

HENSOTHERM® | HENSOMASTIK®
Fire Protection Coating Systems



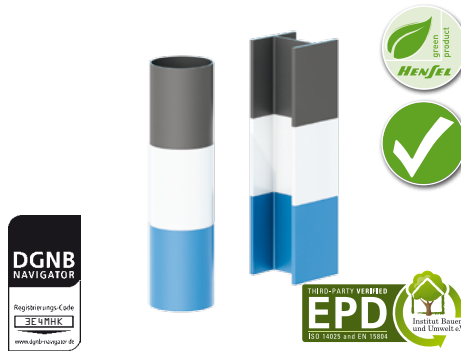
FIRE PROTECTION COATING SYSTEMS

For structural steel profiles



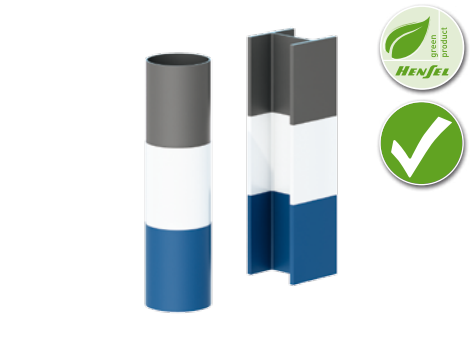
HENSOTHERM® 410 KS R30 – R90

- Intumescent fire protection coating / indoor use
- Approved according to EN 13501-2 Giscode: M-DF01
- ETA-No. 11/0481
- CE-marking according to 93/68/EWG
- Monitored by independent third party institutes
- DGNB Navigator: ZK5AGG
- EPD-RHG-20140057-IAA1-DE
- Water-based coating systems, free from halogens, APEO, borates, fibres and plasticizers, Non-VOC according to ISO 11890-2, LEED
- Product is classified to VOC-emission class A+
- Assessed also for use on galvanized profiles
- High efficiency due to low material consumption/low coverage rates and fast drying times; maintenance-free
- 1c- and 2c-top coats available
- Packaging: 25 kg plastic pails



HENSOTHERM® 421 KS R90 – R120

- Intumescent fire protection coating / indoor use
- Approved according to EN 13501-2 Giscode: M-DF01
- ETA-No. 16/0251
- CE-marking according to 93/68/EWG
- Monitored by independent third party institutes
- DGNB Navigator: 3E4MHK
- EPD-RHG-20140057-IAA1-DE
- Water-based coating systems, free from halogens, APEO, borates, fibres and plasticizers, Non-VOC according to ISO 11890-2, LEED v4 confirmed
- Product is classified to VOC-emission class A+
- Assessed also for use on galvanized profiles
- High efficiency due to low material consumption/low coverage rates and fast drying times; maintenance-free
- 1c- and 2c-top coats available
- Packaging: 25 kg plastic pails



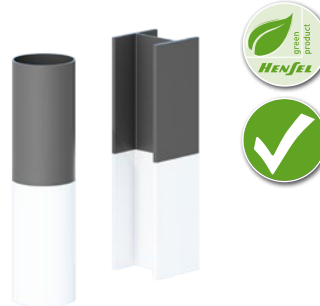
HENSOTHERM® 440 KS R30 – R120

- Intumescent fire protection coating / indoor use
- Classified according to BS 476 Giscode: M-DF01
- Certifire certificate No. CF 701
- Monitored by independent third party institutes
- Water-based coating systems, free from halogens, APEO, borates, fibres and plasticizers, Non-VOC according to ISO 11890-2, LEED confirmed
- Product is classified to VOC-emission class A+
- Assessed also for use on galvanized profiles
- High efficiency due to low material consumption/low coverage rates and fast drying times; maintenance-free
- 1c- and 2c-top coats available
- Packaging: 25 kg plastic pails



HENSOTHERM® 471 KS R15 – R180

- Intumescent fire protection coating / indoor use
- Classified according to BS 476 Giscode: M-DF01
- Certifire certificate No. CF 5344
- Monitored by independent third party institutes
- Water-based coating systems, free from halogens, APEO, borates, fibres and plasticizers, Non-VOC according to ISO 11890-2, LEED confirmed
- Product is classified to VOC-emission class A+
- Suitable also for use on galvanized profiles
- High efficiency due to low material consumption/low coverage rates and fast drying times; maintenance-free
- 1c- and 2c-top coats available
- Packaging: 25 kg plastic pails



