

DATA SHEET 2484

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HENSOTHERM 920 KS

Solvent-free 2-component intumescent paint

PAINT TYPE	HENSOTHERM 920 KS is a 100% solid solvent-free intumescent coating suitable for indoor and outdoor use, which reacts under the influence of heat by swelling to many times of its original thickness and producing a layer of carbonaceous foam that acts as an insulating layer to delay the steel from reaching its critical temperature.
USAGE	Recommended fire resistance rates for open and closed steel profiles are R30-R120. Depending on the environment corrosivity category HENSOTHERM 920 KS can be used either direct-to-metal or with an approved suitable anticorrosion primer.
SPECIAL PROPERTIES	HENSOTHERM 920 KS is tested and approved according to EN 13381-8 and EN 13501-2. ETA No 21/0475, with CE markings applied according to 93/68/EEC. Allowed usage categories are X/Y/Z1/Z2 (all indoor and outdoor areas) according to EAD 350402-00-1106. Additionally approved in accordance with BS476, certificate No. CF5994. AgBB tested, non-VOC, emissions class A+, suitable for indoor use, free of halogens, alkylphenol (APEO) and benzyl alcohol.

TECHNICAL DATA

Mixing ratio	Base (Comp. A):			2.4 parts by volume or 100 parts by weight 1 part by volume or 40 parts by weight
	Hardener (Comp B): HENSOTHERM 920 KS HARDENER			
Pot life, +23 °C / +30 °C / +40 °C	60 min / 45 min / 30 min			
Solids	100 % by volume			
Recommended film thickness and theoretical spreading rate	Dry film µm	Wet film µm	Theoretical spreading rate m²/l	
	1000	1000	1.0	
	2500	2500	0.4	
Volatile organic compound (VOC)	0 g/l			
Density	1,3 kg/l			
Drying time, +23°C / 50 % RH (dry film 1000 µm)				
- dust free (ISO 9117-3:2010)	after 6 h			
- dry to handle	after 24 h			

Overcoatable 50 % RH (dry film 1000 µm)

Tempera- ture	by itself		by approved top coats	
	min.*	max.	min.*	max.
+ 23°C	24 h	7 days	24 h	7 days

***See Overcoating instruction for additional information.**

Increase in film thickness and rise in the relative humidity of the air in the drying space usually slow down the drying process.

Clean up

TEKNOSOLV 9506 and TEKNOSOLV 6720

SAFETY MARKINGS

See Safety Data Sheet.

PTO

DIRECTION FOR USE**Surface preparation and approved primers**

Remove from the surfaces any contaminants that might be detrimental to surface preparation and painting. Remove also water-soluble salts by using appropriate methods.

HENSOTHERM 920 KS is designed to be applied over suitable prepared or primed steel substrate. For up to corrosivity category C2 - High HENSOTHERM 920 KS can be used direct-to-metal. For corrosivity categories higher than that, an approved suitable anticorrosion primer and top coat are required.

Steel preparation by blast-cleaning to grade Sa 2½ (ISO 8501-1).

Approved suitable anticorrosion primers are TEKNOPLAST PRIMER 5, TEKNOPLAST PRIMER 7 and TEKNOMASTIC 80. The suitability of surfaces painted with other paint types must be evaluated separately.

Application conditions

The surface to be painted has to be dry. During the application and drying period the temperature of the ambient air and the surface shall be above +15°C and the relative air humidity below 80%. The temperature of the paint during application shall be between +30°C and +45°C.

Additionally the temperature of the surface to be painted must be at least 3°C above the dew point of the ambient air.

Good ventilation, increased temperature and lower relative humidity will speed up the drying process.

However, it is recommended that the temperature of the steel to be painted is max. +35°C during the application and drying period.

Mixing of the components

Take into consideration the pot life of the mixture when estimating the amount to be mixed at a time. Before painting the base and hardener are mixed in right proportion. Stir thoroughly down to the bottom of the vessel for more than 5 minutes. Inadequate stirring or incorrect mixing ratio results in imperfect curing and impaired intumescent coating properties.

Fire retardant coating, application methods

The coat thickness to be achieved is determined by the structure to be coated, the so-called critical temperature and the fire endurance time required (cf. separate calculating instructions).

Application by 1K or plural feed airless spray: Application of HENSOTHERM 920 KS requires a high performance airless equipment with paint heating unit(s) and feed pump(s) or gravity feed unit. Recommended spraying pressure is 320 - 400 bar.

Recommended airless spray nozzle 0.019" - 0.029" and spray angle of 40-50°.

Brush or roller can also be used for touch up application of undiluted HENSOTHERM 920 KS.

Overcoating

Approved suitable top coats are:

BIORA, for dry indoor areas only.

TEKNODUR 0050, 1x60 µm dft for indoor and outdoor areas.

Application of top coat after through-drying of HENSOTHERM 920 KS, thus after at least 24 h. Through-drying of HENSOTHERM 920 KS can be checked by fingernail test.

Application on a test patch is recommended in order to define the application technique and dilution that gives the best possible top coating result. The possible porosity of the intumescent paint coat is to be considered when overcoating an intumescent paint. The best result is surest achieved by using the so-called mist coating technique, where the undiluted or diluted top coating is sprayed in many thin layers.

Objects coated with HENSOTHERM 920 KS are susceptible to continuous moisture during storage outdoors and transportation and must therefore always be protected by appropriate methods, e.g. with tarpaulins or top-coating. Avoid enduring moisture condensation or pools of standing water. Objects painted with intumescent paint must be packed carefully and handled with care to avoid mechanical damages. Damaged areas must immediately be protected with top coat to avoid damages caused by moisture.

ADDITIONAL INFORMATION

The storage stability is shown on the label. Store in tightly closed containers.

The best storage temperature is +10°C - +25°C.