

## TECHNICAL DATA SHEET

### IWR CRYOCOAT® HR.1

#### PRODUCT DESCRIPTION

**IWR CRYOCOAT® HR.1** is a polymeric elastic coating obtained from the chemical reaction between **IWR CRYOCOAT® HR.1 ISOCYANATE** (a modified MDI diisocyanate) and **IWR CRYOCOAT® HR.1 FORMULATION** (a blend of different polyols and polyamines) free from fillers, solvents, thinners, plasticisers or any other volatile substances (VOC=0). **IWR CRYOCOAT® HR.1** can be applied by high pressure airless spraying on sandblasted concrete, steel, polymer foams like polyurethane / polyisocyanurate, EPX/XPS foam. After complete curing **IWR CRYOCOAT® HR.1** forms an elastic protective coating with high build, glossy surface, great chemical and microbial resistance, moderate resistance to water vapor transmission and gas-tight to oxygen, CH<sub>4</sub>, NH<sub>3</sub> and other gases.

**IWR CRYOCOAT® HR.1** is compatible with LNG and therefore it is used as **liquid-tight cryogenic coating** for **secondary barrier** and **thermal corner protection system** in LNG storage tanks and other cryogenic storage tanks, and as **anti-corrosion coating** for steel pipes and concrete structures.

**IWR CRYOCOAT® HR.1** has very high adhesion to adequately prepared steel, concrete, wood, rocks, bricks, polymer foams. Installation should only be made by trained personnel using appropriated dosing and spraying equipment, following our Technical Specifications and Manual.

Property	Standard	Unit of Measure	Value	
Density	EN 1602	g/cm <sup>3</sup>	0,96	
Surface hardness	ISO 868	Shore A	27 - 30	
Abrasion loss	ISO 9352	mm <sup>3</sup>	330	
Tensile strength	ISO 527-1	MPa	@ 23 °C	14,4
			@ -195 °C	81
Elongation at break			@ 23 °C	>350
			@ -195 °C	>2
Thermal contraction coefficient from -30 to -196 °C	ASTM D696	10 <sup>-6</sup> K <sup>-1</sup>	88,5	
Service temperature range		°C	-196 .. +80	
Water vapour permeability (measured on samples of 1 mm thickness)	ISO 15106-3 – 37,8 °C, 0/90% R.H.	g/m <sup>2</sup> /24h	≤ 96	
Reaction to fire	DIN 4102-1	Class	B2	

#### PROCESS CONDITIONS

MIXING RATIO	<u>IWR CRYOCOAT® HR.1 ISOCYANATE</u>	<u>100 parts by volume</u>
	<u>IWR CRYOCOAT® HR.1 FORMULATION</u>	<u>100 parts by volume</u>
COMPONENTS TEMPERATURE	65 – 75 °C	
SUBSTRATE TEMPERATURE	7 - 40 °C	

#### **STORAGE AND HANDLING DIRECTIONS**

The liquid products must be stored in the original closed containers until use, at temperature between 10 and 30 °C. Before handling the product all personnel must read and understand the indications given in the Material Safety Data Sheet.

Shelf life in original sealed containers is 6 months for both components.

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TAGOS SRL will in no case be responsible for the use of this product in third parties' patent violation. The data and information given above are to be considered as indications; TAGOS SRL guarantees that the product supplied is compliant to the SUPPLY QUALITY SPECIFICATIONS; no other guarantees are given.

The only guarantee of TAGOS SRL, if its responsibility is proved, will be the product substitution or the refund of the invoice amount. The customer must verify personally that this product can be used under safe conditions in her/his facility and production process; this product must be used under the instructions given by the producer. The use of this product is restricted to trained professional users.

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