

# Sika® Unitherm® 19010

Transparent water based fire protective coating system for wood

## Product- description

Sika Unitherm 19010 is a water based transparent fire protection coating for wood for interior use.

Sika Unitherm 19010 forms a carbon char under the effect of heat and delays the inflammation of wood.

## Application areas:

Reduction of ignitability of soft and hard wood and other wood derivatives, i.e. plywood, chipboard, fibre insulation board, hard board, also on veneering  $\geq 12$  mm thickness. Insulates against heat, checks fire, prevents propagation of fire and diminishes flue-gas density and flue-gas temperature. For interior use only!

Plastics subject to compatibility test prior to application.  
Not suitable for surfaces exposed to mechanical stress!

## Characteristics:

- **Water based coating system**
- **Transparent coating, wood appearance is not affected**
- **Low material consumption**
- **Almost no additional statical load of the coating**
- **Simple application**

## Product data

### Colour shades:

Sika Unitherm 19010: transparent  
Topcoat Sika Unitherm 38279: transparent matt  
Topcoat Sika Unitherm 38423: transparent semi-gloss

### Packaging:

Sika Unitherm 19010: 25 kg, net weight  
Topcoats Sika Unitherm 38279/38423: 10 kg, net weight

### Shelf life:

12 months from delivery in cool and dry storage conditions, original unopened containers.

**Protect against frost!**

## Systems

### Coating systems:

Intumescent coating:  
Sika Unitherm 19010  
  
Finishing top seal:  
Sika Unitherm 38279 (matt)  
or  
Sika Unitherm 38423 (semi-gloss)



**Surface pre-treatment:**

Surface must be dry, free from dust, oil, wax, grease, release agents. Existing coatings with poor adhesion have to be completely removed.  
Greasy resinous surfaces: wash down with solvents or brush thoroughly with an aqueous solution containing 5% curd soap and 5% ammonium hydroxide solution, then wash with clear water (saponification of greasy, resinous components). After drying sand lightly. Wood substrates with wetting difficulties should be roughened thoroughly with abrasive paper.  
If necessary an interface - Sika Unitherm 38031, 1 x 80 g/m<sup>2</sup> (90 ml/m<sup>2</sup>) - is to be used (see separate product data sheet Sika Unitherm 38031).

**Pre-treatment with wood preservative:**

If resistant to wet rot, fungi or insect attack, we recommend using commercial preservative agents based on oil-alkyd resins provided they are compatible with the Sika Unitherm transparent fire protection system.  
Apply Sika Unitherm transparent fire protection coating system only after the preservative treatment is completely dry.

**Technical data**

**Mass density:** Sika Unitherm 19010: approx. 1.33 g/cm<sup>3</sup>  
Sika Unitherm 38279/38423: approx. 1.02 g/cm<sup>3</sup>

**Solids by weight:** Approx. 70% (according to EN ISO 3251)

**Flash point:** Not applicable

**Consumption:** Sika Unitherm 19010:  
1 x 200 g/m<sup>2</sup> (150 ml/m<sup>2</sup>) for class 1 / BS 476  
2 x 200 g/m<sup>2</sup> (150 ml/m<sup>2</sup>) for class 0 / BS 476  
Topcoat Sika Unitherm 38279 matt  
or  
Topcoat Sika Unitherm 38423 semi-gloss:  
1 x 50 g/m<sup>2</sup> - 80 g/m<sup>2</sup> (49 ml/m<sup>2</sup> - 78 ml/m<sup>2</sup>)

**Application instructions**

**Preparation of coating material:** Sika Unitherm 19010:  
Stir thoroughly, free of lumps. According to required working viscosity preheating of base coat up to max. 70°C, e.g. in waterbath, heat cabinet or hot spraying apparatus is possible. Loosen lid!  
Sika Unitherm 38279/38423:  
Stir thoroughly.

**Application methods:**

Sika Unitherm 19010:  
Airless spraying:  
- material shall be applied undiluted  
- airless spray equipment with transmission  $\geq 23 : 1$   
- hose diameter not below 3/6 "  
- recommended nozzle size 0.28 - 0.53 mm or 0.011 - 0.021"  
- hoses must be used only for water based coatings!  
The rough film resulting from spray application should be smoothed by brush after spraying. Apply two coats of Sika Unitherm 19010 to a loading of 200 g/m<sup>2</sup> max. per coat. In order to obtain a very smooth finish by cutting down wood fibres, light sanding after the first coat is recommended (e.g. with 150 grade paper).  
Brushing/Rolling:  
- material shall be applied undiluted  
- apply two coats of Sika Unitherm 19010 to a loading of 200 g/m<sup>2</sup> max. per coat  
Topcoats Sika Unitherm 38279/38423:  
Airless spraying:  
- material shall be applied undiluted  
- airless spray equipment with transmission  $\geq 23 : 1$   
- hose diameter not below 3/6"  
- recommended nozzle size 0.28 - 0.53 mm or 0.011 - 0.021"  
Conventional spraying:  
- air pressure 3 - 5 bar  
- recommended nozzle size 1.8 - 2.5 mm or 0.07 - 0.10"  
Brushing/Rolling:  
- material shall be applied undiluted in supply viscosity

<b>Application conditions:</b>	Object temperature not below + 10°C, to max. + 50°C Relative humidity max. 80% Application temperature shall be at least $\geq 3$ K above dew point. In case relative humidity exceeds 80% special measures must be taken to prevent the condensation forming while application.
<b>Drying/Curing:</b>	Sika Unitherm 19010: At approx. + 20°C temperature and 65% relative humidity between first and second coat approx. 8 hours. At the latest after 18 hours. Lower temperatures and higher relative humidity may extend drying time. Overcoatable with Sika Unitherm 38279 or Sika Unitherm 38423 topcoat after approx. 8 hours, at the latest after 18 hours. Topcoats Sika Unitherm 38279 or Sika Unitherm 38423: At approx. + 20°C temperature and 65% relative humidity touch dry after approx. 1.5 hours, fully dry after approx. 6 days.
<b>Cleaning of equipment:</b>	Sika Unitherm 38279 and Sika Unitherm 38423: Immediately after use with Sika Unitherm thinner 11089. Sika Unitherm 19010: Immediately after use with warm water. In particular case, add up to 10% acetic acid or household vinegar or 5% of normal decalcifying agent.
<b>Important notice</b>	
<b>EU Regulation 2004/42 (Decopaint Directive):</b>	The maximum allowed VOC content acc. To EU Regulation 2004/42 (product class IIA / i, type Wb) in the ready for use material is 140 g/l (limit 2010). The maximum VOC content of Sika Unitherm 19010 is < 140 g/l VOC. The maximum allowed VOC content acc. To EU Regulation 2004/42 (product class IIA / i, type Sb) in the ready for use material is 600 g/l (limit 2007). The maximum VOC content of Sika Unitherm 38279 and Sika Unitherm 38423 is < 600 g/l VOC.
<b>Notes regarding hazards:</b>	Please observe safety instructions on container labels and local regulations. Dangerous Goods regulations have to be followed. During application in closed rooms, pits and shafts etc., sufficient ventilation must be provided. Keep away open light, including welding. In poorly lit rooms only electric safety lamps are permitted. The installed ventilation equipment must be spark-proof. In a liquid, or not fully cured state, the thinner and the products contaminate water and should not be allowed to enter drains or be spilled onto open ground. All spillages and liquid waste must be removed according to local Health and Safety regulations. Further details are contained in our instructions "Health protection and the prevention of accidents".
<b>Value Base:</b>	All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.
<b>Legal Notes:</b>	The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.



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