



HENSOTHERM® 921 KS

Product information

2-component coating system for strengthening steel profiles/structures indoors and outdoors – 100 % solids volume, solvent-free, **SVHC-free**

- Fire resistance class R 30 – R 120, approved in accordance with DIN EN 13501-2
- Application: Beams / columns / compression members
- Maintenance-free / At least 50 years service life according to ETA
- Corrosion protection up to C5 very high
- ETA 25/0117



HENSOTHERM® 921 KS

Intended use

HENSOTHERM® 921 KS is a solvent-free, intumescent two-component (2C) fire protection coating for the reinforcement of steel profiles and steel structures in interior and exterior areas for fire resistance times of R 30 / 60 / 90 / 120 minutes. Thanks to very good processing properties, short drying and throughput times, low layer thicknesses and optimum pot lives, **HENSOTHERM® 921 KS** is ideal for workshop coatings, as the system is extremely resistant to physical stress during storage, transport and installation. The certified service life in the maintenance-free system **HENSOTHERM® 921 KS** is at least 50 years in dry indoor areas (Z2) in accordance with ETA.

- Indoor and outdoor use (utilisation categories X / Y / Z1 / Z2 according to EAD 350402-00-1106)
- Corrosivity category up to C5 very high in the system (corrosion protection/fire protection)
- No change of material – only one system as a workshop coating for all R 30 / 60 / 90 / 120 application areas
- Low layer thicknesses and fast drying – Short throughput times for workshop coatings
- Optimised pot life and drying times for effortless application
- Extremely resistant to physical stress during storage, transport and installation
- Solids content 100 % by volume according to ISO 3233, solvent-free
- Free from halogens, alkylphenol and benzyl alcohol, PFAS, **SVHC-free**



Approval / classification

Duration of protection	R 30 / 60 / 90 / 120
European Technical Assessment (ETA) No.	25/0117
General Type Approval (aBG) No.	Submitted
VKF Technical Information No.	Submitted
Certifire (approval according to BS 476) No.	Submitted
Environmental Product Declaration (EPD) No.	Submitted
Corrosivity category (verification by IKS Dresden)	Up to C5 very high (see page 5 for details)

Application in Germany:

Permissible steel grades according to DIN EN 10025-1

Structural steel (designation S)	S235, S275, S355
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Application in the EU:

Permissible steel grades according to DIN EN 10025-1

Structural steel (designation S)	Permitted, except S185
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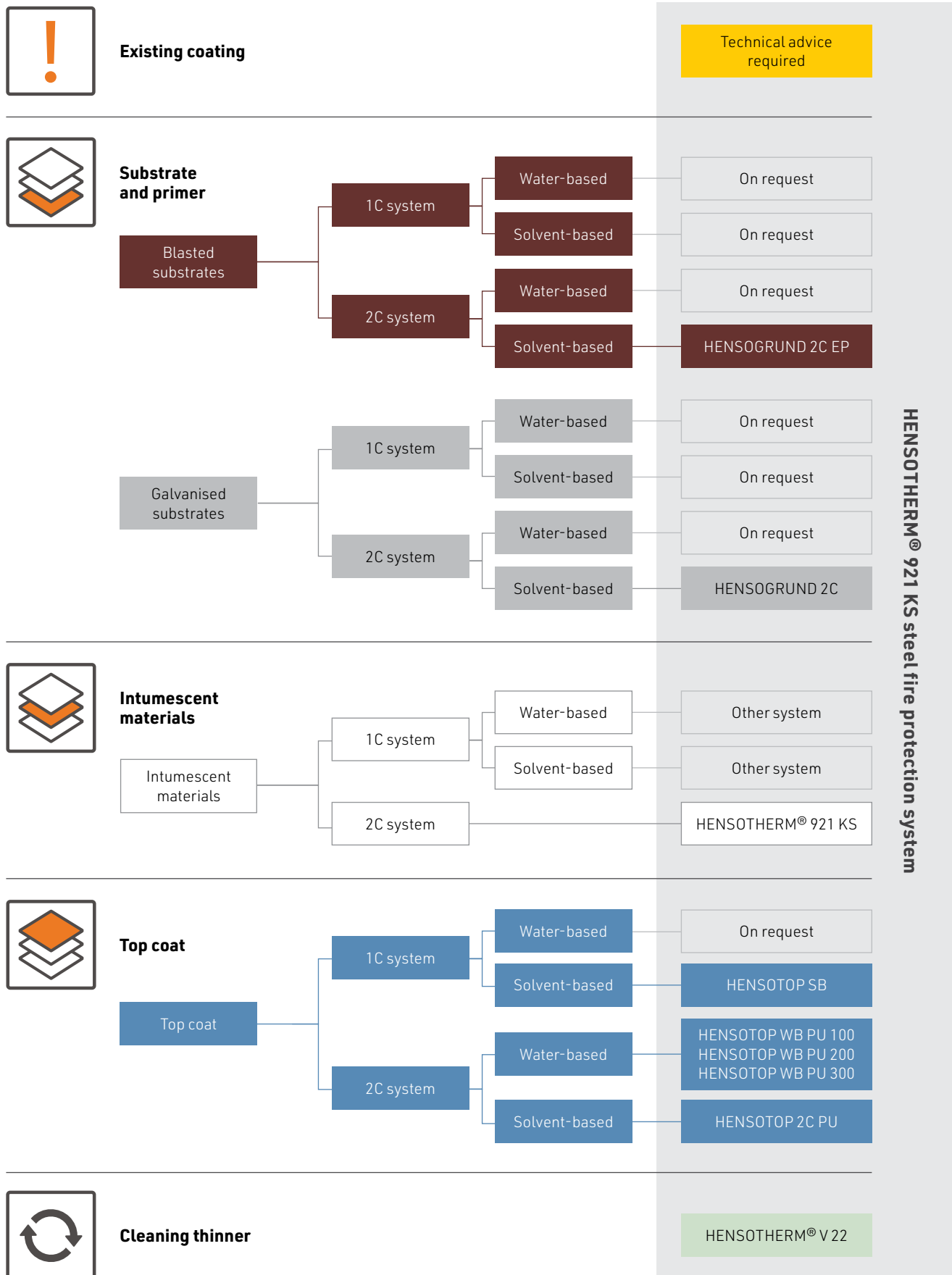
Use category according to EAD 350402-00-1106

	Indoor area	Z2	✓
		Z1	✓
	Protected outdoor area	Y	✓
	Exposed outdoor area	X	✓

Profile cover

Open profiles		✓	Beams (flexural members), Compression members (supports)
		✓	
		✓	
Closed profiles		✓	Compression members (supports)
		✓	
Full profiles		-	On request

Only for use within the system! **HENSOTHERM® 921 KS** is a single product in a coating system. Non-system primers and top coats from third-party suppliers as well as application on old coatings are possible on request. Please contact the technical advisory service!