HENSOTHERM® 490 KS

- Intumescent fire protection coating / indoor use
- Classified according to UL 263 Giscode: M-DF01
- UL online certification directory file: BXUV.Y627 + BXUV.Y628
- Monitored by independent third party institutes
- Water-based coating system, free from halogens, APEO, borates and plasticizers, Non-VOC according to ISO 11890-2, LEED confirmed
- Fire resistance rates up to 2 hours according to UL 263
- Open steel profiles: 2 h up to $H_p/A: 415\text{m}^{-1}$ – $W/D = 0,33$; hollow sections: 2 h up to $H_p/A: 167\text{m}^{-1}$ – $A/P = 0,236$
- Assessed also for use on galvanized profiles
- High efficiency due to low material consumption/low coverage rates and fast drying times; maintenance-free
- Smooth surface due to low coating thicknesses
- Suitable also for shop application
- Packaging: 25 kg plastic pails



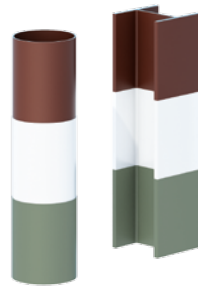
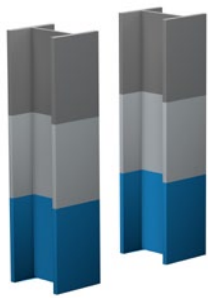
Sustainable and environmentally friendly



NO VOC-emissions



MINIMAL VOC-emissions



HENSOTHERM® 910 KS R30–R60

- Approved according to EN 13501-2 Giscode: RE 1
- ETA No. 16/0834
- Environmental product declaration: applied for
- Application area: for indoor and outdoor use on open and hollow sections
- Assessed also for use on galvanized profiles
- Low-VOC, free of halogens, free of alkylphenol and benzyl alcohol, plasticiser free = no TiBP!
- AgBB-tested, VOC-emission class A+, LEED confirmed
- 100% solvent free 2c epoxy fire protection coating
- 2c-top coat available
- Perfect solution for workshop coatings or on-site application

HENSOTHERM® 310 KS indoor HENSOTHERM® 370 KS indoor

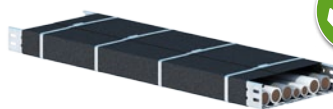
- Indoor use Giscode: BS60
- Approved according to EN 13501-2 / BS 476
- ETA-No. 11/0456, 11/0252, CF 700
- I-sections and hollow sections, R30–R60 / R30–R120
- Assessed also for use on galvanized profiles
- Single pack thin film solvent-based
- Free from borates
- HENSOTHERM® 310 KS is also free from fibres
- Top coat available in RAL or NCS colour shades and special shades on request

HENSOTHERM® 310 KS outdoor / 320 KS outdoor HENSOTHERM® 370 KS outdoor

- Indoor and outdoor use Giscode: BS60
- Approved according to EN 13501-2 / BS 476
- ETA-No. 11/0456, 11/0252, CF 700
- I-sections and hollow sections, R30–R60 / R30–R120
- Assessed also for use on galvanized profiles
- Single pack thin film solvent-based
- Free from borates
- HENSOTHERM® 310 KS is also free from fibres
- Top coat available in RAL or NCS colour shades and special shades on request



For electrical cables



HENSOMASTIK® 5 KS Cables

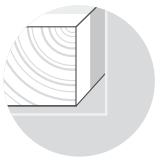
- Ablative fire protection coating system for use on horizontal and vertical oriented electrical cables
- Authorization/certification: Z-19.11-1246 DIBt, Berlin / DNV GL TAE00001K2 / 03-HG 367672-PDA American Bureau of Shipping, IEC 60332-3 cat. A / E-10208 DET NORSKE VERITAS, IEC 60332-3 cat. A / FM Approvals project ID: 3018997
- Monitored by independent third party institutes
- DGNB Navigator: CDDWRA Giscode: M-DF01
- Water-based, impermeable to water according to DIN 1048, free from halogens, APEO, borates and plasticizers, Non-VOC according to ISO 11890-2, LEED confirmed
- Product is classified to VOC-emission class A+
- Resistant to mechanical stress, oil and petrol spills, ageing and after through drying temperature-resistant down to -40°C
- Also flexible in higher dry film thicknesses
- Packaging: 12,5kg and 25kg plastic pails

