SLOVENSKI STANDARD
SIST EN ISO 21809-2:2026

01-april-2026

Naftna in plinska industrija, vključno z nizkoogljično energijo - Zunanje prevleke za cevovode, zakopane v zemljo ali potopljene v vodo, v sistemih cevovodnega transporta - 2. del: Enoplastne epoksidne prevleke, nataljene na podlago (ISO 21809-2:2026)

Oil and gas industries including lower carbon energy - External coatings for buried or submerged pipelines used in pipeline transportation systems - Part 2: Single layer fusion-bonded epoxy coatings (ISO 21809-2:2026)

Industries du pétrole et du gaz, y compris les énergies à faible teneur en carbone - Revêtements externes des conduites enterrées ou immergées utilisées dans les systèmes de transport par conduites - Partie 2: Revêtements monocouche à base de résine époxydique appliquée par fusion (ISO 21809-2:2026)

Ta slovenski standard je istoveten z: **EN ISO 21809-2:2026**

ICS:

25.220.99	Druge obdelave in prevleke	Other treatments and coatings
75.200	Oprema za skladiščenje nafte, naftnih proizvodov in zemeljskega plina	Petroleum products and natural gas handling equipment

SIST EN ISO 21809-2:2026 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 21809-2

February 2026

ICS 75.200

Supersedes EN ISO 21809-2:2014

English Version

Oil and gas industries including lower carbon energy - External coatings for buried or submerged pipelines used in pipeline transportation systems - Part 2: Single layer fusion-bonded epoxy coatings (ISO 21809-2:2026)

Industries du pétrole et du gaz, y compris les énergies à faible teneur en carbone - Revêtements externes des conduites enterrées ou immergées utilisées dans les systèmes de transport par conduites - Partie 2: Revêtements monocouche à base de résine époxydique appliquée par fusion (ISO 21809-2:2026)

This European Standard was approved by CEN on 14 February 2026.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN ISO 21809-2:2026 E

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European foreword

This document (EN ISO 21809-2:2026) has been prepared by Technical Committee ISO/TC 67 "Oil and gas industries including lower carbon energy" in collaboration with Technical Committee CEN/TC 459/SC 10 “Steel tubes, and iron and steel fittings” the secretariat of which is held by UNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 2026, and conflicting national standards shall be withdrawn at the latest by August 2026.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

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Endorsement notice

The text of ISO 21809-2:2026 has been approved by CEN as EN ISO 21809-2:2026 without any modification.

International Standard

ISO 21809-2

Third edition
2026-02

Oil and gas industries including lower carbon energy — External coatings for buried or submerged pipelines used in pipeline transportation systems —

Part 2: Single-layer fusion-bonded epoxy coatings

Industries du pétrole et du gaz, y compris les énergies à faible teneur en carbone — Revêtements externes des conduites enterrées ou immergées utilisées dans les systèmes de transport par conduites —

Partie 2: Revêtements monocouche à base de résine époxydique appliquée par fusion

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 67, *Oil and gas industries including lower carbon energy*, Subcommittee SC 2, *Pipeline transportation systems,* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 459/SC 10, *Steel tubes, and iron and steel fittings,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 21809-2:2014), which has been technically revised.

The main changes are as follows:

— inclusion of new classifications for materials with glass transitions greater than 115 °C;

— inclusion of a qualification scheme;

— harmonization with the other parts of the ISO 21809 series;

— renumbering and rearranging of the annexes;

— changes in various annexes.

A list of all the parts in the ISO 21809 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Oil and gas industries including lower carbon energy — External coatings for buried or submerged pipelines used in pipeline transportation systems —

Part 2: Single-layer fusion-bonded epoxy coatings

1 Scope

This document specifies the requirements for qualification, application, inspection, testing handling and storage of materials for plant application of single-layer fusion-bonded epoxy (FBE) coatings applied externally for the corrosion protection of bare steel pipe for use in pipeline transportation systems for oil and gas industries as defined in ISO 13623.

