

U. S. Steel Košice, s. r. o. (hereinafter USSK) guarantees that during the guarantee period the hot dip galvanized sheets with organic coatings produced by USSK will not peel or otherwise fragment, display abnormal color change or suffer perforation of metal sheet that causes leaks. The guarantee period is counted from the date of delivery to the Buyer.

Guarantee is valid for organic coatings applied in minimum nominal thickness according to table 1.

**Table 1** Guarantee period for hot dip galvanized sheets with organic coatings

| Symbol | Coating type                | Nominal thickness on top side (µm) | Guarantee for metal sheet perforation |    |    | Guarantee for colorfastness and paint peeling |    |    |
|--------|-----------------------------|------------------------------------|---------------------------------------|----|----|---|----|----|
|        |                             |                                    | C1 – C2                               | C3 | C4 | C1 – C2                                       | C3 | C4 |
| PUR    | Polyurethane                | 50*                                | 40                                    | 30 | 20 | 20  | 17 | 15 |
|        |                             | 40                                 | 30                                    | 20 | -  | 20  | 15 | -  |
|        | Textured Polyurethane       | 50*                                | 40                                    | 30 | 20 | 20  | 17 | 15 |
| HDP    | High Durable Polyester      | 50*                                | 40                                    | 25 | 15 | 20  | 15 | 12 |
|        |                             | 35                                 | 20                                    | 17 | -  | 15  | 12 | -  |
|        |                             | 25                                 | 12                                    | 10 | -  | 12  | 10 | -  |
| HBP    | High Build Polyester        | 50*                                | 45                                    | 30 | 20 | 20  | 17 | 15 |
|        |                             | 40                                 | 30                                    | 20 | -  | 20  | 15 | -  |
|        |                             | 35                                 | 20                                    | 17 | -  | 15  | 12 | -  |
| SP     | Standard Polyester          | 25                                 | 10                                    | 10 | -  | 10  | 10 | -  |
|        | Standard Textured Polyester | 35                                 | 15                                    | 15 | -  | 12  | 10 | -  |
|        |                             | 25                                 | 10                                    | 10 | -  | 10  | 10 | -  |
| PVDF   | Polyvinylidenfluorid        | 28                                 | 15                                    | 12 | -  | 12  | 12 | -  |

\*Applies for zinc coating 275g/m<sup>2</sup> only.

USSK declares that the characteristics of the hot dip galvanized sheets with organic coatings are in accordance with valid standards EN 10346, EN 10169:2010.

Guarantee is valid for zinc coatings min 225 g/m<sup>2</sup>. At differential zinc coatings the exposed side must have min 120 g/m<sup>2</sup>. Preferably recommended is zinc coating 275 g/m<sup>2</sup>.

The guarantee is valid for standard coatings in normal environments as described in EN ISO 12944-2:2017 (see also EN10169:2010+A1:2012) under C1–C4, see table 2.

Utilization of prepainted steel in environments with corrosivity class C5-I/M must be specified in purchase order in advance. Appropriate coating system and guarantee period will be agreed individually.

**Table 2** Description of environmental corrosivity (EN ISO 12944-2:2017)

| Corrosivity class | Environmental corrosivity | Environment example – exterior (informative only)   | Appropriate coating system |
|-------------------|---------------------------|---|----------------------------|
| C1                | Very low                  | -   | All                        |
| C2                | Low                       | Atmospheres with low levels of air pollutants, mainly rural environment.  | All                        |
| C3                | Moderate                  | Urban and industry atmospheres with moderate levels of air pollution by sulphur dioxide, coastal atmospheres with a low degree of salinity. | All                        |
| C4                | High                      | Industrial atmospheres and coastal atmospheres with a moderate degree of salinity.  | PUR 50; HDP 50; HBP 50     |
| C5-I              | Very high (Industrial)    | Industrial environment with high humidity and aggressive atmospheres.   | * After prior agreement    |
| C5-M              | Very high (Maritime)      | Coastal and offshore environment with high levels of salinity.  | * After prior agreement    |

Applicable zone of hot dip galvanized sheets with organic coatings should be distant from the coast at least 3km.



For interior applications the ambience in buildings and objects is classified in different categories according to the aggressivity and the risk of condensation. If the intended ambience is not specified in purchase order, standardly considered is environment in category A1 and A2, as defined in EN10169. Examples:

A1: offices, schools, residential (except kitchens and bathrooms), dry storage etc.

A2: sports halls, cinemas, theatres, cold stores, supermarkets etc.

Utilization of prepainted steel in interior environments with categories A3-A5 must be specified in purchase order in advance.