HENSOTHERM® 7 KS Gewebe 1000

- Intumescent fire retardant fabric coated with HENSOTHERM® 7 KS for covering of horizontal oriented electrical cables, trays and holders
- ETA 16/0369
- Monitored by independent third party institutes
- Giscode: M-DF01
- Water-based, free from halogens, APEO, borates, fibres and plasticizers, Non-VOC according to ISO 11890-2, LEED confirmed
- Product is classified to VOC-emission class A+
- Area of application: covering horizontal oriented electrical cables, trays and holders
- Carrier material: glass filament fabric, non-inflammable – A2
- Flexible for use in tightest windings
- Durability classes: X/Y2/Z1/Z2
- Fire resistance rate: up to 90 minutes

HENSOTHERM® Spachtel -universal-

- Fire resistant intumescent acrylic compound; foams in case of fire; indoor and outdoor use
- Tested according to EN 1366-4
- Monitored by independent third party institutes
- Giscode: M-DF01
- Water based, free from halogens, APEO, borates and plasticizers, non-VOC according to ISO 11890-2, LEED confirmed
- Product is classified to VOC-emission A+
- Area of application: seals gaps or openings for single conduits in solid concrete floors and walls and light-weight partition walls > 80 mm thickness (acc. to LAR) / filling joints in borders, walls and floors between metallic or massiv, mineral building materials in a thickness of/filled joint depth up to 20 mm, max. joint width 40 mm
- Colour: greyish black
- Easy to handle, can be overcoated
- Packaging: 310ml cartridge



For wooden building materials



HENSOTHERM® 1 KS INNEN

- Intumescent transparent fire protection coating for indoor use
- Classifies solid wood and wooden materials as hardly combustible B1
- Classified according to EN 13501-1 B-s1, d0
- Monitored by independent third party institutes
- Giscode: M-KH01
- Synthetic resin, transparent
- Free from halogens, APEO, borates, fibres and plasticizers, free from formaldehyde, Non-VOC according to ISO 11890-2, LEED confirmed
- Product is classified to VOC-emission class A+
- Area of application: solid wood, thickness ≥ 12 mm / particle boards, thickness ≥ 12 mm / plywood for construction, thickness ≥ 12 mm
- Protect against mechanical stress
- Aromatics-free top coat, matt/silk-matt
- Packaging: 6 kg, 12,5 kg, 25 kg plastic pails

HENSOTHERM® 2 KS INNEN weiss

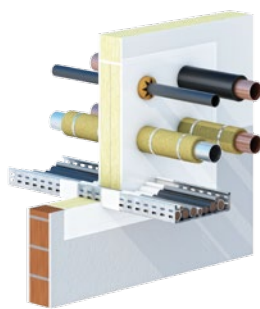
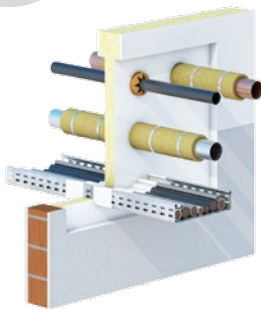
- Intumescent fire protection coating / indoor use
- Classifies solid wood and wooden materials as hardly combustible B1
- Classified according to EN 13501-1 (SBI-test)
- Monitored by independent third party institutes
- Giscode: M-DF01
- Dispersion
- DGNB Navigator: PMX99N
- Free from halogens, APEO, borates, fibres and plasticizers, free from formaldehyde, Non-VOC according to ISO 11890-2, LEED confirmed
- Product is classified to VOC-emission class A+
- Area of application: solid wood, thickness ≥ 12 mm / particle boards, thickness ≥ 12 mm / plywood for construction, thickness ≥ 12 mm
- Protect against mechanical stress
- Top coat, silk-matt; available in RAL or NCS colour shades and on request in individual colour shades
- Packaging: 6 kg, 12,5 kg, 25 kg plastic pails

HENSOTHERM® 2 KS AUSSEN

- Intumescent fire protection coating / outdoor use
- Classifies solid wood and wooden materials as hardly combustible
- Classified according to EN 13501-1 (SBI-test)
- Monitored by independent third party institutes
- Giscode: M-DF01
- Synthetic resin, light grey
- Free from organic solvents and plasticizers
- Area of application: on wood based or solid wood core boards and on wooden composite boards (usage category 3)
- Good adhesion, smooth surface
- Top coat available in RAL or NCS colour shades and on request in individual colour shades
- Packaging: 6 kg, 12,5 kg, 25 kg plastic pails