Coating structure

Coating structure for blasted steel profiles indoors		Indoor area			
		C2 high C3 low C3 middle	C2 very high C3 high C4 middle	C4 very high C4 high C5 high	≤ C5 very high R 60 / R 90
Preparatory work involving blasting, Sa 2 ½		●	●	●	●
Corrosion protection	HENSOGRUND 2C EP (TSD)	○	○	● (80 µm)	● (160 µm)
Intumescent materials	HENSOTHERM® 921 KS	●	●	●	●
Topcoat	HENSOTOP 2C PU (70 µm)	○ ²	○ ²	●	●
	HENSOTOP SB ¹	○	○ (On request)	-	-

TSD = dry film thickness

○ = optional in dry indoor areas (provided there is no environmental pollution)

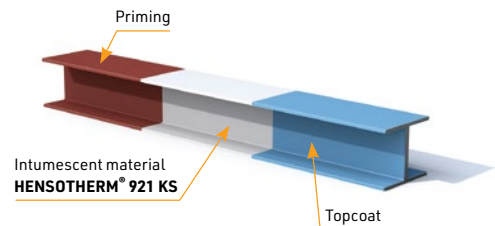
● = must be used!

- = not possible

¹ = Application only in dry indoor areas (Cat. Z1, Z2).

Enquire about possible weathering time.

² = Once completely dry, HENSOTHERM® 921 KS (without primer and topcoat, without environmental stress such as sea climate or aggressive gases) can be weathered on site for up to 6 months, with subsequent indoor use.



Coating structure for blasted steel profiles in outdoor areas		Outdoor area		
		C2 very high C3 high C4 middle	C4 very high C4 high C5 high	≤ C5 very high R 60 / R 90
Preparatory work involving blasting, Sa 2 ½		●	●	●
Corrosion protection	HENSOGRUND 2C EP (TSD)	● (60 µm)	● (80 µm)	● (160 µm)
Intumescent materials	HENSOTHERM® 921 KS	●	●	●
Topcoat	HENSOTOP 2C PU (70 µm)	●	●	●

TSD = dry film thickness

● = must be used

Coating structure for galvanised steel profiles		Indoor area		Outdoor area		
		C2 very high C3 high C4 middle	C4 very high C4 high C5 high	C2 very high C3 high C4 middle	C4 very high C4 high C5 high	≤ C5 very high R 60 / R 90
Preliminary work by sweep blasting		●	●	●	●	●
Adhesion agent	HENSOGRUND 2C (TSD)	● (60 µm)	● (60 µm)	● (60 µm)	● (80 µm)	● (160 µm)
Intumescent materials	HENSOTHERM® 921 KS	●	●	●	●	●
Topcoat	HENSOTOP 2C PU (70 µm)	○ ²	●	●	●	●
	HENSOTOP SB ¹	○	-	-	-	-

TSD = dry film thickness

○ = optional in dry indoor areas (provided there is no environmental stress)

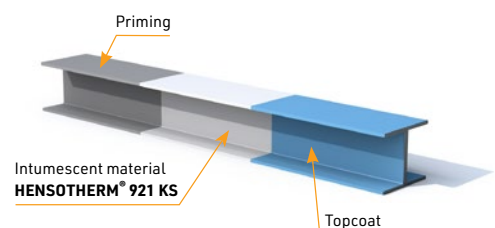
● = must be used!

- = not possible

¹ = Application only in dry indoor areas (Cat. Z1, Z2).

Weathering max. 8 weeks.

² = Once completely dry, HENSOTHERM® 921 KS (without primer and topcoat, without environmental stress such as sea climate or aggressive gases) can be weathered on site for up to 6 months, with subsequent indoor use.



Individual products in this product system

HENSOTHERM® 921 KS fire protection coating

Product	Packaging unit	Article number
 HENSOTHERM® 921 KS for 2C airless machines	20 kg of base + 20 kg of hardener	Base: 1200901224 Hardener: 1210901225
	225 kg of base + 225 kg of hardener	Base: 1200901322 Hardener: 1210901322
 HENSOTHERM® 921 KS for touch-up work with a brush, colour shade approx. RAL 7045 (Telegrey 1), matt	2.5 kg of base + 1 kg of hardener	Base: 1200901204 Hardener: 1210901202

HENSOGRUND 2C EP and HENSOGRUND 2C adhesive primer

Quick-drying, mechanically resistant primers for steel, cast steel, stainless steel and galvanised surfaces. See separate technical data sheet for details.

Product	Packaging unit	Article number
 HENSOGRUND 2C EP Corrosion protection 2C primer for blasted steel, cast steel sections and stainless steel surfaces	11 kg of base + 2.2 kg of hardener	Base: 1420300210 Hardener: 1430300202
	22 kg of base + 4.4 kg of hardener	Base: 1420300225 Hardener: 1430300204
HENSOGRUND 2C 2C adhesive primer for galvanised surfaces and screws	10 kg of base + 0.66 kg of hardener	Base: 1420400210 Hardener: 1430400201

HENSOTOP SB and HENSOTOP 2C PU top coats

Quick-drying, mechanically resistant one- or two-component top coats for interior and exterior use for colour design tinted according to RAL, DB, Sikkens or individual pattern. See separate technical data sheet for details.

Product	Packaging unit	Article number
 HENSOTOP SB 1C acrylic resin-based topcoat for indoor and outdoor use	5 kg	See technical datasheet
	10 kg	
	25 kg	
	10 kg of base + 1.7 kg of hardener	
	20 kg of base + 3.4 kg of hardener	
HENSOTOP 2C PU 2C polyester-based topcoat for interior and exterior use		
HENSOTOP WB PU 100 200 300	On request	On request

HENSOTHERM® V 22 cleaning thinner

Cleaning thinner for pre- and intermediate cleaning during longer work interruptions and for final cleaning of tools after processing of **HENSOTHERM® 921 KS** and for adjusting the viscosity of the solvent-based primers HENSOGRUND 2C and HENSOGRUND 2C EP. See separate technical data sheet for details.

