



Technical Definition

Brinell/Rockwell B Hardness Test – Aluminium 2024

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.

- One specimen (\emptyset 30 x 15 mm) is supplied to each participant – 4 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.
- No additional machining of specimens is required. However, it is allowed to prepare the surface of the specimen if needed.
- Each participant is required to determine the hardness at four positions on the specimen.
- All tests are to be performed at room temperature in accordance with the following requirements:
 - ASTM E18-17e1** or **EN ISO 6508-2 (2015)**, if performing a Rockwell “B” test.
 - ASTM E10-17** or **EN ISO 6506-1 (2014)**, using a force/diameter ratio of **10** if performing the Brinell test.

The tests shall be performed respecting the following conditions:


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

Characteristic	Unit	Significant digits	Mandatory / Not mandatory	Evaluated Yes/no
Room temperature	°C	XX,X	Mandatory	No
Indenter diameter	mm	X,XX	Mandatory	No
Force applied	kgf	XX	Mandatory	No
Test force application time	s	XX	Mandatory	No
Brinell hardness	HBW	XXX	At least one type of hardness result has to be provided	Yes
Rockwell “B” hardness	HRB	XX,X		Yes

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

Please be aware that laboratories who obtained a standard deviation equal to zero (i.e. who provided 4 times the same result) **will not be included** in the statistical population.

- 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 :	May 1st, 2018
Technical and administrative support :	info@ptpscheme.com

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

<https://ptpscheme.com>

8. 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.

9. 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.

10. The tested specimen does not need to be sent back to PTP.

REVISION HISTORY

Issue Date	Issue N°	Changes
02/01/2018	1	Document creation
02/02/2018	2	Modification of the number of significant digits for Rockwell "B" hardness