

DECLARATION OF PERFORMANCE

NO. USSK-02/2022

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| 1. Unique identification code for product type: | Flat hot rolled structural steel product – embossed plate, of grades acc. to EN 10025-2^{1,2)}: S235JR, S235J0, S235J2, S275JR, S275J0, S275J2 design “T” and design “R” acc. to EN 10363, Produced in thickness 3,0 – 10,0 mm ¹⁾ applies also for the delivery condition: +AR, +N ²⁾ supplied also with the designation C - suitable for cold forming |
| 2. Intended use for construction product: | For use in metal structures or in composite metal and concrete structures. |
| 3. Producer: | U. S. Steel Košice, s. r. o. Vstupný areál U. S. Steel 044 54 Košice Slovenská Republika Producing plant: Hot Rolling Mill Division Plant |
| 4. Authorized representative: | not relevant |
| 5. Assessment system and verification for constancy of performance: | DIN EN 10025-1:2005, Annex ZA, system 2+ |
| 6a. Harmonized standard: | DIN EN 10025-1:2005 Hot rolled products of structural steels. Part 1: General technical delivery conditions. |
| The notified subject: | Technischer Überwachungsverein Thüringen e.V. Melchendorfer Straße 64 99096 Erfurt Germany Identification number: 0090 Issued: Certificate of conformity of the factory production control No. 0090-CPR-1178 |

7. Declared performance:

| Essential characteristics | Performance | Technical specification |
|---|--|---|
| Tolerancie rozmerov a tvaru | <i>Tolerances on dimensions and shape according to standards EN 10029 and EN10363.</i> | EN10363 |
| Minimum elongation A (in transversal direction) | S235JR | 17 % ^{a)} |
| | S235J0 | 18 % ^{b)} |
| | S235J2 | 19 % ^{c)} |
| | S275JR | 24 % ^{d)} |
| | S275J0 | 15 % ^{a)} |
| | S275J2 | 16 % ^{b)} |
| | | 17 % ^{c)} |
| | | 21 % ^{d)} |
| ^{a)} at nominal thickness ≤ 2 mm ^{b)} at nominal thickness > 2 mm and ≤ 2,5 mm | | ^{c)} at nominal thickness > 2,5 mm and < 3 mm ^{d)} at nominal thickness ≥ 3 mm |

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| Minimum upper yield strength R_{eH} | S235JR | 235 MPa | EN 10025-2 Art. 7.3.1, Tab. 6 |
| | S235J0 | | |
| | S235J2 | | |
| | S275JR | 275 MPa | |
| | S275J0 | | |
| | S275J2 | | |

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|---|--------|--|----------------------------------|
| Tensile strength R_m | S235JR | 360 to 510 MPa | EN 10025-2 Art. 7.3.1, Tab. 6 |
| | S235J0 | | |
| | S235J2 | | |
| | S275JR | 430 to 580 MPa ^{e)} 410 to 560 MPa ^{f)} | |
| | S275J0 | | |
| | S275J2 | | |
| ^{e)} at nominal thickness < 3 mm ^{f)} at nominal thickness ≥ 3 mm | | | |

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| Nárazová práca KV ^{g)} (min.) | S235JR ^{h)} | 27 J at +20 °C | EN 10025-2 Art. 7.3.1, 7.3.2, Tab. 8 |
| | S235J0 | 27 J at 0 °C | |
| | S235J2 | 27 J at -20 °C | |
| | S275JR ^{h)} | 27 J at +20 °C | |
| | S275J0 | 27 J at 0 °C | |
| | S275J2 | 27 J at -20 °C | |

^{g)} At nominal thickness < 6 mm the Charpy impact test is not performed, in as per EN 10025-1:2005, Article 7.3.2.1

^{h)} The impact properties are verified only when specified at the time of the order.

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| Weldability | Based on carbon equivalent CEV calculation the material is weldable. | EN 10025-2 Art. 7.4.1 |
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| Durability (chemical composition %) | C | Si | Mn | P | S | N | Cu | Cr | Nb | V | Al | Ti | Ni | Mo | CEV | |
|--|----------------------------------|------|------|-----------|-------|---------------------|----------|----|------|------|------|------|------|------|--------|------|
| | max. | max. | max. | | max. | max. | | | max. | max. | min. | max. | max. | max. | max. | |
| | EN 10025-2:2004; Art. 7.2; 7.4.3 | | | | | | | | | | | | | | | |
| | ----- | | | | | | | | | | | | | | | |
| | Tab. 1 | | | | | | | | | | | | | | Tab. 5 | |
| S235JR | 0,17 | - | 1,40 | max.0,035 | 0,035 | 0,012 ^{j)} | max.0,55 | - | - | - | - | - | - | - | - | 0,35 |
| S235J0 | 0,17 | - | 1,40 | max.0,030 | 0,030 | 0,012 ^{j)} | max.0,55 | - | - | - | - | - | - | - | - | 0,35 |
| S235J2 | 0,17 | - | 1,40 | max.0,025 | 0,025 | - | max.0,55 | - | - | - | - | - | - | - | - | 0,35 |
| S275JR | 0,21 | - | 1,50 | max.0,035 | 0,035 | 0,012 ^{j)} | max.0,55 | - | - | - | - | - | - | - | - | 0,40 |
| S275J0 | 0,18 | - | 1,50 | max.0,030 | 0,030 | 0,012 ^{j)} | max.0,55 | - | - | - | - | - | - | - | - | 0,40 |
| S275J2 | 0,18 | - | 1,50 | max.0,025 | 0,025 | - | max.0,55 | - | - | - | - | - | - | - | - | 0,40 |

^{j)} For grades suitable for cold roll forming max. 0,22 % C max.

^{k)} The max. value for Nitrogen does not apply if the chemical composition shows a minimum total Al content of 0,020 % or alternatively sufficient other binding elements are present.

The Declaration of performance for download: <http://www.usske.sk/sk/produkty/ocel-valcovana-za-tepla/vyhlasenie-o-parametroch>

8. The performance of the product identified above is in conformity with the set of declared performance/s. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

The declaration of performance is valid since June 1, 2022

Name: Ing. Štefan Novák
Position: Director of Hot Rolling Mill DP

Ing. Radomír Chovanec
Head of department QMS

Signature:


