FIRE PROTECTION COATING FOR STRUCTURAL STEEL SECTIONS

TECHNICAL DATA SHEET HENSOTHERM® 370 KS

- Solvent-based 1C system
- Free from borates and silicones
- Approved according to BS 476, Certifire No. CF 700
- Fire resistance rates: R 30 – R 120 for open and hollow profiles
- Suitable for shop application

HENSOTHERM® 370 KS
BENEFITS

Environmental Benefits
- Solvent-based 1C system
- Free from borates and silicones

Technical Performance
- Optimal surface appearance by application with airless spraying achievable; long fire resistance rates with low layer thicknesses; maintenance-free
- Approved also for the use on galvanized profiles
- Top coat in RAL or individual colour shades available
- Suitable for shop application (fast-drying)
- Physical life according to ETAG No. 018-1 up to 25 years, can be prolonged for special projects
- Open profiles up to Hp/A 330 m^{-1} and hollow profiles up to Hp/A 330 m^{-1} (Tcrit. 520 °C)
- Specific gravity: 1,29 kg/l, volume solids: 74 % ± 3 % (measured acc. to ISO 3233)

Additionals
- High efficiency due to low material consumption/low coverage rates and fast drying times
- Monitored by independent third party institutes

Our **HENSOTHERM®** and **HENSOMASTIK®** fire protection coating systems are developed and manufactured exclusively at our company base in Börnsen near Hamburg.

QUALITY MARKS

European Organisation for Technical Assessment

TECHNICAL INFORMATION

Approval / Classification

- Approved according to BS 476
- Certifire Certificate No. CF 700

Application Area

- Focused mainly on R 30 – R 120
- For outdoor and indoor use
- Open steel profiles: R 30 – R 120 for columns, beams and tension members (utilization factor in cold condition ≤ 78%)
- Hollow profiles: R 30 – R 120 for columns
- Assessed also for use on galvanized profiles
- According to ETAG 018-2 durability class X/Y/Z1/Z2
- Structural steel according to EN 10025-1 (class S, not S185) machine-building steel (class E) is not permitted
- Excluded are steel constructions permanently stressed by ponding water due to rainfall, condensation or aggressive gases
- Standing moisture is to be constructively excluded. We don't recommend the application for balcony systems, staircases and arcades.
- Coated steel components shall not be receive coverings or miscellaneous jackets which prevent the intumescent fire protection coating from foaming / expanding! Only those components may be connected force-fit, which comply with the same fire resistance rate.

Instructions for Application

- The coating system consists of the primer HENSOGRUND*, the fire protection coating HENSOTHERM® 370 KS and the top coat HENSOTOP SB*
- The coating system should only be applied by trained staff!
- The coating system shall be protected against weather effects until it is fully dried / completed! By housing for example.
- System should be preferably applied and dried at a temperature above +5 °C and at a relative humidity below 80 %
- Surface temperature should be at least +3 °C above dew point during application, see Corrosion Protection Standard EN ISO 12944-7
- Steel surfaces should not be warmer than +35 °C during application and drying time
- **The ambient conditions during application must be documented in a report according to EN ISO 12944-7 and -8**

Surface Preparation / Primer

Bare Profiles

- Sandblasting Sa 2.5 according to EN ISO 12944-4, then application of primer HENSOGRUND 1966 E* or HENSOGRUND 2K EP* recommended for cast steel
- Manual cleaning possible, PSt 2 according to EN ISO 12944-4, after manual cleaning application of HENSOGRUND 1K AK*

Primed Profiles

- HENSOTHERM® 370 KS is designed to be applied over suitable-prepared and primed substrate
- The compatibility between HENSOTHERM® 370 KS and unknown already applied primers need to be checked; any damage (corrosion, impact e.g.) must be repaired carefully e.g. with HENSOGRUND 1966 E*, HENSOGRUND 1K AK* or other compatible primers

Before the application of HENSOTHERM® 370 KS already primed surfaces must be checked for damages and dry film thickness if they have been exposed to the weather for longer. If necessary, repair work is needed! For further information see Technical Data Sheets for HENSOGRUND primers.

Galvanized Profiles

- Surface has to be cleaned to remove contamination and to ensure adhesion, then priming with HENSOGRUND 2K*
- Galvanized components must be tempered (heated) before coating with HENSOGRUND 2K (Blistering!)

Application

Before application stir up thoroughly with slow speed!
Immediate cleaning of the equipment after use by means of thinner HENSOTHERM® V 45

Airless Spraying

- A material temperature of about +20 °C is recommended for achieving an optimal spraying behaviour and result
- If needed thinning with max. 5 % thinner HENSOTHERM® V 45*
- Recommended operation pressure 200 – 250 bar
- Nozzle size 0.017 " – 0.025 "; flow rate > 4 l/min
- All filters should be removed
- Recommended coverage rate for the 1st layer on a primed surface 500 g/m² (approx. 280 µm dry film thickness)
- Up to 1.000 g/m² (approx. 560 µm dry film thickness) can be applied in one layer
- Typical coverage rate of HENSOTHERM® 370 KS applied in one layer depends on the type of steel profile and the position within construction

Brushing and Rolling

- Brushing with long-bristled brushes, resistant to solvents
- Rolling by lambskin or mohair roller, resistant to solvents

Drying Time

- The drying time depends on temperature and relative humidity
- At a temperature of approx. +20 °C and a relative humidity of approx. 65 % the drying time of each layer (up to 1,000 g/m²) is at least 24 hours till next application
- Each layer must be dried through (fingernail test positive) before the next application
- Lower temperatures, higher relative humidity and insufficient air movement can prolong drying time

Note: Due to thermoplasticity of the product the mechanical resistance is reduced in temperature ranges above +40 °C!
With temperature decrease the original mechanical resistance will be achieved.

* Please consult the respective technical data sheet!

TECHNICAL INFORMATION

Top Coats

HENSOTOP top coats offer the possibility of colored design, protection against moisture and should be applied when the surfaces, during the usage, are exposed to environmental influences, regular cleaning and similar external influences. Do not apply the top coat before the HENSOTHERM® fire protection coating is fully dried! At the earliest after 24 hours and after a positive fingernail test. Usage without top coat is possible, but only in dry indoor conditions without condensation. If steel surfaces are regularly exposed to intense heat/high temperatures, do not use dark colours as a top coating. HENSOTOP top coats are available in RAL colour shades and on request in individual colour shades.

For HENSOTHERM® 370 KS the following top coat* is compatible:
HENSOTOP SB

Storage and Transport

- Storage and Transport free from frost!
  Preferably at a minimum of +5 °C to a maximum of +30 °C
- Shelf life of unopened pails: 12 months
- Opened pails must be sealed carefully after use!

Packaging

25 kg tinplate pails

Precautions for Safety Use

Use HENSOTHERM® 370 KS in accordance with all applicable local and national regulations.
Giscode: BS60

Environment, Health and Safety

As regulations are often revised please request for the actual Material Safety Data Sheet before using the product.

* Please consult the respective technical data sheet!

In case of any questions please contact our technical support team!
For full product documentation and other information to download please visit our website **www.rudolf-hensel.de**

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