LIFELAST®
*Innovation Through Formulation*

# THERMALAST®

## TECHNICAL DATA SHEET

EFFECTIVE: 9/12/16

## PRODUCT DESCRIPTION

### CHEMICAL DESCRIPTION
Single component, waterborne acrylic polymer with insulating additives.

### USAGE
ThermaLast is a general-purpose liquid insulation, consisting of a complete mixture of insulating additives blended into a high-quality acrylic polymer. ThermaLast is designed to provide both thermal and acoustical insulation for a variety of industrial and commercial applications, providing an effective, inexpensive alternative to the high cost of tradtitional insulation systems. Due to its excellent reflectivity and emissivity, ThermaLast excels at insulating structures and equipment from radiant energy gain. Approximately 99% of the radiant energy that comes in contact with ThermaLast is either reflected or re-emitted, meaning only 1% of the radiant energy is absorbed. ThermaLast also performs very well at protecting personnel from burn hazards on hot or cold structures and equipment. Because it physically adheres to the surface, ThermaLast significantly reduces corrosion and rust formation, unlike customary insulations. ThermaLast is extremely lightweight and pliable, allowing it to expand and contract with the surface to which it is applied. The use of ThermaLast, in place of other insulation, reduces both the space and weight for any given structure or piece of equipment.

### COLORS
Standard colors are white & black. Special colors available upon request.

### QUALIFICATIONS
- Passes ASTM C1055 and C1057 standards for protection from burn injuries
- Energy Star

### TYPICAL APPLICATIONS
- Energy Savings
- Personnel Protection
- Condensation Mitigation
- Acoustical Dampening
- Tank Insulation
- Roof Coating
- Interior and Exterior Wall Insulation
- Pipe and Valve Insulation

## PRODUCT ADVANTAGES

### EXCELLENT RADIANT REFLECTIVITY & EMISSIVITY
Virtually eliminates radiant energy transfer

### LOW THERMAL CONDUCTIVITY
Reduces conductive energy transfer

### MITIGATES CORROSION UNDER INSULATION (CUI)
Does not require monitoring under the CUI program

### EXCELLENT ADHESION
Bonds well to a variety of substrates

### EASY APPLICATION AND INSTALLATION
One part system installs in less time than conventional insulation

### BURN SAFETY CHARACTERISTICS
Excellent for personnel protection

### REDUCES OR ELIMINATES CONDENSATION

### WATER BASED
Very low VOC content

### HIGH TEMPERATURE RESISTANCE
Continuous operation up to 450°F; surges to 500°F

## COATING SYSTEMS

### PRIMERS
- **Steel**: Self-priming or corrosion resistant primer.
- **High Temperature Steel:** For applications greater than 250°F, primer is required. Please call a LifeLast representative for the most current list of approved primers.
- **Non-Ferrous Metals & Galvanized Steel**: Self-priming.
- **Concrete & Wood**: Self-priming.

### TOPCOATS
- **Acrylic Latex Compatible Systems**: Not recommended for personnel protection or radiant energy mitigation applications.

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## TECHNICAL DATA

### SOLIDS
>80% by volume

### RECOMMENDED DRY FILM THICKNESS
15-20 mils (0.38—0.51 mm) per coat; multiple coats required to obtain thicknesses in excess of 20 mils (0.51 mm). Thickness varies with application and there is no maximum thickness. Please consult a technical representative for assistance.

### COVERAGE
Spray Application: ≈60 ft²/gallon @ 15 mils (0.4 mm)

### NET WEIGHT PER GALLON
- As Supplied (wet): 5.6 lbs/gallon (2.54 kg/gallon)
- As Applied (dry): 3.2 lbs/gallon (1.45 kg/gallon)

## PHYSICAL PROPERTIES

| Test | Standard | Result |
|---|---|---|
| Cross Hatch Adhesion | ASTM D3359 | 100% passed no failure |
| Flame Spread | ASTM E84-98 | 25 |
| Smoke Developed | ASTM E84-98 | 45 |
| Accelerated Aging | ASTM G53, no primer | No discoloration at 200 hours |
| Viscosity | Stormer Viscometer | 140-150 KU |
| Thermal Conductivity | ASTM E1461 ASTM E1269 | 0.00097 W/cm•K |
| Solar Reflectance | ASTM E903 | 0.83 |
| Emittance | ASTM E408-71 | 0.94 |

### DRY TIME* (50% R.H.)

| Temperature | Dry To Touch | Recoat Time | To Use |
|---|---|---|---|
| 75°F | 3 hrs | 3 hrs | 24 hrs. |

* Estimated time for 15-20 mils of wet applied ThermaLast. Dry times will vary with temperature, humidity, thickness, and environmental conditions such as air flow.

### SHELF LIFE
12 months at recommended storage temperatures in sealed, unopened containers.

### STORAGE TEMPERATURE
- Minimum: 40°F (5°C).
- Maximum: 90°F (32°C).
- Containers must be kept from freezing.

### SHIPPING INSTRUCTIONS
Not regulated. Protect product from freezing.

## APPLICATION

### HANDLING
ThermaLast is a one part system so it will not set up as long as the container remains sealed and above 40°F (5°C).

### SURFACE PREPARATION
- Surface must be dry and free of all contaminants such as dirt, dust, oil, and/or grease in accordance with SSPC-SP1.
- Non–ferrous surfaces: Please refer to the Application Specification Sheet.
- Ferrous surfaces: Prepare per SSPC-SP2/3, minimum. Follow preparation instructions for primer used in conjunction with ThermaLast. For specific application requirements, refer to the Application Specification Sheet.

### SURFACE TEMPERATURE
- Min. 50°F (10°C).
- Max 300°F (150°C).
- ThermaLast will not dry below 50°F (10°C).
- Prior to applying to substrate temperatures greater than 150°F (68°C), please contact a LifeLast technical representative for assistance.

### AMBIENT CONDITIONS
- Min. 50°F (10°C).
- Cold temperatures and high humidity will slow the dry time of ThermaLast. Warm, dry air will accelerate the dry time and allow for faster recoat times.

### MIXING
- Mix each bucket with a mud paddle style mixer only.
- Using a 1/2" low speed drill, mix the contents until the material is of uniform consistency.
- Do not thin the material.

### SPRAY EQUIPMENT
- Minimum Pump Ratio: 30:1
- Maximum Spray Pressure: 3000 psi
- Minimum Pump Output: 1.25 gpm (4.73 lpm)
- Minimum Spray Hose Size: 3/8" for lengths 0-50 ft<br>1/2" for lengths over 50 ft<br>1/4" whip—3' to 6' max.
- Recommended Spray Tip Size: .017" - small areas<br>.019-.025" - large areas<br>Use reversible tips
- Recommended Spray Gun: Graco XTR, FTx or equal

### APPLICATION METHODS
- Remove all screens and filters on sprayer and spray gun.
- Prime sprayer with clean water, then feed ThermaLast.
- Remove the spray gun or at least the tip to aid in the priming process and allow foreign objects to flow freely out of the spray line.
- To minimize runs on vertical surfaces, apply an initial coat of 10 mils (0.25 mm) and allow to dry.
- Apply thinner coats (<10 mils) in cold weather or in high humidity environments to improve dry times.
- Heating the substrate and ventilating with fans will speed dry times and allow for a quicker recoat.
- Cleanup with clean water.