NBN EN 12697-23: Indirect Tensile Strength

Preparations

- Make sure the correct ITS frame is installed (ø100mm or ø150mm)

	Dimensions mm				
Specimen diameter (mm)	80 ± 2	100 ± 3	120 ± 3	150 ± 3	160 ± 3
Loading strip width, W (mm)	10,2 ± 0,1	12,7 ± 0,2	15,2 ± 0,2	19,1 ± 0,2	20,0 ± 0,2
Maximum height difference at the curved side of the loading strip, h (mm)	0,33	0,40	0,48	0,61	0,63

- Check if the LVDT is resting on the guide of the frame

- Check if there is a connection between pc and uniframe (see manual)

- At least 3 specimens shall be prepared for each sample and conditioned tested

- Measure the dimensions of the specimens to be tested according to EN 12697-29 before bringing them to test temperature

- The specimens should be stored in a cooling chamber (standard at 15°C) at test temperature for at least 2h before testing.

  (Note: for ITS-R tests this time will be increased to 4h)

Performing the test

- Take the conditioned specimen out of the cooling chamber and place it directly in the frame

- Align the specimen on the lower loading strip, so that the specimen can be loaded diametrically. (fig. 2)

- Start the compression of the specimen, applying a diametrical load continuously and at a constant speed of deformation until the specimen breaks. *(For the complete test procedure check the manual)*

- The total time between the removal of the specimen from the cooling chamber and the end of the test shall not exceed 2min.

- Record the peak load and displacement as shown on the uniframe and check the results on PC

- Save the data on the PC

- Remove the broken specimen from the frame and record the type of failure
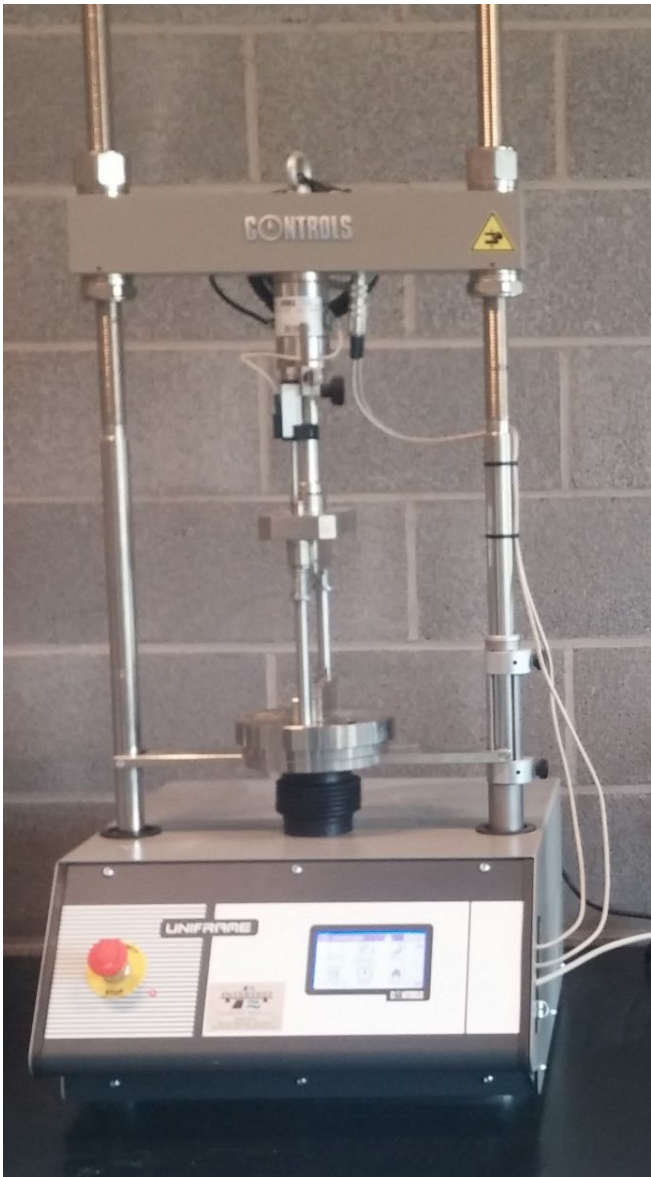
- Clean the frame and the surrounding area

Figure 1: Setup Uniframe – Indirect Tensile strength
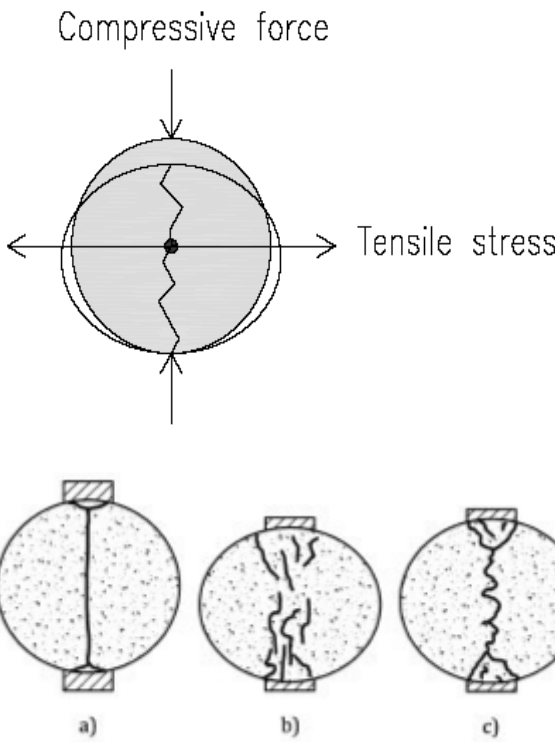

Figure 2: Align the specimen

1) **Always contact a lab assistant or lab manager in case of doubt.**

2) **Personal Protection Equipment**

3) **Risks**

Test parameters (test set 2)

- Test Type = Marshall
- Displacement Channel = Transd. CH3
- Peak [kN] = 050.000
- Preload = 000.050
- Limits = 050.000 LOAD
- Test Speed = 50.00 mm/min

Table 1: Test settings ITS test