

# **Technical Definition**

Climbing Drum Peel Test Carbon Fiber Composite

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

### Instructions to participant laboratories

### Please read these instructions carefully BEFORE starting the tests.

- 1. Five specimens (300 x 75 x 14,5 mm) are supplied to each participant 5 results must be provided.
  - If one result is missing, your test will be considered as an outlier. A RCA shall be completed.
- 2. The specimens have to be dried during 48 hours (0/+10) at  $70^{\circ}$ C (+/-3) and tested within the next 8 hours after the drying.
- 3. All tests must be performed at room temperature in accordance with the requirements of **EN 2243-3 (2005) or ASTM D1781-98 (2012)**.

If your peeling tool is different from the one required in the EN 2243-3, you have to inform your sponsor before testing.

The tests shall be performed respecting the following conditions:

- One operator only
- One testing machine only
- Tests performed in sequence
- 4. The following information need to be reported:

Characteristic		Significant digits	Mandatory / Not mandatory	Evaluated Yes/no
Specimen thickness	mm	X,XX	Mandatory	No
Specimen width	mm	X,XX	Mandatory	No
Tools dimensions		X,XX	Mandatory if different from the standard	No
<b>F</b> <sub>0</sub> – the load necessary to bend the skin alone.		XXX,X	Mandatory	No
<b>F</b> <sub>1</sub> – the mean load obtained during the test		XXX,X	Mandatory	No
$F$ – the value of peeling load F is calculated by the following equation: $F = F_1-F_0$	N	XXX,X	Mandatory	No
$\tau$ – the peeling strength shall be express as follows $\tau$ = F/W	N/cm	XX,X	Mandatory	Yes
F <sub>0</sub> measurement curve (to be uploaded in the results form)	N/A	N/A	Mandatory	No
Recording of load versus cross-head displacement (to be uploaded in the results form)	N/A	N/A	Mandatory	No

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Characteristic	Unit	Significant digits	Mandatory / Not mandatory	Evaluated Yes/no
Location of the failure		N/A	Mandatory	No
Nature of failure with estimated percentage of failure in cohesion and/or adhesion in adhesive or primer	N/A	N/A	Mandatory	No
<b>F</b> <sub>0</sub> measurement method (on 1 or 5 samples)	N/A	N/A	Mandatory	No
Upload of the official test report		N/A	Mandatory	No

### Notes:

- The determination of F1 is performed by calculating the mean value of the load between 25 mm and 150 mm of peeling, measured starting from the point where the load has reached the first peak.
- Only the EN testing method is evaluated. Please apply the test standard even if the provided material is different.
- Measure of F<sub>0</sub>: no additional skin will be provided. F<sub>0</sub> has to be measured directly on the specimen. To do so, the laboratories need to start the test from 0 and redo the test on the peeled skin alone.

All evaluated characteristics will be analysed according to the algorithm A and S (ISO 13528 – 2022) and evaluated using z-score.

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

Submission date:	1 <sup>st</sup> August, 2023	
Technical and administrative	info@ptpscheme.com	
support:		

6. Instructions for submission of results are detailed on the website:

## https://ptpscheme.com/

- 7. 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.
- 8. 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.
- 9. 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. <u>Confidentiality</u>: 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 samples)	3 samples	3 samples	3 samples	3 samples
Test machine 2	3 samples				
Test machine 3	3 samples				
Test machine Y	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** (TM1) is to be the most utilised machine for this test in your laboratory and shall be tested by all operators (OP1, OP2, OP3...)

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

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

Operator 2 shall test 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 Climbing Drum Peel-2023.

<u>Reminder:</u> 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.

#### **VERSION HISTORY**

Issue Date	Issue N°	Changes Document creation	
21/12/2022	1		
28/04/2023	2	Modification of the submission date	