Product	Packaging unit	Article number
 HENSOTHERM® V 22	20 litres	1900022204
	190 litres	1900022323

Fire protection made in Germany – 100 years of expertise and commitment to a safe and sustainable future

Rudolf Hensel GmbH has been certified to ISO 9001:2008 since 1997. ISO 9001 is the globally recognised standard for the certification of quality management systems. Every company which has already introduced a quality management system can apply to be certified in accordance with ISO 9001. At the same time, ISO 9001 forms the basis of all further industry-specific standards and developments. In many sectors, ISO 9001 certification is already taken for granted or expected.



Made in Germany – Used worldwide. Our HENSOTHERM® and HENSOMASTIK® fire-protection coating systems are developed and produced exclusively at our company base in Börnsen near Hamburg. We support science-based policy making that leads to a more competitive, healthier and more sustainable future.

The work of the German Sustainable Building Council (DGNB) focuses on designing living spaces that are sustainable. The association is the central platform for everyone who is interested in and committed to sustainable construction. The aim is for our built environment to be planned, built and used in a sustainable way. To this end, DGNB e.V. is developing a certification system that enables an objective assessment and, consequently, the optimisation of our built environment. We support these objectives and make an active contribution to the sustainable design of our future living spaces through our membership of the association (since 2012).

We have been a founding member and manufacturer of fire protection coatings since the establishment of the Fire Protection Coatings Interest Group (IGSB) in 2012. The members of the IGSB have set themselves the goal of promoting the use and understanding of fire protection with intumescent coatings. The IGSB sees itself as a competence centre for all issues relating to intumescent coatings and actively participates in important topics of standardisation and related public discussions in order to provide IGSB members with up-to-date information. At the same time, it is also available to advise all interested market participants on the subject of fire protection coatings. Through our active participation in the German Fire Protection Association, we maintain and promote the high level of preventive fire protection in Germany in German and European standardisation and legislation committees.

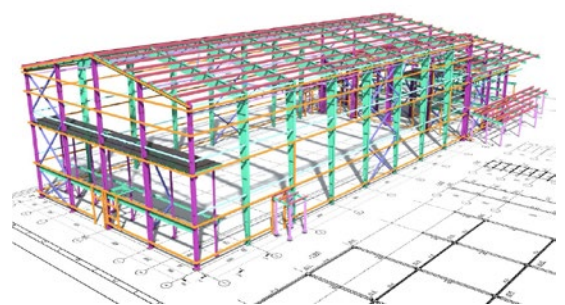


Building Information Modelling (BIM) in steel fire protection



Building Information Modelling (BIM) describes a working method for the networked planning, execution and management of buildings and other structures using software. All relevant building data is digitally modelled, combined and recorded.

In addition to the digitalisation of the construction industry, the aim of this method is to significantly reduce the costs of construction projects by bringing people, processes and tools together in a targeted manner over the entire life cycle of a building. This enhances a construction project's transparency, quality, and certainty regarding costs and deadlines.



We at Hensel are also convinced of this, which is why we are now supporting innovative and forward-looking BIM projects with a free BIM planning service for a suitable steel fire protection system:

1. We analyse your BIM model or an exported steel parts list with GUIDs and advise you on the selection of a suitable fire protection system and, if necessary, on alternative or economically more suitable components with fire protection requirements.
2. We enter our fire protection system directly into your model or your exported steel parts list per component (GUID) on the basis of our standardised ifc parameter set or parameters that have been customised and adapted specifically for your project.

We are keen to learn about your BIM project and look forward to hearing from you.

Processing and planning instructions

Certification



Important! The coating system may only be processed by trained professionals and certified companies.

The specialised companies must provide the client with proof of their qualifications and confirm the conformity of the execution with their European Technical Assessment (ETA) or the provisions of the General Type Approval (aBG) as well as the processing guidelines of the coating system as part of the documentation.

Preparation



Bare profiles must be blasted to preparation degree Sa 2.5 according to DIN EN ISO 12944-4.

If the corrosion protection requirement requires an additional primer coat for the entire system, this must be applied with **HENSOGRUND 2C EP** in advance. The same applies to galvanised surfaces with **HENSOGRUND 2C**.

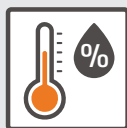
Before coating with **HENSOGRUND 2C**, galvanised components must be completely degassed (blistering!) and bond-disturbing deposits must be completely removed by sweep blasting.

The relevant technical data sheets must be observed.

High-tension joints and connections as well as drill holes and areas of screw connections must be covered in advance with adhesive tape or magnetic plates or screw plugs. Based on experience, we recommend removing adhesive tapes at the latest approx. 1 to 2 hours after application of **HENSOTHERM® 921 KS**.

Detailed information on the application of **HENSOTHERM® 921 KS** can be found in the chapter "Processing".

Ambient conditions during processing



Air temperature (permissible range):	+ 15 °C to + 35 °C
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Substrate temperature (permissible range):	+ 15 °C to + 35 °C
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During application, the substrate temperature must be at least + 3 °C above the dew point of the surrounding air. See corrosion protection basic standard DIN EN ISO 12944-7.

Optimum processing and drying at:	+ 20 °C to + 30 °C
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Max. permissible relative humidity:	80 %
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Material temperature during application (permissible range):	Base:	+ 15 °C to + 35 °C
	Hardener:	+ 15 °C to + 35 °C

We recommend storing the coating materials (base and hardener) in a suitably temperature-controlled area for at least 12 hours before processing. + 20 °C to + 30 °C

Storage



Storage and transport:	Transport and store at temperatures between + 5 °C and + 30 °C. The containers must be protected from frost and direct sunlight! Opened containers must be carefully resealed.
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Minimum shelf life:	The minimum shelf life of unopened containers is 24 months from the date of manufacture at a storage temperature of + 20 °C for the base and hardener. Outside this storage temperature, the minimum shelf life may be reduced.
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Drying times and recoating intervals

The values given are theoretical guide values for planning and calculating throughput times for workshop coatings with **HENSOTHERM® 921 KS** depending on the air temperature and wet film thickness at a relative humidity of 70 %, material temperature at the nozzle of 40 °C and substrate temperature of 20 °C until recoating or transport are possible. Deviating ambient conditions, material and substrate temperatures can lead to considerable deviations. Sufficient air exchange must be ensured during the application and drying phase.