NOTE Pipes coated in accordance with this document are considered suitable for additional protection by means of cathodic protection.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 8130-2, *Coating powders — Part 2: Determination of density by gas comparison pycnometer (referee method)*

ISO 8130-3, *Coating powders — Part 3: Determination of density by liquid displacement pycnometer*

ISO 8501-1, *Preparation of steel substrates before application of paints and related products — Visual assessment of surface cleanliness — Part 1: Rust grades and preparation grades of uncoated steel substrates and of steel substrates after overall removal of previous coatings*

ISO 8502-3, *Preparation of steel substrates before application of paints and related products — Tests for the assessment of surface cleanliness — Part 3: Assessment of dust on steel surfaces prepared for painting (pressure-sensitive tape method)*

ISO 8502-6, *Preparation of steel substrates before application of paints and related products — Tests for the assessment of surface cleanliness — Part 6: Extraction of water soluble contaminants for analysis (Bresle method)*

ISO 8502-9, *Preparation of steel substrates before application of paints and related products — Tests for the assessment of surface cleanliness — Part 9: Field method for the conductometric determination of water-soluble salts*

ISO 8503-4, *Preparation of steel substrates before application of paints and related products — Surface roughness characteristics of blast-cleaned steel substrates — Part 4: Method for the calibration of ISO surface profile comparators and for the determination of surface profile — Stylus instrument procedure*

ISO 8503-5, *Preparation of steel substrates before application of paints and related products — Surface roughness characteristics of blast-cleaned steel substrates — Part 5: Replica tape method for the determination of the surface profile*

ISO 10474, *Steel and steel products — Inspection documents*

ISO 11124 (all parts), *Preparation of steel substrates before application of paints and related products — Specifications for metallic blast-cleaning abrasives*

ISO 11126 (all parts), *Preparation of steel substrates before application of paints and related products — Specifications for non-metallic blast-cleaning abrasives*

ISO 11357-1, *Plastics — Differential scanning calorimetry (DSC) — Part 1: General principles*

ISO 11357-2, *Plastics — Differential scanning calorimetry (DSC) — Part 2: Determination of glass transition temperature and step height*

ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories*

ISO 19840, *Paints and varnishes — Corrosion protection of steel structures by protective paint systems — Measurement of, and acceptance criteria for, the thickness of dry films on rough surfaces*

ISO 80000-1, *Quantities and units — Part 1: General*

EN 10204, *Metallic products — Types of inspection documents*

ASTM D4285, *Standard Test Method for Indicating Oil or Water in Compressed Air*

ASTM D4940, *Standard Test Method for Conductimetric Analysis of Water Soluble Ionic Contamination of Blasting Abrasives*

SSPC-AB 1, *Mineral and Slag Abrasives*

SSPC-AB 2, *Cleanliness of Recycled Ferrous Metallic Abrasives*

SSPC-AB 3, *Ferrous Metallic Abrasive*

SSPC-PA2, *Procedure for Determining Conformance to Dry Coating Thickness Requirements*

SSPC-SP 1, *Solvent cleaning*

SSPC-Guide 15, *Field Methods for Extraction and Analysis of Soluble Salts on Steel and Other Nonporous Substrates*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
adhesion
bond between coating and substrate

3.2
application procedure specification
APS
document describing procedures, methods, equipment and tools used for coating application

3.3
applicator
company that undertakes the coating application

Note 1 to entry: The coating application shall be in accordance with this document.

3.4
batch
quantity of material produced in a continuous manufacturing operation using raw materials of the same source and grade

3.5
batch certificate
document provided by the *manufacturer* (3.17) that contains the results of specific tests or analysis, including test methodology, performed on a defined lot of the manufacturer's product and corresponding conformity ranges for each coating system

3.6
coating qualification
CQ
qualification of the coating materials properties carried out by the *manufacturer* (3.17) before the *coating system qualification* (3.7)

3.7
coating system qualification
CSQ
qualification of application method, applied coating system and subsequent inspection or testing of its properties, to confirm that the *APS* (3.2) is adequate to produce a coating with the specified properties

3.8
cutback
length of pipe left uncoated at each end for joining purposes

3.9
design temperature
temperature, that can be endured by a *pipeline* (3.24) (component) during operation, including maximum and minimum temperatures, likely to be reached during transport, storage, handling, installation, upset conditions and operation

Note 1 to entry: The design temperature range of the coating can be narrower than that specified for the steel pipe material.

3.10
dummy pipe
pipe having the same outside diameter and wall thickness of the project pipes

Note 1 to entry: Dummy pipes and coated dummy pipes shall be representative of the production and shall be coated in accordance with approved *APS* (3.2).

3.11
end user
company (or companies) that owns or operates *pipeline(s)* (3.24)

Note 1 to entry: There can be a combination of ownership and operating.

3.12
glass transition
reversible change in an amorphous polymer or in amorphous regions of a partially crystalline polymer from (or to) a viscous or rubbery condition to (or from) a hard and relatively brittle one