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| Revision No. 2 | Page 1 of 3 | <h2>Technical Definition</h2> <p>Compression 2850 B test Carbon Fiber Composite</p> |
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| Kit Compression 2850 B PTP 2019 | | |

You shall respect the HSE policy of your laboratory for each performed test.

Instructions to participant laboratories

Please read carefully these instructions BEFORE starting the tests.

- Ten specimens (80 x 12,5 x 2,0 mm) are supplied to each participant (5 for compression strength and 5 for compression modulus) – 5 + 5 results must be provided.

In case of :

- loss or deterioration of PTP sample(s) please contact your sponsor for replacement kit.
- exclusion of a test specimen results by yourself, you shall provide a short root cause analysis.

- The specimens have to be dried during 48 hours (0/+10) at 70°C (+/- 3) and tested within the next 8 hours after the drying.

- All tests have to be performed at room temperature in accordance with the requirements of **EN 2850 (2017)**.

If a tool type B as described in the EN 2850 is used, then apply a torque of 0,5 N.m.


If necessary, specimen length can be physically adjusted (has to be indicated in the results form).

The tests shall be performed respecting the following conditions:

- One operator only
- One testing machine only
- Tests performed in sequence

- The following information need to be reported:

| Characteristic | Unit | Significant digits | Mandatory / Not mandatory | Evaluated Yes/no |
|---|------|--------------------|------------------------------------|------------------|
| Specimen dimensions both width and thickness measured in at least 3 positions as stated in the reference standard | mm | X,XX | Mandatory | No |
| Compression strength based on theoretical thickness (cross section area shall be calculated by multiplying the theoretical thickness x the actual measured width) * | MPa | XXX | Mandatory | Yes |
| Compression strength based on real thickness (cross section area shall be calculated by multiplying the actual thickness x the actual measured width) * | MPa | XXX | Mandatory | Yes |
| Compression load at failure * | kN | XX,X | Mandatory | No |
| Secant compression modulus – Strain method (based on nominal thickness)** | GPa | XXX,X | At least one method has to be used | Yes |
| Secant compression modulus – Load method (based on nominal thickness) ** | GPa | XXX,X | | Yes |

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| Characteristic | Unit | Significant digits | Mandatory / Not mandatory | Evaluated Yes/no |
|-------------------------------|------|--------------------|---------------------------|------------------|
| Compression failure mode | N/A | N/A | Mandatory | No |
| Validity of the failure | N/A | N/A | Mandatory | No |
| Upload of the official report | N/A | N/A | Mandatory | No |

Nominal thickness : 2,024 mm

*: obtained from Compression strength specimens

** : obtained from Compression modulus specimens

All evaluated characteristics will be analysed according to the algorithm A and S (ISO 13528 – 2015) and evaluated using z-score.


- Testing shall start **as soon as test specimens are received**. Please contact the following e-mail address for any technical or administrative query.

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| Submission date : | December 1st, 2019 |
| Technical and administrative support : | info@ptpscheme.com |

- Instructions for submission of results are detailed on the website:

<https://ptpscheme.com/>

- To ensure the confidential treatment of your results in the final report, you will be allocated a unique identity number when you register for the program.
- Collusion and falsification of your PTP results are totally forbidden. In case of identification or suspicion of collusion or falsification, the laboratory will be excluded from the program and the sponsors will be immediately informed. The sponsors could ask you proofs of your records and analyses, so be sure to conserve data, curves and specimens.
- The tested specimens do not need to be sent back to PTP.

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APPENDIX : Instructions for IRR participation

The Internal Round Robin participation (IRR) is **optional** and **independent** from your PTP participation.

Confidentiality : The IRR results and reports are confidential and only accessible by your laboratory. They are not shared with the scheme sponsors or any other accreditation or certification bodies.

The extra samples shall be tested according to the following table:

| | Operator 1 | Operator 2 | Operator 3 | Operator 4 | Operator X |
|-----------------------|-------------------------|---------------|---------------|---------------|---------------|
| Test machine 1 | PTP kit (5 + 5 samples) | 3 + 3 samples | 3 + 3 samples | 3 + 3 samples | 3 + 3 samples |
| Test machine 2 | 3 + 3 samples | | | | |
| Test machine 3 | 3 + 3 samples | | | | |
| Test machine Y | 3 + 3 samples | | | | |

Operator 1 (OP1) is to be the most experienced operator currently conducting tests on a regular basis and shall perform tests on all machines (TM1, TM2, TM3...)

Test Machine 1 (TM 1) is to be the most utilised machine for this test in your laboratory and shall be tested by all operators (OP1, OP2, OP3...)

Example: A laboratory has 2 operators and 3 test machines. They receive a PTP kit and 9 + 9 extra specimens.

Operator 1 shall test the PTP kit on TM1, 3 + 3 specimens on TM2 and 3 + 3 specimens on TM3.

Operator 2 shall test 3 + 3 specimens on TM1.

The IRR results have to be submitted on a separate results form available on the PTP website.

The identification of operators and test machines you provide will appear on the IRR final report.

These identifications will not be seen by other laboratories.

The IRR results will be classified against the acceptance classes of the kit Compression 2850 B -2019.

Reminder: Laboratories are not permitted to switch specimens between the PTP kit and IRR samples. The traceability of the samples will be checked during the evaluation. Laboratories found to have switched samples will invalidate their PTP participation.

REVISION HISTORY

| Issue Date | Issue N° | Changes |
|------------|----------|--|
| 10/05/2019 | 1 | Document creation |
| 09/08/2019 | 2 | Update of the results submission date Modification of the nominal thickness |