



**NSAI**  
Standards

Irish Standard  
I.S. EN ISO 18797-1:2017

Petroleum, petrochemical and natural gas industries - External corrosion protection of risers by coatings and linings - Part 1: Elastomeric coating systems-polychloroprene or EPDM (ISO 18797-1:2016)

**I.S. EN ISO 18797-1:2017**

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## National Foreword

I.S. EN ISO 18797-1:2017 is the adopted Irish version of the European Document EN ISO 18797-1:2017, Petroleum, petrochemical and natural gas industries - External corrosion protection of risers by coatings and linings - Part 1: Elastomeric coating systems-polychloroprene or EPDM (ISO 18797-1:2016)

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EUROPEAN STANDARD

**EN ISO 18797-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2017

ICS 75.180.10

English Version

**Petroleum, petrochemical and natural gas industries -  
External corrosion protection of risers by coatings and  
linings - Part 1: Elastomeric coating systems-  
polychloroprene or EPDM (ISO 18797-1:2016)**

Industries du pétrole, de la pétrochimie et du gaz  
naturel - Protection de la corrosion externe des risers  
par revêtements et doublures - Partie 1: Systèmes de  
revêtement élastomère-polychloroprène ou EPDM (ISO  
18797-1:2016)

Erdöl-, petrochemische und Erdgasindustrie - Äußerer  
Korrosionsschutz von Steilgeitungen durch  
Beschichtungen und Auskleidungen - Teil 1:  
Elastomerisches Beschichtungssystem -  
Polychloropren oder EPDM (ISO 18797-1:2016)

This European Standard was approved by CEN on 23 August 2017.

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**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

**EN ISO 18797-1:2017 (E)**

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## **European foreword**

The text of ISO 18797-1:2016 has been prepared by Technical Committee ISO/TC 67 “Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 18797-1:2017 by Technical Committee CEN/TC 12 “Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries” the secretariat of which is held by NEN.

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of an identical text or by endorsement, at the latest by March 2018, and conflicting national standards shall be withdrawn at the latest by March 2018.

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 18797-1:2016 has been approved by CEN as EN ISO 18797-1:2017 without any modification.

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INTERNATIONAL  
STANDARD

ISO  
18797-1

First edition  
2016-09-01

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**Petroleum, petrochemical and natural  
gas industries — External corrosion  
protection of risers by coatings and  
linings —**

**Part 1:  
Elastomeric coating systems-  
polychloroprene or EPDM**

*Industries du pétrole, de la pétrochimie et du gaz naturel —  
Protection de la corrosion externe des risers par revêtements et  
doublures —*

*Partie 1: Systèmes de revêtement élastomère-polychloroprène ou EPDM*



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**ISO 18797-1:2016(E)**



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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 documents 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](http://www.iso.org/directives)).

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For an explanation on 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 the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

The committee responsible for this document is ISO/TC 67, *Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries*.

A list of all parts in the ISO 18797 series can be found on the ISO website.

## **ISO 18797-1:2016(E)**

### **Introduction**

This document is based on GSO 2273. This document defines the minimum technical requirements for the external corrosion protection of risers by coatings and linings based on elastomeric coating systems-polychloroprene, EPDM or equivalent elastomeric coatings that are employed in the oil and gas industry and provides technical guidance for developing local standards and specifications in order to ensure compliance in coating and lining material selection and performance with contract requirements.

Users of this document need to be aware that further or differing requirements can be needed for individual applications. This document is not limiting the contractor and/or manufacturer from proposing or company from accepting alternative engineering solutions for the individual application. This can be particularly applicable where there is innovative or developing technology. Where an alternative is proposed, the specification issuer needs to identify any deviations from this document and provide details.

This document does not incorporate any form of passive fireproofing requirements or any related compatibility issues. Any requirements with regards to passive fireproofing are to be addressed separately.

# Petroleum, petrochemical and natural gas industries — External corrosion protection of risers by coatings and linings —

## Part 1: Elastomeric coating systems-polychloroprene or EPDM

### 1 Scope

This document specifies the minimum requirements for materials selection, surface preparation, application, inspection, testing, qualification and acceptance criteria of external coating for steel riser pipes used in the splash zone, their field joints and clamps/guides, using an elastomeric protective coating based on polychloroprene, EPDM or equivalent. This is applicable for new construction and repair of applied pipes before installation. Maintenance requirements and field repairs are covered in ISO 18797-2.

This document also specifies the requirements for transportation, handling and storage of riser pipes before and after surface preparation and coating application.

### 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 34 (all parts), *Rubber, vulcanized or thermoplastic — Determination of tear strength*

ISO 37, *Rubber, vulcanized or thermoplastic — Determination of tensile stress-strain properties*

ISO 48, *Rubber, vulcanized or thermoplastic — Determination of hardness (hardness between 10 IRHD and 100 IRHD)*

ISO 813, *Rubber, vulcanized or thermoplastic — Determination of adhesion to rigid substrate — 90 degree peel method* [alternative to ISO 814]

ISO 814, *Rubber, vulcanized or thermoplastic — Determination of adhesion to metal — Two-plate method* [alternative to ISO 813]

ISO 815-1, *Rubber, vulcanized or thermoplastic — Determination of compression set — Part 1: At ambient or elevated temperatures*

ISO 815-2, *Rubber, vulcanized or thermoplastic — Determination of compression set — Part 2: At low temperatures*

ISO 1431-1, *Rubber, vulcanized or thermoplastic — Resistance to ozone cracking — Part 1: Static and dynamic strain testing*

ISO 1817, *Rubber, vulcanized or thermoplastic — Determination of the effect of liquids*

ISO 2781, *Rubber, vulcanized or thermoplastic — Determination of density*

ISO 2812-2, *Paints and varnishes — Determination of resistance to liquids — Part 2: Water immersion method*

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