct-to-Metal coating for surfaces from -40F (-40C) up to 400F (204C).

Nanotechnology-based insulation and corrosion prevention coating. Long-term performance and durability resulting in lower maintenance costs and longer asset life; reduces asset turnover and waste. Color: Translucent (Clear Coat) over surfaces below 170F/77C and opaque (white) over surfaces above 170F/77C. Smooth, matte finish.

ADVANTAGES:

THERMAL INSULATION: Excellent thermal insulation performance to maximize control of heat loss, contributing to reduced energy costs. Resistant to moisture infiltration, for consistent thermal performance over time.

CORROSION PREVENTION: Superior corrosion prevention of surfaces. Coating forms a tight bond with the substrate and eliminates issues with corrosion under insulation (CUI). Clear finish (below 170F/77C) allows visibility of substrate through the insulation coating.

ENVIRONMENTALLY FRIENDLY: Non-toxic, non-flammable, water-based coating is low VOC and environmentally friendly. Syneffex™ coatings are a sustainable, green technology.

ADHESION: Excellent adhesion qualities to multiple metal and non-metal surfaces.

SURFACE TEMPERATURE REDUCTION: Insulates and reduces surface temperatures, making it an excellent safety coating to use for reducing hot surfaces to safer touch levels.

WEATHERING: Resistant to moisture and UV. The coating can be used in outdoor environments and performs well in extreme environments.

CONTACT/ORDERING:

Phone: 800-858-3176 Order
Online: www.syneffex.com



Sustainability Simplified.™
very Simple.

PRODUCT DATA SHEET

Award Winning Energy Saving and Asset Protection Coatings

PRODUCT DATA:

Theoretical coverage rate for One Gallon (3.79 Liters)	Yields approximately 4 mils/100 microns wet film thickness (1 coat) over 450 square feet (42 square meters) of surface area, depending on surface.
Coverage rate for typical application for One Gallon (3.79 litres)	Yields approximately 40 mils/1000 microns wet film thickness (10 coats) over 45 square feet (4.2 square meters) of surface area, depending on surface.
Typical applied coat thickness	4 wet mils (100 microns) per coat
Typical dry film thickness (DFT) of 1 coat	0.75 mil (19 microns) DFT
Typical touch dry time for 1 coat	30 minutes to 2 hours
Typical hard dry time	72 hours
Typical full cure time	30 days, dependent upon environmental variables
Shelf life	2 years, from date of manufacture
VOC content	180 g/L (calculated)
Viscosity	3000-3500 (cps)
Salt Fog Corrosion Test (GM9540P)	Completed 24 cycles, no rust present The GM9540P Accelerated Corrosion Test is an advanced cyclic method originally developed by General Motors and now the corrosion test preferred by the US. Navy. Passing 8 cycles is considered the standard for an anticorrosion coating.
Cross Hatch Adhesion - ASTM D-3359	0% 5B, edges remain smooth, no flaking
Pull Apart Strength - ASTM D-4541	2400-2450 psi
Flame Spread- ASTM E84	Class A
Thermal performance - ISO 8990:1999	34.8% decrease in thermal conduction, 3-coat thickness
Thermal conductivity (BC/BP/JC issue 1)	No visible signs of cracking, flaking or disbondment. Temperature difference at internal temperature of 120°C= 28°C
CUI Exposure Test (BC/BP/JC issue 1)	No visible signs of cracking, flaking or disbondment. Consistent insulation performance over 100 day test.
Emissivity	0.91
Permeability	5 perms/inch @ 23 deg C.

LIMITATIONS:

- Do not use as a final floor covering.
- Do not install where long-term submersion in liquid or continuous exposure to liquids is a possibility.
- Do not install over poor surfaces, such as those with flaking paint, grease or other contaminants.
- Do not allow application to be subject to rain or condensation for at least 72 hours.
- Do not allow application to be subject to freezing temperatures during first 30 days.
- Do not rely on visual measurement for coating thickness. Always use a wet film thickness (WFT) and/or dry film thickness (DFT) gauge in several areas to ensure proper application thickness. See Application Handbook for further details.

NOTE ABOUT CURE TIME:

The product is dry to touch within a few minutes to a few hours and in most cases can be applied while equipment is in operation. The coating reaches full insulating ability AFTER a cure time of approximately 30 days, which is dependent upon environmental variables, humidity, and number of coats used. Test of thermal performance should be performed after full cure. Thermal benefits will typically begin to be seen approximately two weeks after application, and will continue to improve as the cure time completes. Final cure is complete when thermal performance has reached a steady state. Cure time won't interfere with normal operations, you can continue to use your equipment as usual while the product cures.

All statements, technical information and recommendations contained in this document are based upon tests or experience that Syneffex™ believes are reliable. However, many factors beyond Syneffex's control can affect the use and performance of a Syneffex™ product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluate the Syneffex™ product to determine whether it is fit for a particular purpose and suitable for the user's method of application. No warranty, expressed or implied is given regarding the accuracy of this information. Except where prohibited by law, Syneffex® will not be liable for any loss or damage arising from the Syneffex™ product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability. For questions, contact Syneffex™ at 800-858-3176 or contact@syneffex.com. Products are Made in the USA.