Recoating intervals

	Max. Dry film thickness (TSD) per coat:	2,500 µm (depending on the component geometry)
	Min. recoating interval (wet-on-wet):	6 h
	Max. Recoating period with HENSOTHERM® 921 KS :	7 days
	Max. recoating period with top coat:	7 days
If this is exceeded, the surfaces must be sanded (grain size approx. P 60 to P 80).		

Drying times at permanent hall and component temperatures

	Air temperature:	+ 20 °C	
	Dry film thickness (TSD):	500 µm	1000 µm
	Transportable*:	14 h	18 h

* Localised damage in the areas where the product comes into contact with square timbers or similar objects cannot be ruled out.

Environment

Regulation	Compliance	Ingredients / Compounds	Stated content
VOC Directive 2004/42/EC	Compliant	VOC content of wet paint	<5 g/l
Directive 2011/65/EU (RoHS Directive)	Compliant	Halogens (chlorinated paraffins)	Not present
AgBB standard	Compliant	Tris(2-chloroethyl)phosphate (TCEP)	Not present
LEED credits v4.2	Compliant	Alkylphenol and benzyl alcohol	Not present
		Silicones	Not present
		Lead	Not present
		Cadmium	Not present
		Mercury	Not present
		Bromine	Not present
		SVHC in accordance with the REACH Regulation	Not present

An Environmental Product Declaration (EPD) certified by the Institut Bauen und Umwelt e. V. (IBU) has been applied for for **HENSOTHERM® 921 KS**.

An EPD provides transparent, quantified and comparable information on the environmental impact of a building product over its entire life cycle. For building owners and purchasing decision-makers, the comparative check of EPDs offers the opportunity to select the most environmentally friendly product by providing transparent information on CO₂ emissions and other environmental impacts of a building product.



EPDs are an indispensable tool for anyone who wants to build in an environmentally friendly and future-proof way. They offer architects and builders the opportunity to make informed decisions, fulfil sustainable standards and at the same time contribute to reducing the environmental impact of construction projects.

Building products with EPDs promote the circular economy, resource conservation and waste management. In many countries, environmental requirements for construction projects are increasingly prescribed by law. EPDs offer legal certainty through a standardised database and prepare projects for possible future legal requirements. Building owners can more easily achieve sustainable building certifications such as DGNB or LEED, which increase the long-term value and attractiveness of projects.

Our technical consultants and DGNB Registered Professionals will be happy to help you find the optimum fire protection solution for your building project or project-related requirements.

Legal matters



All accompanying regulations, such as DIN 4102, aBG, DIN EN ISO 12944-4 and others, must be taken into account during planning and execution.

For warranty purposes, a daily coating log (form available from Rudolf Hensel GmbH) must be kept in which the external conditions during application and drying are documented.

Accessibility for possible inspections must be guaranteed.

Each time the reactive fire protection coating is applied, the installer must inform the client in writing that the fire protection effect can only be guaranteed in the long term if the reactive fire protection coating is always kept in proper condition. The installer must also specify which coating materials may be used for repairing and renewing the reactive fire protection coating (see identification plate).

Project consulting

Plan with confidence. Build with confidence.
Compliance made simple.

HENSEL NEXT GENERATION

Fire protection solutions for your individual requirements – we provide fast, uncomplicated and competent advice!

We would be happy to review your project documents for construction projects with fire protection requirements for structural elements made of steel, concrete or timber free of charge and without obligation, including online in web meetings.

We analyse your building project together and advise you on the selection of a suitable fire protection system and, if necessary, on alternative components that are more economically suitable.

Based on the planning documents, we as the material manufacturer can calculate the appropriate coating system, the corresponding application quantities and layer thicknesses as well as the resulting material requirements. Of course, we will also be happy to provide you with details of specially qualified and certified companies in your region.

- ✓ Short-term appointment scheduling
- ✓ Compact meetings, all documents at hand
- ✓ Questions and answers immediately
- ✓ Joint inspection of sample surfaces and references
- ✓ Weblink without downloading and installing software
- ✓ Free and without obligation

**Scan and find
Technical Sales**



If you are interested, please contact our Technical Sales department in your region.

Occupational Safety

When using **HENSOTHERM® 921 KS**, the relevant local and national health and safety regulations must be observed. Wear protective clothing and avoid contact with eyes and skin.

The legal requirements are subject to frequent changes. The labelling and environmental protection details must therefore be taken from the current safety data sheet (SDB). This can be downloaded from the product website:

www.rudolf-hensel.de/921KS



Giscode: RE90

Processing

Guide values and recommendations for optimum processing with 2C airless machines



Ratio:	≥ 70:1			
Volume flow:	≥ 140 cm³ per double stroke			
Suitable makes:	WIWA FLEXIMIX 2 PHOENIX GX WIWA FLEXIMIX 2 PROFESSIONAL GX WIWA FLEXIMIX 2 HERKULES GX WIWA DUOMIX 333 GX WIWA DUOMIX 333 GX PFP Suitable with restrictions or modifications only (details available on request): Graco XP50 (modified) Graco XP70 (modified) Graco XM70 (modified) Graco E-Mix XT (modified) Other makes on request.			
Container agitator:	The components (base and hardener) must be homogenised with electric or pneumatic container/drum agitators before feeding.			
Barrel pump:	WIWA VULKAN GX Graco 10:1 Ratio President® Pump			
Material of the tank:	Stainless steel or plastic			
Filter:	None! All filters must be removed!			
Field of application:		Minimum	Target (optimum processing)	Maximum
Mixing ratio (volume):		2.31 : 1	2.43 : 1	2.53 : 1
Temperature in the tank:	Base:	15 °C	25 °C	60 °C
	Hardener:	15 °C	25 °C	30 °C
Temperature at the instantaneous water heater:	Base:	35 °C	50 °C	60 °C
	Hardener:	30 °C	30 °C	30 °C
At the nozzle:		35 °C	40 °C	45 °C
	The material temperature influences the viscosity of the components and therefore the mixing ratio. The temperatures of the components, at the flow heater and at the nozzle, the correct mixing ratio, the pressure of the material pumps and the colour of the mixture during application must be checked regularly!			
	Only hoses and lines that carry the components (base and hardener) may be heated if required. Hoses that carry mixed HENSOTHERM® 921 KS must not be heated, but can be insulated if necessary.			

