

8350 Parkline Blvd  
Suite 7  
Orlando, FL 32809  
(800) 612 6798



Nonfood Compounds  
Program Listed R2



[www.qes-usa.com](http://www.qes-usa.com)

## NANSULATE® BEE PROTECT CLEAR

Thermal insulation, mold and moisture resistant coating. Exterior hive use.

### DESCRIPTION:

Clear, nanotechnology-based insulation and mold prevention coating used to insulate beehives. Color: Translucent (ClearCoat) with matte finish.

### APPLICATIONS:

- ✓ Wood Hives
- ✓ Plastic Hives

### BENEFITS:

- ✓ Insulates hives for more temperate environment.
- ✓ Easy cleanup with soap and water.
- ✓ Breathable - does not interfere with normal ventilation.
- ✓ NSF non-food compound registered (R-2)
- ✓ Can be painted over.
- ✓ Can be used over pre-painted surfaces.
- ✓ Resistant to mold and moisture.
- ✓ Provides protection from harmful UV rays.
- ✓ Protects hives from weathering.
- ✓ Easily applied by brush, roller or paint sprayer.
- ✓ Does not contain any potentially harmful anti-microbial additives or biocides.
- ✓ Non-hazardous, water-based.
- ✓ Exhibits outstanding durability with excellent adhesion to concrete, pvc, wood, brick, plastic, and many more substrates.
- ✓ Low VOC.

### ORDERING:

PH: 800-767-3998 or +1 239-254-0346  
[www.nansulate.com/protectbees.htm](http://www.nansulate.com/protectbees.htm)

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### PRODUCT DATA:

Theoretical coverage rate	150 S.F. (13.94 Sq.M.) per 3 coats (recommended coverage)
Typical applied coat thickness	3-5 wet mils (76-127 microns) per coat
Typical thickness of 1 coat	2.5 dry mils (63.5 microns)
Typical thickness of 3 coats	7.5 dry mils (190.5 microns)
Typical touch dry time for 1 coat	1 hour
Typical full dry time for 3-coat coverage	72 hours
Typical full cure time for 3-coat coverage	30 days
Shelf life	2 years
VOC content	100 g/L
Viscosity	3500 to 4000 (cps)

### PRODUCT TEST DATA:

Cross Hatch Adhesion - ASTM D-3359	0% 5B, edges remain smooth, no flaking
Pull Apart Strength - ASTM D-4541	2400-2450 psi
Flame Spread/Smoke Developed - ASTM E84	Class A
Mold Resistance Testing (ASTM D5590 & ASTM G21)	Zero or minimal growth
U/V Exposure	Passed 2000 hours
Accelerated Salt Fog Corrosion Test (GM9540P)	Passed 24 cycles, no rust
Permeability	5 perms/inch @ 23 deg C.
Thermal resistance (UNI EN ISO 8990:1999)	28.98% increase in thermal resistance
Thermal flow (watts) (UNI EN ISO 8990:1999)	34.8% decrease in thermal flow through a substrates, measured in watts
Spectrophotometer testing	Allows through 92% visible light (tested on pane glass)

### NSF REGISTRATION

Registered in Non-food compounds program, R-2 category by NSF International.

Registration No. 141658

Acceptable for use on structural surfaces or surfaces with the possibility of incidental food contact.

### LIMITATIONS:

- Do not use as a final floor covering.
- Do not install where long-term submersion in liquid or continuous exposure to moisture is a possibility.
- Do not install over poor surfaces, such as those with flaking paint, grease or other contaminants.
- Do not allow exterior 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.

### NOTE ABOUT CURE TIME:

The product reaches its full insulating ability after the cure time of approximately 30 days for a 3-coat coverage is completed. Any testing of thermal abilities should be done only after the cure time has completed. Thermal benefits will typically begin to be seen approximately 2 weeks after application, and will continue to improve as the cure time completes.

