

MECHANICAL CHARACTERIZATION & TESTING
TENSILE TEST PROCEDURE
(HDPE) MICRODUCTS
Accessories
Connectors
IEC60794-1-21

Client: الوارد من الشركة المصرية للاتصالات لصالح شركة سفن هاندرد للأفكار الصناعية والتطوير الرقمي:

Date: 29/02 /2024

Introduction:

As per the Client request for mechanical testing for the microduct accessories

The tests for the endcap and connectors have been determined to provide optimal blown performance, along with the desired mechanical and environmental properties that face the microduct itself.

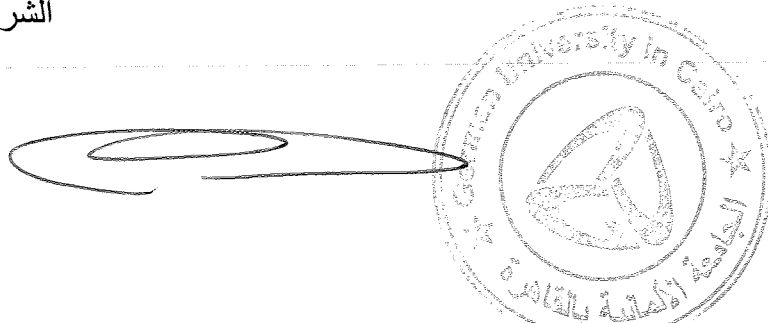
We followed the same mechanical characterization & testing procedure of microducts IEC60794-1-21 for the microduct accessories as well.

Verifying the Test Result

Mechanical Test-Tensile- was verified by visual inspection and by applying pressure test to the microduct fitted with its accessories for all sizes provided by the client. The verification step with pressure tests ensures there is no leakage into the microducts with its accessories fitted on.

Important Notes:

- Pressure test procedures were supplied by client's representatives: SABBOUR Consulting (as attached Pdf document) sent by the client **Telecom Egypt Company** - الشركة المصرية للاتصالات -



b) To investigate and determine the position of the leakage after impact test; if it is present; we have used the “Water dunk tube” where the microducts with its accessories have submerged in water under pressure test 9 bar. This way it was easier to pinpoint the leakage and its position. Accessories/Products with air bubbles present around them = leaking area = loss in pressure bar.

Acceptance criteria

Under visual examination, without magnification, there shall be no damage after the test.

Test Condition and parameters

- IEC60794-1-2 Method E1
- Duration of Max. Load: 10min
- Sample Length 1000 mm = 2*500 mm microduct linked to each other by connector
- Tensile Load: 0.8 W and 1.0 W(W: Weight of microduct /km).
- Rate of extension of microduct $\geq 20\text{mm/min}$.
- Testing Machine: Universal Testing Machine Zwick Roell Z100



**Mechanical Characterization & Testing (1 Watt) Tensile Test Result –
Connectors/Endcaps**

#	Connectors	1 Watt TENSION /KG	Test Result	Pressure test 9 bar -10 minutes
1	7/3.5mm	31.4	Pass	No leakage

Document approved M. Osman Date 3/3/2024

Materials Testing Lab



Prof. Dr. Ahmed Abd El Aziz

تمت هذه الاختبارات للعينات الواردة من العميل دون ادنى مسؤولية على جهة الاختبار

