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Test No.:

4876

Test Intention:

In test 4876 we want to compare the lifespan of our TPE cable CF9.15.18 and a PUR competitor cable. The CF9 is declared for use at -35°C in e-chain application and the competitor for flexing at -40°C.

Client:								
Name: Christi	ian Mittelstedt	Team:	chainflex	®	Date:	24.02.2014		
Order-Info:	Order-Info:							
Customer / No.	: igus [®] GmbH, Spicher	Str.1a, 5114	47 Köln					
Series / No: CF	9, competitor cable			Installation type: horizontal, conditioned				
Customer test:	Yes 🗌	No 🖂		Development test: Yes 🛛 No 🗌				
Technical data	a			Target & Examination				
	e-chain [®] type: E4.28.8	50.100.0		Target [double strokes]: Lifespan				
e-chair	n [®] radius [mm]: 100			Optical check:	\boxtimes			
	Stroke [m]: 4,5		Function check:					
Ambient ter	mperature [°C]: approx	40°C	Standard measuring:					
Ca	able length [m]: 4,30			AutΩMeS:				
Experimental	setup							
Checklist for the experimental preparations additional inscription/label at all wires strain reliefs at both ends of the chain correct electrical connection of all wires radius was marked at the cables and the energy chain A Construction: This test is built up on the "Klimakammer". The following picture shows the test structure: Construction: Construction: Construction:								

Ch. Mittelstedt/Versuch/10.12.2021

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The managing data show the results of the accomplished examinations. With all data it still acts neither around one or more warranties of certain characteristics around one or more warranties regarding the suitability of a product for a certain targeted application, since the examinations on laboratory conditions took place. The warranty of certain characteristics of the products and/or their suitability for a certain application requires writing in the confirmation of order. Finally we recommend user-specific measurements under genuine operating conditions.

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2. Cable and hose packages:

No. 1: **1x CF9.15.18** with the cable marking 01637m igus chainflex CF9.15.18 1G1,5 300/500V CE C P/DC RoHS-II conform www.igus.de

No. 2: 1x Competitor cable

3. Description of the cable construction:

Standard igus chainflex[®] catalogue cable

Competitor cables without further information

4. Remarks:

The following chart gives an overview regarding the test parameters:

Cable no.	Cable type	E-chain radius [mm]	Outer diameter [mm]	Bending factor [xd]	Bending factor catalogue [xd]
1.X	CF9.15.18	100	15,4	6,5	6,8
2.X	Competitor	100	15,6	6,4	5,0

Samples tested at -40°C

C	abla na	Cable type		Counter	Ef	Effectively	Cable okay after DS	
Cable IIU.	Cable type		mounting	demountin	g te	sted DS		
	1.1	CF9.15.18		0	526.775	5	26.775	526.775
	2.1	Competitor		0	40.533	4	10.533	<40.533
Test-order was checked by [Martin Göllner or Rainer Rössel and further employee]								
Date	e: 24.0	02.2014	Name:			Name:	Christian (Mittelstedt



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Result

Start report 24.02.2014:

We started the test 4876 at approx. -40°C at counter reading 0, we will make an optical check regularly.

Interim report 04.03.2014:

We demounted the cable no. 2.1 after 40.533 double strokes, because we noticed several breakages on the outer jacket.

Interim report 19.03.2014:

The daily optical check showed no damages at the outer jacket of the cable no. 1.1, after 137.960 double strokes.

Interim report 15.04.2014:

The daily optical check showed no damages at the outer jacket of the cable no. 1.1, after 386.432 double strokes.

Interim report 01.07.2014:

At the 01.07.2014, after 526.775 double strokes we demounted the cable to finish the test. Cable no. 1.1 showed no damages, the outer jacket is still in a good condition

Evaluation

The following pictures show the condition of the cables after the test:

The condition of the cable no.1.1 (CF9.15.18) after 526.775 double strokes



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Ε	e condition of the second seco	he cable	<image/> <image/> <image/>
Name: 15.07.201	5	Date:	Christian Mittelstedt

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