

Test Report No. 7191289245-EEC22
dated 19 Sep 2022

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PSB Singapore

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Subject

TESTING OF OPTICAL FIBRE CABLE

Client

Fibertek Pte. Ltd.

3015A Ubi Road 1

#04-13

Singapore 408705

Attn: Mr. Alvin Wong

Sample Submission Date

03 Aug 2022

Date(s) of Performance of Test

04 Aug 2022 to 09 Sep 2022

Description of Sample

Type	:	Armoured (CST) Fire Resistant LSZH Uni-Loose Fiber Optic Cable
Brand	:	Fibertek
Model	:	FTSF-FUTMGCZ (FRUVAT)
Fibre count	:	24
Insulation	:	Loose tube - white
Fire resistant layer	:	Mica tape
Filler	:	Glass yarn
Armour	:	Corrugated Steel Tape
Sheath	:	UV resistant and anti-termite LSZH - Black



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Method of Test

The assessment detailed in this document was carried out in accordance with the following test standards:

- a) IEC 60332-1-2: 2004/AMD1: 2015;
- b) IEC 60332-3-24: 2018;
- c) IEC 60754-1: 2011+AMD1: 2019;
- d) IEC 60754-2: 2011+AMD1: 2019;
- e) IEC 61034-2: 2005+AMD1: 2013+AMD2: 2019.

Results

Test Standards	Test Description	Results	Requirements
IEC 60332-1-2	Flame propagation on single cable Overall diameter of cable: 9.4 mm Flame application time: 60 seconds	Complied	The distance from the lower edge of the top support to the upper and lower onset of charring shall be greater than 50 mm and less than 540 mm respectively.
IEC 60332-3-24	<u>Test for vertical flame spread of vertically - mounted bunched wires or cables – Category C</u> 1) Number of test pieces: 26 (Calculated) 2) Total volume of non-metallic material, per metre of test sample: 0.0585 l/m 3) Method of mounting: Touching 4) Number of layer: 1 5) Number of test pieces in the layer: 26 6) Flame application time: 20 minutes 7) Number of burners: 1 8) Time to extinction of all burning or glowing: 2 minutes 58 seconds Maximum extent of the charred portion measured on the sample. (m)	0.5	Shall not have reached a height exceeding 2.5 m above the bottom edge of the burner
IEC 60754-1	<u>Determination of the halogen acid gas (as HCl)</u> Concentration of halogen acid (mg/g) Sheath	5	Maximum: 5 (see remarks 1 and 2)

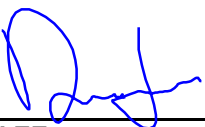


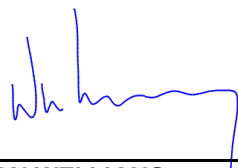
Results (Cont'd)

Test Standards	Test Description	Results	Requirements
IEC 60754-2	<u>Determination of degree of acidity of gases</u> 1) pH value at 25°C when related to one litre of water Sheath	5.4	Minimum: 4.3
	2) Conductivity value ($\mu\text{S}/\text{mm}$) Sheath	0.2	Maximum: 10
IEC 61034-2	<u>Measurement of smoke density of cable burning under defined conditions</u> Overall diameter of cable: 9.4 mm Number of test pieces: 4 Light transmittance (%)	66	Minimum: 60

Remarks:

- As stated in clause 8 of IEC 60754-1: 2011+AMD1: 2019, amount of halogen acid = 5 is recorded when the amount of halogen acid is less than 5mg/g.
- There is no requirement for IEC 60754-1: 2011+AMD1: 2019. The requirement (Maximum: 5 mg/g) is generally specified in the test standards of electric cables.
- The sample tested is deemed to comply with the following test standards:
 - IEC 60332-1-2: 2004/AMD1: 2015;
 - IEC 60332-3-24: 2018;
 - IEC 60754-1: 2011+AMD1: 2019;
 - IEC 60754-2: 2011+AMD1: 2019;
 - IEC 61034-2: 2005+AMD1: 2013+AMD2: 2019.


CINDY LEE
TESTING OFFICER


TAN WEI LIANG
ASSISTANT MANAGER
NON-ASSET INTENSIVE LABORATORIES
PRODUCT SERVICE

Appendix I

- a) Marking: Printed on the sheath

FIBERTEK FTSF-FUTMGCZ(FRUVAT)024009 24 x 9/125UM ARMOURED (CST) FIRE
RESISTANT LSZH FIBER OPTIC CABLE YR2022

- b) General view of the cable



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Effective 26 January 2021