Spray guns



Nozzle type:	High-pressure nozzles (XHD)
Nozzle opening:	0.021 - 0.025 inch
Spray angle:	$\geq 30^\circ$
Filter:	None! All filters in the spray gun must be removed!
Suitable makes:	WIWA 500 F Graco XTR-7
Hose length:	10 to 30 metres (depending on performance)
Hose diameter:	≥ 10 mm ($\geq 3/8$ inch)
Whip length:	1 to 3 metres
Whip diameter:	≥ 6 mm ($\geq 1/4$ inch)



WIWA 500 F



Graco XTR-7

Compressor / compressed air connection



Pressure:	≥ 7 bar
Volume flow:	≥ 4 m ³ /min with storage tank (intermediate storage tank)
Connection:	25 mm (1 inch), claw coupling type SKG 25

Rinsing processes, intermediate and final cleaning



Cleaning thinner:	HENSOTHERM® V 22	
Cleaning:	Pre-cleaning and intermediate cleaning during longer work interruptions and final cleaning. After completing the rinsing process, completely drain the cleaning thinner from the airless device and the hoses!	
Longer interruption:	The airless device and hoses can be left filled with the cleaning thinner. This must be completely drained from the device and the hoses before recommissioning.	
Material requirement per wash cycle:	2C airless machines:	Approx. 5 – 10 litres
Cleaning balls:	Cleaning balls or sponge balls can be used to clean the hose assemblies.	

Storage and transport

	When:	Coated steel profiles/components may only be transported after the coating has completely dried! See table on page 11 for drying time.
	How:	 Sloped storage! If the steel profiles are exposed to the weather during transport or the construction phase, standing water (tub effect) must be ruled out! When transporting coated components, straps and belts must only be used in conjunction with suitable support structures and edge protection!
	How long:	Without a primer and topcoat, HENSOTHERM® 921 KS may be stored outdoors on the construction site for a maximum of 6 months (provided it is subsequently used indoors and is not exposed to any particular environmental stress such as sea air/climate or aggressive gases).



Labelling and documentation

The steel structures coated with **HENSOTHERM® 921 KS** must be labelled with identification plates (available from Rudolf Hensel GmbH, see page 8).

The following documents must be submitted by the installer after completion: Copy of the training certificate, approval or ETA of the system used, technical data sheets, completed and signed measurement reports, declaration of conformity.

The installer must inform the client in writing that the fire protection effect is only guaranteed in the long term if the reactive fire protection coating is always kept in proper condition. In particular, the boundary conditions for connecting components must be observed. The coated components must be accessible for inspections (visual inspections); inspection flaps must be provided if necessary. It is recommended to offer the building owner a corresponding inspection contract.

HENSOTHERM®
Übereinstimmungserklärung

Ausführendes Unternehmen / Ausrichter:

Bauvorhaben: _____

Die Arbeiten wurden ausgeführt im Zeitraum: _____

Brandschutz-Beschichtung

HENSOTHERM® 610 KS ETA 20072291 abb 2-19-51-2279 ☐	HENSOTHERM® #20 KS ETA 2156/1751 abb 2-19-51-2621 ☐
HENSOTHERM® 621 KS ETA 20072291 abb 2-19-51-2313 ☐	HENSOTHERM® #21 KS ETA 2007171 ☐
HENSOTHERM® 621 KS / Stahlstützpfeiler abb 2-19-51-2549 ☐	HENSOTHERM® #10 KS rapid ETA 20072291 abb 2-19-51-2542 ☐

Feuerwiderstand: R 30 ☐ R 60 ☐ R 90 ☐ R 120 ☐

Hiermit bestätigen wir, dass die oben beschriebene Brandschutz-Beschichtungsmaßnahme gemäß der entsprechenden Europäischen Technischen Spezifikation (ETB) nach EN 15021-2 bzw. gemäß der allgemeinen Bauartgenehmigung (aBG) vom DBB fachgerecht unter Berücksichtigung der Bauvorschriften ausgeführt wurde.
Um die äußeren Bedingungen während der Applikation zu dokumentieren, wurde durch uns ein Protokoll entsprechend der DIN EN ISO 17094-1 und -2 geführt. Name/Name

Die Brandschutz-Beschichtung wird mit Kennzeichnungsschildern ausgewiesen.

Ort/Datum: _____ Unterschrift: _____

Fire protection solutions for industry



Our core expertise – your development advantage

We offer the development, testing and production of intumescent and ablative building materials, components and coatings as a service – also as a partner for research projects.

Intumescent materials, also known as “intumescent agents”, expand when exposed to heat and increase greatly in volume, forming a protective insulating layer that delays the passage of heat and can also seal cavities. Strong expansion does not equate to better fire protection performance! The temperature at which intumescence is triggered and the reaction time until the maximum height of the intumescent layer is reached, as well as the stability and expansion pressure of the intumescent layer formation, can be optimally adapted to the respective application. For example, for intumescent strips made of HENSOTHERM® 7 KS fabric with self-adhesive lamination, which are used for the fire protection upgrading of doors, windows, cupboards, etc. Ablative substances delay the transfer of heat to the materials to be protected by releasing chemically bound water. In addition to this “cooling effect”, the fire gases are diluted, i.e. the toxicity of the gases is reduced. Escape and rescue routes remain passable for longer and there is less smoke-related visual obstruction. Our ablative, waterproof, oil and petrol-resistant fire protection coating HENSOMASTIK® 5 KS paint not only has an EPD, it is also weather-proof, UV-resistant, ageing-resistant and mechanically resilient.

These properties can also add value to your product.

Turn our expertise into your competitive advantage!

Advantages of a competent development partner

- Many years of experience in the development of new fire protection products
- Qualified team of development engineers
- Close cooperation and fast response times
- Environmentally friendly and sustainable products have long been a focus at Hensel and have been in the portfolio for years
- International co-operations – all industry standards
- Broad international network of industry experts and decision-makers
- Complete systems or individual requirements for the safety product, components, corrosion protection or top coats, etc.
- Short distances – fire resistance testing carried out in three in-house certified fire test chambers and extensive testing facilities in our own testing laboratory
- Expertise in applying for and obtaining certificates of usability under building law
- Support from recognised industry experts
- High-quality products – production facility in Germany with high-quality production machines, excellently trained employees and multi-stage quality control
- Seamless documentation of manufacturing processes – certified to ISO 9001 since 1997
- Continuous market-orientated further development for a wide range of applications
- Practical and cost-efficient solutions