For penetration sealings



HENSOMASTIK® 5 KS Farbe for Mixed Penetration Seal System EI 60

- Ablative fire protection coating system for bulkheading penetrations of cables and pipes in walls and ceilings classified according to EN 13501-2 EI 60
- For indoor and outdoor use
- Tested in accordance to ETAG 026-2 / EN 1366-3
- ETA-No. 15/0294
- CE-marking according to 93/68/EWG
- Giscode: M-DF01
- Water-based, free from halogens, APEO, borates and plasticizers, Non-VOC according to ISO 11890-2, LEED confirmed
- Product is classified to VOC-emission class A+
- Packaging: 12,5 kg plastic pails

HENSOMASTIK® 5 KS Farbe for Mixed Penetration Seal System EI 90 / EI 120

- Ablative fire protection coating system for bulkheading penetrations of cables and pipes in walls and ceilings classified according to EN 13501-2 EI 90 / EI 120
- For indoor and outdoor use
- Tested in accordance to ETAG 026-2 / EN 1366-3
- ETA-No. 15/0295
- CE-marking according to 93/68/EWG
- Monitored by independent third party institutes
- Giscode: M-DF01
- Water-based, free from halogens, APEO, borates and plasticizers, Non-VOC according to ISO 11890-2, LEED confirmed
- Product is classified to VOC-emission class A+
- Packaging: 12,5 kg plastic pails

HENSOTHERM® 7 KS Gewebe 50

- Approved according to EN 13501-2 Giscode: M-DF01
- ETA No. 16/0369 and ETA No. 15/0295
- For indoor and outdoor use
- Intumescent pipe wrap (carrier material: glass filament fabric A2) for sealing for plastic and composite pipes up to $\varnothing 125$ mm
- In flexible walls, solid walls and solid floors
- Flexible; easy and fast installation; low space requirement due to low installation height
- Free of solvents, halogens and plasticizers



Sustainable and environmentally friendly



NO VOC-emissions



MINIMAL VOC-emissions



For structural elements of concrete



HENSOMASTIK® B 3000 R 30 – R 120

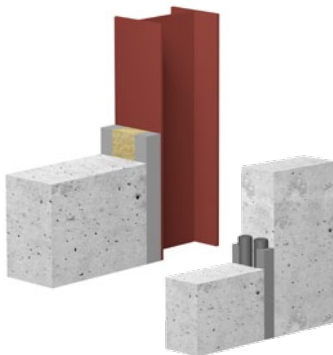
- Ablative fire protection coating
- Approved according to EN 13381-3:2015 Giscode: M-DF01
- Monitored by independent third party institutes
- Water-based, free from halogens, APEO, borates, fibres and plasticizers, Non-VOC according to ISO 11890-2, LEED confirmed
- Product is classified to VOC-emission class A+
- Indoor and outdoor use, in areas with high emission burden e.g. underground car parks
- Fire protection coating system for concrete beams and columns (Exova WF-Report No. 339818), ripped concrete slabs on request
- Impermeable according to DIN 1048
- Resistant to oil and petrol spills
- Weatherproof/UV resistant according to DIN 53 384
- In combination with BETON-CARBONSPERRE protection against penetration of harmful substances
- Colour shade: white, approx. RAL 9010
- Packaging: 25 kg plastic pails

HENSOTHERM® 820 KS R 30 – R 240

- Intumescent fire protection coating
- Approved according to EN 13381-3:2015 Giscode: M-DF01
- Monitored by independent third party institutes
- Water-based, free from halogens, APEO, borates, fibres and plasticizers, minimal VOC < 6 g/l, LEED confirmed
- Product is classified to VOC-emission class A+
- Indoor use only
- Fire protection coating system for concrete hollow core slabs (2012-Efectis-R0556 [Rev1]), concrete flat ceilings (Exova WF-Report No. 339814), concrete beams and columns (Exova WF-Report No. 339816), ripped concrete slabs on request
- In combination with BETON-CARBONSPERRE protection against penetration of harmful substances
- Smooth surface
- High efficiency through low material consumption
- Easy to handle, maintenance-free
- No spalling by subsequently wall breakthroughs or installations
- Colour shade: white, approx. RAL 9010
- Packaging: 25 kg plastic pails