Guarantee will be assumed only when organic coatings on sheets were not mechanically or chemically damaged and when certain accurately established principles of transport, storage and handling were observed. Installation, annual inspection and maintenance have to be carried out in a professional manner. For more details see “Recommendations related to transport and storage of organic coated sheets” and “Cleaning and maintenance of painted surface” available on our website ([www.usske.sk](http://www.usske.sk)).

Guarantee does not cover:

- Uniform change of color, fading of coating color, changes in coating color caused by dust and changes in gloss of coating.
- Guarantee is binding only in cases when the product was used under normal environmental conditions. Guarantee does not cover any damage of the coating caused by extraordinary meteorological conditions, acts of nature or caused by force majeure, products used in the aggressive environment (industrial pollutants, fumes or deleterious gases, ammonia, chlorine, saltpeter, salts or other chemical substances, etc.) and damage due to war, riots and terrorist actions.
- Guarantee does not cover the products, which were in contact with corroded objects, aggressive chemicals, structural elements manufactured of copper and with liquids flowing out of copper pipes.
- Guarantee does not cover color differences in coils, which were not manufactured in one production batch.
- Guarantee does not cover damages arising during improper forming of organic coated sheets, also sheets which were stored for the period exceeding 6 months, and which were formed at temperatures below 18°C.
- Guarantee does not cover damages arising from long contact of organic coatings with protective film. This shall be removed latest 3 months after its application and immediately after installation of product.
- Guarantee does not apply to cut edges and additionally made openings, which were not adequately protected by protective paint.
- Guarantee does not cover damages arising from incorrect storage of sheets.
- Guarantee does not cover damages originating during forming, transport and installation caused by mechanical or chemical effects, including contamination of the coating by metal particles produced during cutting, milling or boring operations or any assembling operations realized at building site.
- Guarantee does not cover damages arising from incorrect and unprofessional method of installation and unsuitable placement of products in the final place of their use (roof slope less than 5% which can lead to accumulation of water/dirt, overlapping, chimneys, etc.). It is recommended regular maintenance - annual washing with use of non-abrasive and mild detergents and immediate treatments of any initial signs of corrosion.
- Guarantee does not cover the corrosion of reverse sides of coated products and corrosion of organic coatings that have been repaired by painting.



Guarantee claim:

- Guarantee is valid from the date of delivery to the Buyer.
- Guarantee claim requires unambiguous identification of the claimed product (e.g. purchase contract number, USSK coil number) and submission of this “Guarantee Form” together with the invoice for purchase of the goods. Additionally, the Buyer must provide all information necessary to analyze the claim and which USSK reserves the right to request.
- Guarantee claim procedure can be started only when min. 5% of all sheets used in production/construction are damaged and prior the defect spreads to area over 10% of the surface. The defects must be notified immediately after their ascertainment and a claim must be lodged in writing within 15 days from the detection of the defect.
- USSK will replace the acknowledged damaged coatings with new material, or it will reimburse the cost of renovation of the product. USSK has the right of selection of one of the above-mentioned methods of settlement of claim. However, USSK will not be liable for any indirect costs or damages arising from the damage of coating (dismantling, installation costs).
- Responsibility of the manufacturer is limited by the invoice issued by USSK during sale of the product, which is the subject of claim. Under no circumstances shall this guarantee cover any cost in excess of the original invoice amount after deduction of all taxes.
- After expiration of the guarantee period, the claims will not be acknowledged.

Compensation rules:

If a legitimate claim is made under the terms of this guarantee, USSK has the right to select the method of claim settlement, which must be the most practical method and at reasonable cost agreed with the Buyer on a case by case basis in accordance to conditions of the Agreement. Selected settlement method is limited solely to damaged areas, undamaged areas will not be subject to compensation of any kind.

The compensation value takes into consideration the elapsed time when the subject under the claim has fulfilled its function until the date of claim. The original invoiced value (excluding VAT) of accepted defective amount as per Agreement with the Buyer will be decreased by the compensation coefficient as follows:

- Claim submitted within first 5 years of service:
  - coefficient = 1.00
- Claim submitted over 5 years of service:
  - coefficient = remaining years of guarantee/(guaranteed period in years – 5 years)

The “General Delivery Terms and Conditions of Sale”, “Recommendations related to transport and storage of organic coated sheets” and “Cleaning and maintenance of painted surface” are an integral part of this Guarantee.

Notes:

The life service of hot dip galvanized sheets with organic coatings is influenced by many other factors and the details cannot be included in this Guarantee. The user of hot dip galvanized sheets with organic coatings has to consider the environment of utilization in order to employ all benefits of this material and maximize its service to his needs. For advices and recommendations visit our website ([www.usske.sk](http://www.usske.sk)).

There is no exact formula or test for calculations of lifetime. Guaranteed period is estimated time for material to fulfill its designation based on results of accelerated tests and common cognition and experience in this branch.

The color difference at metallic, textured or wrinkled topcoats cannot be measured technically.