**Fire protection solutions for your individual requirements.
Get in touch with us, we will be happy to advise you!**

**Phone: +49 40 72 10 62-11 or
E-mail: kontakt@rudolf-hensel.de**



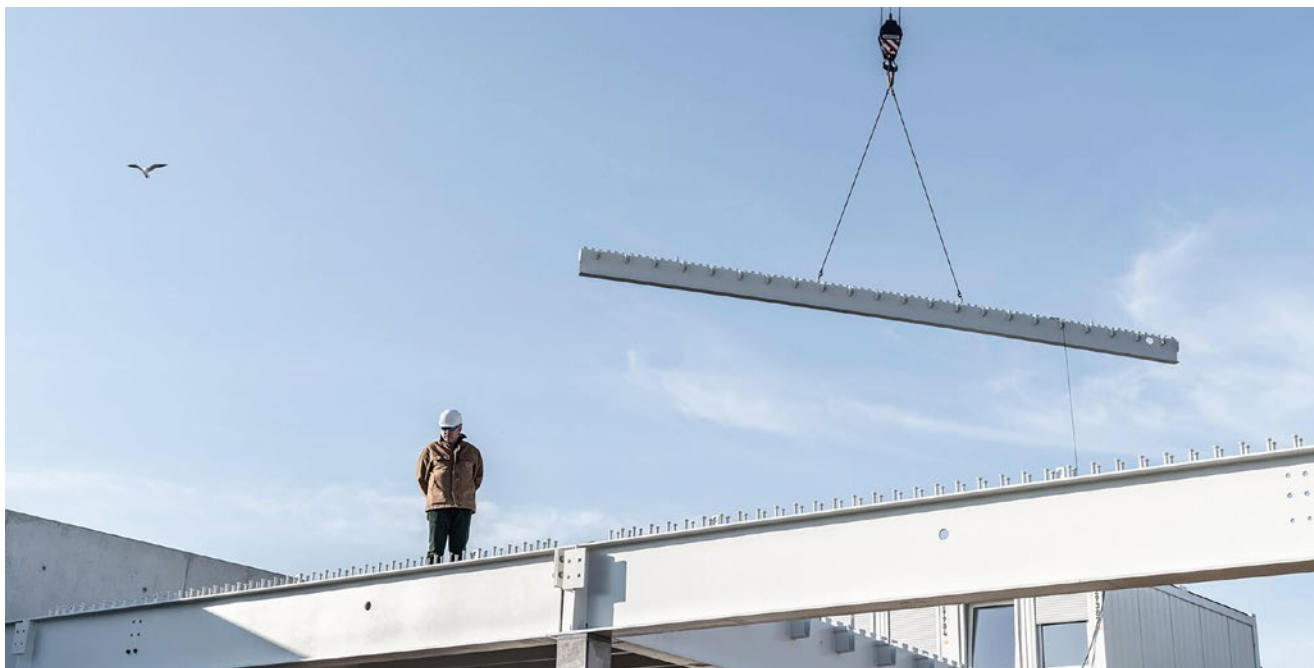
INNOVATIVE THROUGH RESEARCH

Since 2014, the Stifterverband has recognised research-based companies for the special responsibility they assume for the state and society with the “Innovative through research” seal.



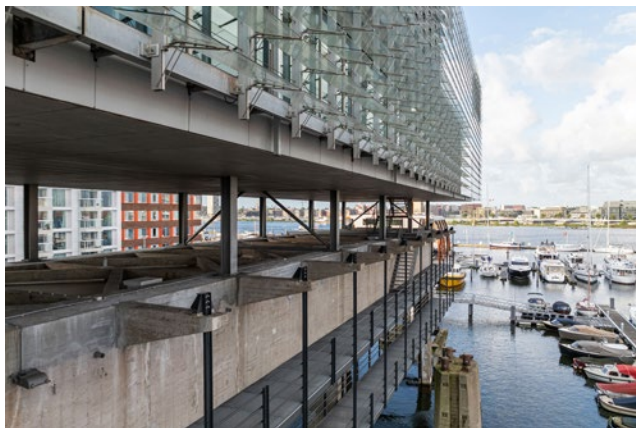
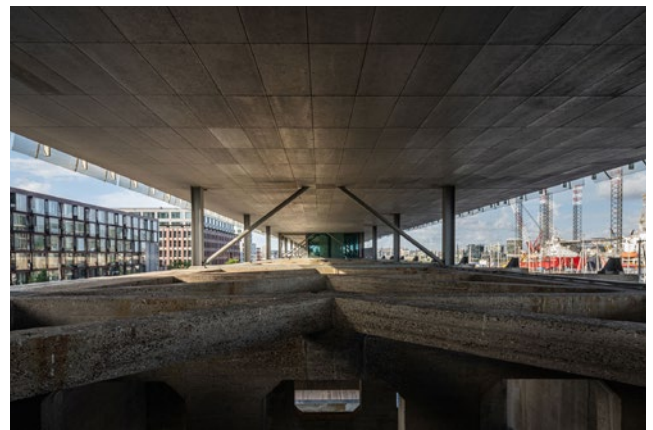
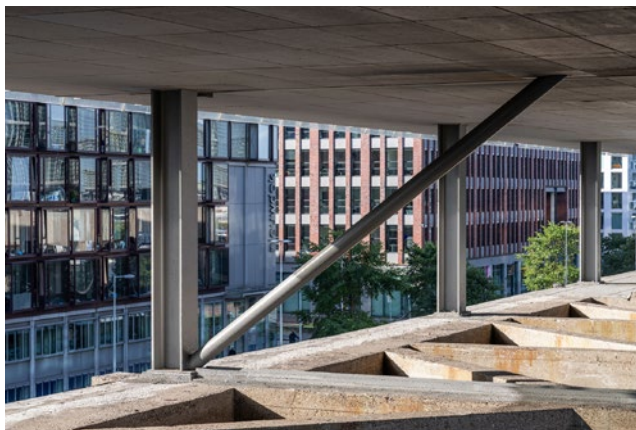
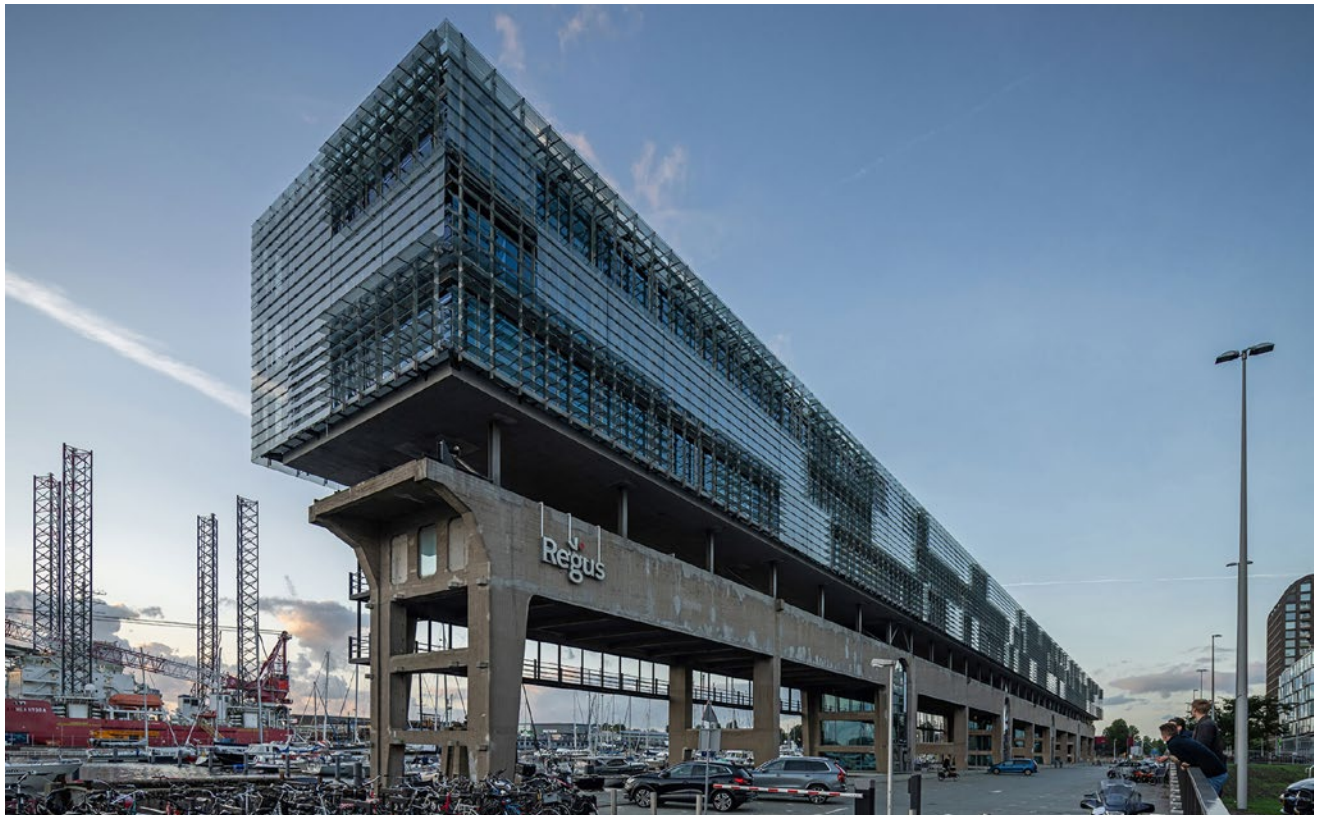
Notes

