

Technical Data Sheet

Issue: 01/2021/v03

Product-Line: HTX-KM-PUR, HTX-KM-AIO
Material: Thermoplastic Polyether-Polyurethane
TEXTIT-Material-Code: TMC-1043

Material data:

Description
HTX-KM-PUR is a zero-halogen high density, thermoplastic polyether polyurethane cable marker, which is available in the colours white, yellow, red, orange and black.

Physical Properties			
Property	Unit	Standard	Value
Hardness	Shore D	DIN ISO 7619-1 (3s)	58
Density	g/cm ³	DIN EN ISO 1183-1-A	1,27
Tensile strength	MPa	DIN 53504-S2	30
Elongation at break	%	DIN 53504-S2	400
Stress at 20% elongation	MPa	DIN 53504-S2	13
Stress at 100% elongation	MPa	DIN 53504-S2	19
Stress at 300 % elongation	MPa	DIN 53504-S2	33
E-module of tensile test	MPa	DIN EN ISO 527	160
Tear strength	N/mm	DIN ISO 34-1Bb	110
Abrasion loss	mm ³	DIN ISO 4649-A	30
Compression set at 30°C / 72 hours	%	DIN EN ISO 815	30
Compression set at 70° / 24 hours	%	DIN EN ISO 815	45
Tensile strength after storage in water at 80°C for 21 days	MPa	DIN 53504-S2	20
Elongation at break after storage in water at 80°C for 21 days	%	DIN 53504-S2	400
Notched impact strength (Charpy) + 23°C - 30°C	 kj/m ² kj/m ²	 DIN EN ISO 179-1 DIN EN ISO 179-1	 50 3
Flammability	-	VO/V2	UL 94

Performance Properties		
Property	Test Methods	Typical Results
Operation temperature	- 50°C (-58°F) until + 90°C (+194°F)	No visible effect
Humidity resistance	30 days at 37°C (100°F) 95% relative humidity	No visible effect
UV-resistance	30 days in UV light chamber	White and yellow parts are discoloring but legible No visible effect on black, orange and red
Weatherability	30 days QUV (ASTM G-53)	White and yellow parts are discoloring but legible No visible effect on black, orange and red

Chemical resistance

Samples were thermal transfer printed with printer type T4+/300 and ribbon FTI-Y-110x360-BK. Testing consisted of 5 cycles of 10 minutes immersions in the specified chemical reagent followed by 30 minutes recovery periods. After the final immersion, the samples were removed from the test fluid and the printed image rubbed 10 times with a cotton swab saturated with the test fluid.

Chemical reagent	Subjective Observation of visual change		
	Substrate (all colours)	Effect to printed image	
		Without Rub	With Rub
Isopropyl Alcohol	No visible effect	5	2
MEK	No visible effect	5	0
JP-4 Jet Fuel	No visible effect	5	5
Gasfuel	No visible effect	5	0
Gasoline	No visible effect	5	5
ASTM #3 Oil	No visible effect	5	4
Mil 5606 Oil	No visible effect	5	5

Chemical reagent	Subjective Observation of visual change		
	Substrate (all colours)	Effect to printed image	
		Without Rub	With Rub
Deionized Water	No visible effect	5	5
SAE 15WT Oil	No visible effect	5	5
Skydrol®500B-4	No visible effect	5	0
10% Sulfuric Acid Solution	No visible effect	5	5
10% NaCl Salt Solution	No visible effect	5	5
Alcohol mix ¹⁾	No visible effect	5	5

¹⁾ Alcohol mixture: 50% Ethyl alcohol, 30% Methyl alcohol, 20% Distilled water

Legend:

- 5 = No visible effect
- 4 = Slight fading
- 3 = Fading
- 2 = Moderate fading
- 1 = Severe fading
- 0 = Print gone

Shelf life

4 years if stored at 27°C (80°F) and 60% relative humidity

RoHS-compliant

Yes