# INTERNATIONAL STANDARD

# ISO 10931-1

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# Plastics piping systems for industrial applications — Poly(vinylidene fluoride) (PVDF) —

## Part 1: General

*Système de canalisation en matières plastiques pour les applications industrielles — Poly(fluorure de vinylidène) (PVDF) —*

*Partie 1: Généralités*

Reference number
ISO 10931-1:1997(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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 10931-1 was prepared by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 3, *Plastics pipes and fittings for industrial applications*.

ISO 10931 consists of the following parts, under the general title *Plastics piping systems for industrial applications — Poly(vinylidene fluoride) (PVDF)*:

— *Part 1: General*

— *Part 2: Pipes*

— *Part 3: Fittings*

— *Part 4: Valves and auxiliary equipment*

— *Part 5: Fitness for system purpose*

— *Part 6: Recommendations for installation*

Annexes A and B of this part of ISO 10931 are for information only.

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International Organization for Standardization
Case postale 56 • CH-1211 Genève 20 • Switzerland
Internet central@iso.ch
X.400 c=ch; a=400net; p=iso; o=isocs; s=central

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# Introduction

ISO 10931, which is divided into six parts (see Foreword), specifies the properties of pipes and piping system components made of poly(vinylidene fluoride) (PVDF) for industrial applications. It includes recommendations for installation (see ISO 10931-6) and is intended to be used by authorities, design engineers, testing and certification institutes and manufacturers. This part of ISO 10931 covers general aspects of such piping systems.

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# Plastics piping systems for industrial applications — Poly(vinylidene fluoride) (PVDF) —

# Part 1: General

## 1 Scope

This part of ISO 10931 specifies the general requirements for piping systems made of poly(vinylidene fluoride) (PVDF) intended for industrial applications which include the conveyance of water and chemicals in liquid and gaseous forms. In conjunction with parts 2 to 6 of ISO 10931, it covers PVDF pipes, fittings, valves and ancillary equipment, as well as information related to methods of jointing to components made of other plastics and nonplastics materials.

It also specifies the parameters for the test methods referred to in this part of ISO 10931.

It is applicable to PVDF pipe systems for use at temperatures up to 150 °C. However, for applications above 120 °C, which depend upon the crystalline melting point of the specific PVDF grade being used, the advice of the pipe and fittings manufacturers should be sought.

NOTE — For information about the resistance of PVDF piping components in contact with chemicals, see ISO/TR 10358.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 10931. At the time of publication, the editions indicated were valid. All standards are subject to revisions, and parties to agreements based on this part of ISO 10931 are encouraged to investigate the possibility of applying the most recent editions of the standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 3:1973, *Preferred numbers — Series of preferred numbers.*

ISO 7686:1992, *Plastics pipes and fittings — Opacity — Test method.*

ISO/TR 8584-2:1993, *Thermoplastics pipes for industrial applications under pressure — Determination of the chemical resistance factor and of the basic stress — Part 2: Pipes made of halogenated polymers.*

ISO/TR 9080:1992, *Thermoplastics pipes for the transport of fluids — Methods of extrapolation of hydrostatic stress rupture data to determine the long-term hydrostatic strength of thermoplastics pipe materials.*

ISO 11922-1:1977[1)], *Thermoplastics pipes for transport of fluids — Dimensions and tolerances — Part 1: Metric series.*

1) To be published.