For fire protection joints



HENSOMASTIK® 5 KS Farbe Joints | membrane

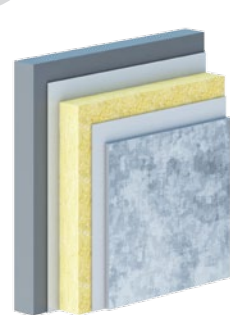
- Ablative fire protection coating/ indoor and outdoor use
- Tested according to EN 1366-4 in conjunction to EN 1363-1
- Monitored by independent third party institutes
- Giscode: M-DF01
- DGNB Navigator: CDDWRA
- EPD-RHG-20140204-IAA1-DE
- Water-based, free from halogens, APEO, borates and plasticizers, Non-VOC according to ISO 11890-2, LEED confirmed
- Product is classified to VOC-emission class A+
- Areas of application: joints in ceilings max. 100 mm wide up to F90, membrane max. 100 mm wide up to EI90 and higher, between concrete and/or masonry or aerated concreted
- Weatherproof/UV-resistant, impermeable to water
- Resistant to oil and petrol spills and ageing
- Viscoplastic at high layer thickness after drying
- Packaging: 12,5 kg plastic pails

HENSOTHERM® Spachtel-universal-Joints

- Fire resistant intumescent acrylic compound; foams in case of fire; indoor and outdoor use
- Tested according to EN 1366-4
- Monitored by independent third party institutes
- Giscode: M-DF01
- Water based, free from halogens, APEO, borates and plasticizers, non-VOC according to ISO 11890-2, LEED confirmed
- Product is classified to VOC-emission A+
- Area of application: filling joints in borders, walls and floors up to 7,5 cm width up to R120 in areated concrete, reinforced concrete, sand-lime bricks and brickwork in accordance to EN 1366-4 on floors from > 125 mm and walls > 100 mm / EI120 up to joint width 40 mm / EI90 up to joint width 75 mm / tested up to 12,5% joint expansion
- Colour: greyish black
- Easy to handle, can be overcoated
- Packaging: 310 ml cartridge



Special adhesive



HENSOMASTIK® K 2000 Flexible special adhesive

- Indoor and outdoor use
- Special adhesive/glue
- Bonding and fixing of building materials with different coefficients of expansion
- Classified as A2-s1, d0 according to EN 13501-1, classification according to UNE 23721: class M1
- Fulfills the requirements of R1 HL3 according to EN 45545-2:2013; Exova Warringtonfire Test Report No. 2014-2265-1
- Free from solvents, VOC < 1 g/l
- Organic, permanent elastic
- Ready for spraying or also available viscous for application by trowel or spatula

FIRE PROTECTION OUR PASSION

Rudolf Hensel GmbH | Lack- und Farbenfabrik

Founded as a paint and coatings factory in Hamburg in 1922, Rudolf Hensel GmbH already recognised the importance of passive fire protection in the 1950s and focused its product development on fire protection coating systems.

Decades of experience, a high quality standard in our products and a service oriented working relationship with our customers have made us one of the world's market-leading manufacturers of fire protection coating systems.

Our development work centres on the environmental compatibility and sustainability of Hensel fire protection coatings designed for use in passive fire protection in construction.

Over the years, our efforts have evolved to produce the **Green Product** line, consisting of fire protection products which only contain non-volatile organic compounds (non-VOCs) and therefore qualify as a building material for environmentally friendly construction.

In addition to LEED and LEED v4, the **Green Product** fire protection range meets the requirements specified in the German Institute for Building Technology (DIBt, 10/2010) 'approval guidelines for health-related evaluation of building products for interiors', together with the LCI (NIK) values established by the German Committee for Health-Related Evaluation of Building Products (AgBB). These products are highly suitable for use in buildings which need to satisfy the criteria in the 'sustainable construction for federal buildings' evaluation system established by the German Federal Ministry for Traffic and Digital Infrastructure (BMVI).

Items in the **Green Product** fire protection range are categorised as **Emission Class A+** in accordance with the French directive for labelling paints, coatings and construction products in relation to the emission of volatile pollutants. Rudolf Hensel GmbH has created environmental product declarations (EPDs) for a number of products in its **Green Product** line and subsequently submitted these EPDs for verification by the Institut Bauen und Umwelt (IBU), a German association for sustainable construction. These EPDs are Type III environmental declarations which meet the quantitative requirements for environmental declarations as per ISO 14025.