Extract from our 2C references	Surface area	Resistance to fire	Year
Zoo, Neuwied DE	1,400 m ²	R 30	2016
Tegel Airport, Berlin DE	1,540 m ²	R 30	2017
Triple gymnasium, Passau DE	2,970 m ²	R 30	2017
School construction, Laufen CH	3,850 m ²	R 30	2018
Lidl DK	8,500 m ²	R 15	2018
City Centre, Stockholm SE	15,000 m ²	R 60	2018
Leisure pool, Würzburg DE	2,400 m ²	R 30	2018
Multi-storey car park, Husum DE	5,800 m ²	R 30	2019
Siemens, Marburg DE	3,500 m ²	R 30	2020
LVR-Museum MiQua, Cologne DE	15,000 m ²	R 30	2020-2025
Hospital, Stavanger NO	2,500 m ²	R 30	2022
Data centre Delfzijl NL	18,000 m ²	R 60	2024
Bora Herford DE	3,500 m ²	R 30	2024
Loick Green Tec, Dorsten	6,000 m ²	R 30	2023
BHZ multi-storey car park, Erfurt DE	3,700 m ²	R 30	2024
Multi-storey car park BHZ, Erfurt DE	3,700 m ²	R 30	2024
Novo Nordisk, Copenhagen DK	72,000 m ²	R 120	2024
Zeiss, Jena DE	4,900 m ²	R 30	2025
Smart Mobility Hub, Stuttgart DE	2,000 m ²	R 30/90	2025
Data centre NL	10,000 m ²	R 90	2025
Mack Pyramid, Mohnheim DE	9,500 m ²	R 30	2025
Budde Fördertechnik, Bielefeld DE	3,000 m ²	R 30	2026
ODIN marine equipment, Schifffdorf DE	1,950 m ²	R 30	2026
Expo 2027, Belgrade RS	40,000 m ²	R 30	2026



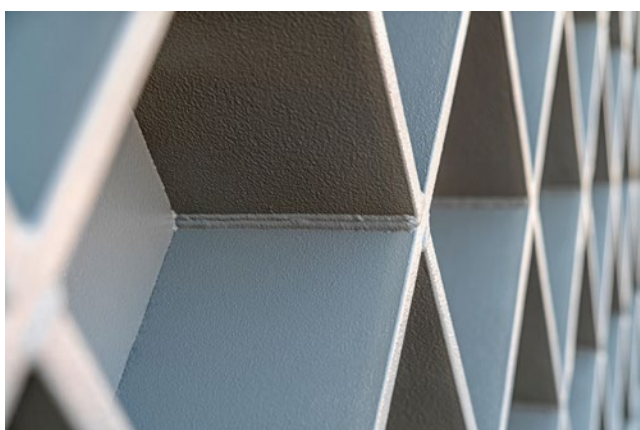
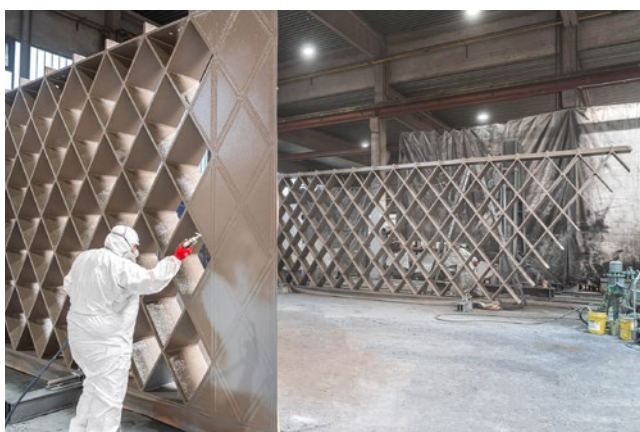
Kraanspoor | Amsterdam (NL)

The Kraanspoor office building in Amsterdam underwent a complete refurbishment of its fire protection system. The steel structure was protected on site with the 2C fire protection system **HENSOTHERM® 920 KS** including primer and top coat. This has allowed the building to achieve the required fire resistance time R 90 and corrosivity category C5.



