

ONAFHANKELIJK

REPORT

Testing of Supertherm

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Haarlem, 10 July 2003

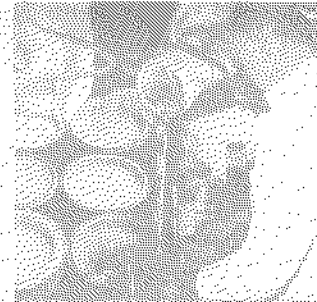
Principal : Pre Coatings
Leidseweg 26
3531 BA UTRECHT

Order number : 310.233

Report number : LB03-0557-REP

Handled by : Ing. M. Walrave

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1. INTRODUCTION

By order of Pre Coatings in Utrecht (The Netherlands) the Centrum voor Onderzoek en Technisch advies BV (COT) in Haarlem (The Netherlands) has performed several tests of the isolating paint product Supertherm.

The order for this investigation has been given by mr. H. Oudshoorn by signing for approval our quotation with reference LB02-781-BRF dated 29 August 2002.

2. RECEIVED INFORMATION

On behalf of this investigation, the following information has been received.

- Material Safety Data Sheet Supertherm
- Document "Supertherm Sound Proofing Barrier"
- Results Hotbox measurements
- Northwest Testing Laboratories Inc.
Results Salt Spray Corrosion tests
- VTEC Laboratories Inc.
Results Fire Endurance Screening Testing (ASTM E119 en UL1709)
- Det Norske Veritas (DNV) EC Type Examination Certificate (Certificate number MED-B-1423)
- Thermophysical Properties Research Laboratory
"Thermophysical Properties of Supertherm Coating"
- Supertherm "Test Listings" (revised 10-09-01)
- Fax Isover concerning results hotbox testing

3. GENERAL DATA

Sample	: Supertherm	Batchnumber	: -
Colour	: White	COT sample number	: 25-03-03/425
Principal	: Pre Coatings BV	COT order number	: 310.233
Manufacturer	: Superior Products Int.	Content	: 2.5 L
Received	: 20 March 2003		



4. PHYSICAL PAINT PROPERTIES

	Result
4.1 Wet film	
Viscosity (ASTM D2196)	: 10.0 Pa.s, spindle 5, 20 rpm, Brookfield, 23°C
Density (ISO 2811)	: 1.47 kg/dm ³
Ease of use	: good
Spreading rate	: 483 g/m ²
4.2 Drying (ISO 1517)	
Dust dry	: 1 h
Tack free	: 2 h
Dry through	: 8 - 16 h
4.3 Dry film	
Dry film thickness (ISO 2808)	: 150 - 175 μm
Hardness, after 7 days 23°C (ISO 1522)	: 17 s (König)
Flexibility (ISO 1520)	: 4 mm
Adhesion (ISO 2409), on zinc phosphated steel panels	: class 0 (2 mm)
Water resistance (ISO 2812-1)	: slightly softening of film
Water vapour permeability (DIN 53122)	: 178 g/m ² . 24 h
Resistance to artificial light (ASTM G53), 1000 hours	: no defects
Resistance to corrosion (ASTM B117), 450 hours	: blisters (4MD)

5. FIRE RESISTANCE / INSULATING PROPERTIES

Results from American investigation (Thermophysical Properties Research Laboratory):

Conductivity Supertherm	: 0.015 W/mK	Wood (dry)	: 0.048 W/mK
R- value	: 10.00 (0.025 cm)	Wood (dry)	: 3.03 (2.5 cm)

Results from Dutch investigation (TNO):

Cavity wall insulation, without use of Supertherm	: 1.62 m ² .K/W
with use of Supertherm	: 2.02 m ² .K/W

6. CHEMICAL COMPOSITION

46% Pigments, consisting of : Zinc phosphate dihydrate (25% $Zn_3(PO_4)_2 \cdot 2 H_2O$)
Titaniumdioxide (36% TiO_2)
Calciumcarbonate (1% $CaCO_3$)
Magnesiumcarbonate (< 1% $MgCO_3$)
and silicates

19% Vehicle, consisting of : Polyvinylacetate copolymer

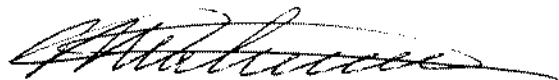
35% Volatile matter, consisting of : primarily water

Pigment-Volume concentration : $\pm 45\%$

CENTRUM VOOR ONDERZOEK
EN TECHNISCH ADVIES (COT)



Dr. B.P. Alblas
Manager Laboratory



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Projectmanager Laboratory