MADE IN GERMANY

Over 60 years' expertise in fire protection coatings

Our HENSOTHERM® and HENSOMASTIK® product lines are developed and manufactured exclusively at our headquarters in Börnsen, near Hamburg. These lines offer flame-proof, heat-absorbing coatings for fire protection for steel, wood, concrete, cables, the production of fire barrier walls and ceilings, and fire-resistant joints. Hensel fire protection coating systems hold national technical approvals in accordance with DIN and European standards. They also offer international certification issued by organisations such as BSI, VKF, UL and GOST.



Made in Germany

Developed and manufactured
in Börnsen near Hamburg



Our **Green Product** line
– sustainable and
environmentally friendly



Member of

DGNB

Deutsche Gesellschaft für Nachhaltiges Bauen
German Sustainable Building Council



Member of

Institut Bauen und
Umwelt e.V. (IBU)



HENSEL



FIRE PROTECTION COATING FOR STRUCTURAL STEEL SECTIONS

TECHNICAL DATA SHEET HENSOTHERM® 410 KS

- Sustainable and environmentally friendly
- Free from halogens, APEO, borates, plasticizers, silicones and fibres (glass-fibre free)
- Classified according to DIN EN 13501-2
- Focused mainly on: R30-R40 open steel profiles and R30 hollow profiles
- AgBB-tested, Non-VOC, VOC-emission class A+
- DGNB Navigator Registration: ZKSAIGS



HENSEL



FIRE PROTECTION COATING FOR STRUCTURAL STEEL SECTIONS

TECHNICAL DATA SHEET HENSOTHERM® 310 KS outdoor

- Approved according to EN 13501-2
- Focused mainly on: R30-R40, R30 up to U/A 470 m²
- Solvent-based, free from borates and silicones
- Top coat free from halogens



HENSEL



FIRE PROTECTION COATING FOR STRUCTURAL STEEL SECTIONS

TECHNICAL DATA SHEET HENSOTHERM® 420 KS

- Sustainable and environmentally friendly
- Free from halogens, APEO, borates, plasticizers, silicones and fibres (glass-fibre free)
- Classified according to DIN EN 13501-2
- Focused mainly on: R30-R40 open steel profiles and R30-R120 hollow profiles
- AgBB-tested, Non-VOC, VOC-emission class A+, LEED v4
- DGNB Navigator Registration: 3E4MHK



HENSEL



FIRE PROTECTION COATING FOR STRUCTURAL STEEL SECTIONS

TECHNICAL DATA SHEET HENSOTHERM® 310 KS indoor

- Approved according to EN 13501-2
- Focused mainly on: R30-R40, R30 up to U/A 470 m²
- Solvent-based, free from borates, silicones and fibres
- Top coat free from halogens



HENSEL



FIRE PROTECTION COATING FOR STRUCTURAL STEEL SECTIONS

TECHNICAL DATA SHEET HENSOTHERM® 470 KS

- Water-based 1C system
- Non-VOC, free from halogens, APEO, borates, fibres and plasticizers
- Approved according to BS 476, Certifire No. CF 812
- Fire resistance rates R30-R120
- VOC-emission class A+



HENSEL



FIRE PROTECTION COATING FOR STRUCTURAL STEEL SECTIONS

TECHNICAL DATA SHEET HENSOTHERM® 471 KS

- Water-based 1C system
- Non-VOC, free from halogens, APEO, borates, fibres and plasticizers
- Approved according to BS 476, Certifire No. CF 5364
- Fire resistance rates: R15-R180
- VOC-emission class A+



HENSEL



FIRE PROTECTION COATING FOR STRUCTURAL STEEL SECTIONS/STEEL STRUCTURES

TECHNICAL DATA SHEET HENSOTHERM® 490 KS

- Environmentally friendly
- Non-VOC, free from halogens, APEO, borates and plasticizers
- Classified according to UL 263
- Fire resistance rates up to 4 hours
- Environmental Product Declaration, UL - 478785008, 101.1
- Environmental Product Declaration, IBU - EPD-RHG-20160139-JAA1-EN



HENSEL



FIRE PROTECTION COATING SYSTEM FOR STEEL

TECHNICAL DATA SHEET HENSOTHERM® 910 KS

- 100% solvent free 2C epoxy fire protection coating for indoor and outdoor applications
- AgBB-tested, VOC-emission class A+, free of halogens, free of alkylphenol and benzyl alcohol, plasticiser free
- ETA 16/0834
- Main application: R30-R40 for open and hollow sections up to Hg/A 390 m²
- For workshop coatings



FIRE PROTECTION OUR PASSION

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