Jewish Museum "MiQua" | Cologne

The HENSOTHERM® 910 KS two-component fire protection system protects the approximately 13,000 m² of steel structures at MiQua using HENSOGROUND 2C EP, the 2C intumescent agent HENSOTHERM® 910 KS and the topcoat HENSOTOP 2C PU for the coloured finish of the diamond-shaped trusses. This achieves R30 and corrosivity category C5.



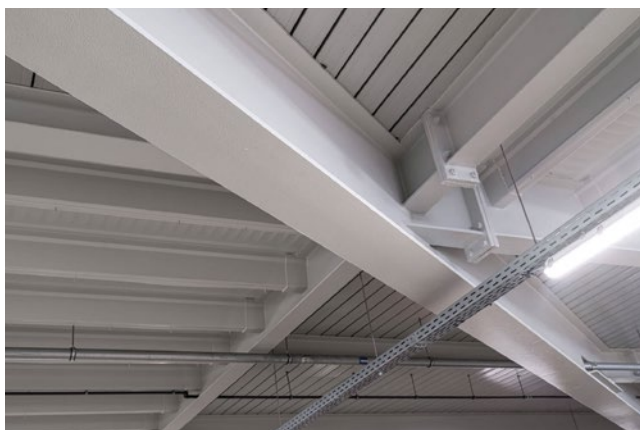
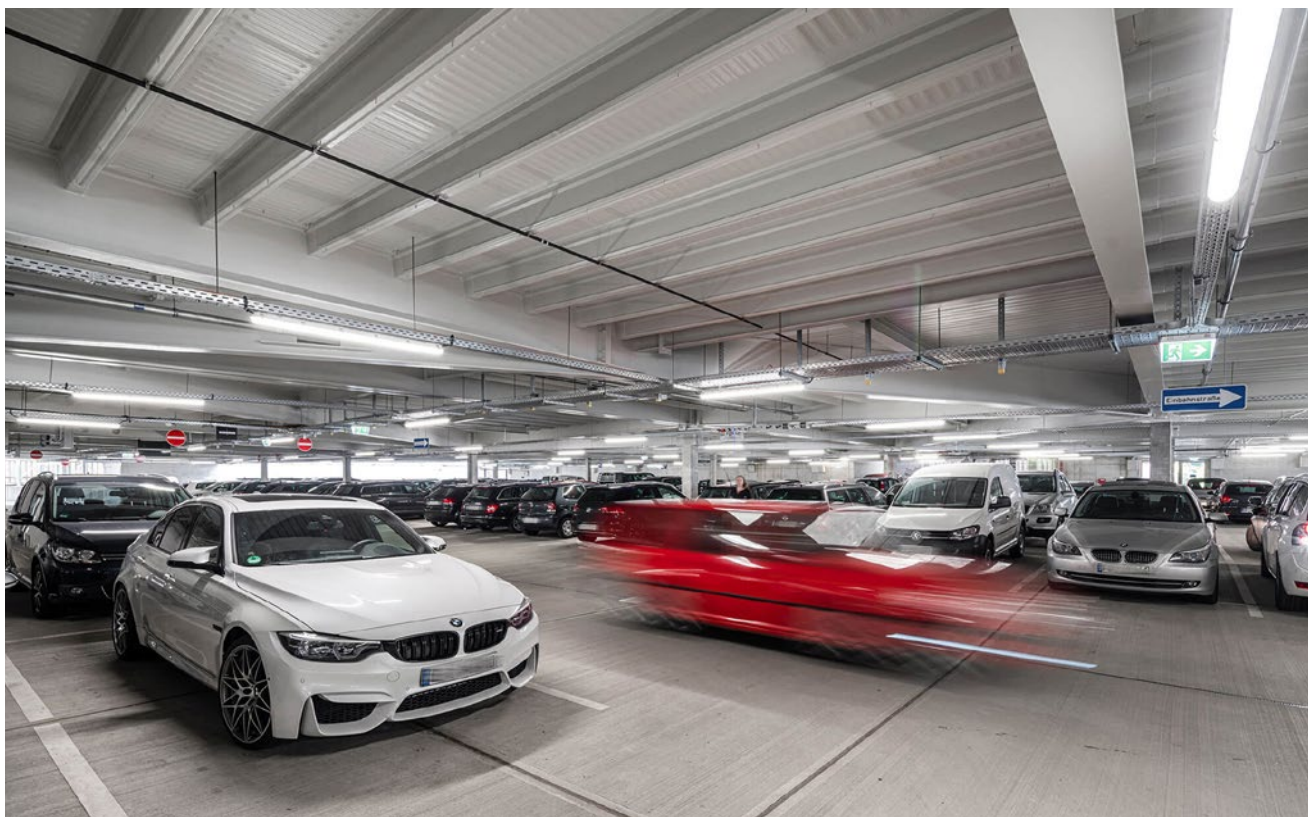
Adventure pool "Nautiland" | Würzburg

The new NAUTILAND in Würzburg offers a modern water landscape with seven pools, three of which are outdoors, as well as a sauna area and an 85-metre slide with special effects. The steel structures were protected with the solvent-free 2C fire protection system HENSOTHERM® 910 KS up to R60, including corrosion protection up to C5.



"THEO" shopping centre | Husum

The steel structures in the car park of the THEO shopping centre in Husum were protected with the robust, solvent-free 2C fire protection system HENSOTHERM® 910 KS. The workshop coating achieved corrosivity category C5 M and guaranteed permanent fire protection for the 650 or so parking bays.



The HENSEL logo is displayed in a bold, black, sans-serif font, with the 'H' and 'S' being significantly larger and more prominent than the other letters. The logo is set against a background of vertical orange and yellow stripes.

FIRE PROTECTION SYSTEMS



LEED v4



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