Rail Baltica

RBDG-MAN-014C-0101

Design guidelines

Technical Specification - Ballast

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1. Scope

This Technical Specification describes the minimum requirements of the ballast aggregate (EN 13450) to be supplied to RB Rail AS (Client).

2. Requirements

Ballast shall be produced in accordance with EN 13450. The Assessment and Verification of Constancy of Performance (AVCP) level of the production shall be 2+.

The type of ballast shall be **natural railway ballast**.

The ballast shall fulfill the requirements stated in Table 1 of this Technical Specification.

Property	Reference	Category (requirement)
Grading	EN 13450, Clause 6.3	Category F (31,5 to 63 mm)
Fines content	EN 13450, Clause 6.5	Category A (0,5%) *
Shape index	EN 13450, Clause 6.6.2	SI_{20}
Particle length	EN 13450, Clause 6.7	Category D (12%)
Resistance to fragmentation	EN 13450, Clause 7.2	LA_{RB} 16
Resistance to wear	EN 13450, Clause 7.3	MDE_{RB} 11
Resistance to freezing and thawing (assessed based on water absorption)	EN 13450, Clause 7.4.3	WA_{cm} 0,5
Sonnenbrand	EN 13450, Clause 7.5	No signs of Sonnenbrand are allowed
*For the evaluation of degradation of the railway ballast during transportation, fines content at the Delivery place shall be < 1,0 %.		

TABLE 1. MINIMUM BALLAST REQUIREMENTS ACCORDING TO EN 13450

3. Stockpiling, Loading and Handling

Ballast supply shall be organized by the Supplier to locations indicated by the Client.

Ballast shall be delivered to the Client in a state fulfilling the requirements described in Table 1. Any deliveries which doesn't meet the requirements described in Table 1 shall be rejected and replaced at the expense of the Supplier.

Any necessary reprocessing of the material to meet the requirements shall be done by the Supplier's expense. The Supplier shall organize sampling and testing after reprocessing at the Supplier's expense.

The material will be weighed at the point of delivery.

4. Documentation

Ballast Supplier shall submit Factory Production Control (FPC) certificate and Declaration of Performance (DoP) of the material to RB Rail AS. DoP shall be signed by the ballast Producer. The declared properties shall conform with the minimum requirements described in Table 1 of this Technical Specification. In addition, the declared values shall be confirmed with test report(s) issued by accredited laboratory (accredited in accordance with ISO/IEC 17025) and testing shall be done with accredited testing methodology (accredited in accordance with ISO/IEC 17025 and applicable testing methodology).

Each supplied batch of material shall be accompanied with Delivey Ticket which shall contain following information:

a) Designation – In accordance with Clause 10.1 of EN 13450
    i. Source
    ii. Petrographic type
    iii. Railway ballast size
b) Identification number (ID) of the batch and its' volume
c) Date of dispatch
d) Declaration of Performance and CE marking

5. Testing and acceptance

All tests done by the Producer shall be documented and RB Rail AS shall always have access to these test results and test reports.

RB Rail AS reserves the right to conduct additional sampling and testing to verify the properties of the supplied material. Additional sampling and testing can be done at any times and locations.

Sampling shall be done in accordance with EN 932-1 or EN 13450 (Annex A).