INTERNATIONAL STANDARD

**ISO 13775-2**

Second edition
2016-12-15

# Thermoplastic tubing and hoses for automotive use —

## Part 2: Petroleum-based-fuel applications

*Tubes et tuyaux en thermoplastique pour l'industrie automobile —*

*Partie 2: Applications pour carburants à base de pétrole*

Reference number
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ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

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# Foreword

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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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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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.

The committee responsible for this document is ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 1, *Rubber and plastics hoses and hose assemblies*.

This second edition cancels and replaces the first edition (ISO 13775-2:2000), which has been technically revised.

ISO 13775 consists of the following parts, under the general title *Thermoplastic tubing and hoses for automotive use*:

— *Part 1: Non-fuel applications*

— *Part 2: Petroleum-based-fuel applications*

# Introduction

This part of ISO 13775 defines the requirements of extruded thermoplastic tubing/hoses for petroleum-based-fuel applications for automotive use. In addition, it can also be applied as a classification system to enable original equipment manufacturers (OEMs) to detail a "line call-out" of tests for specific applications where these are not covered by the six main types (see example in Annex A). In this case, the tubing or hose would not carry any marking showing this ISO specification number, but could detail the OEM's own identification markings as shown on their part drawings.

# Thermoplastic tubing and hoses for automotive use —

# Part 2:
# Petroleum-based-fuel applications

**WARNING — Persons using this part of ISO 13775 should be familiar with normal laboratory practice. This part of ISO 13775 does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any national regulatory conditions.**

## 1 Scope

This part of ISO 13775 specifies test requirements and test methods for extruded thermoplastic tubing and hoses for use in petroleum-based-fuel lines in vehicles powered by internal-combustion engines.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 188, *Rubber, vulcanized or thermoplastic — Accelerated ageing and heat resistance tests*

ISO 1402, *Rubber and plastics hoses and hose assemblies — Hydrostatic testing*

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

ISO 4926, *Road vehicles — Hydraulic braking systems — Non-petroleum-base reference fluids*

ISO 7628, *Road vehicles — Thermoplastics tubing for air braking systems*

ISO 8031:2009, *Rubber and plastics hoses and hose assemblies — Determination of electrical resistance and conductivity*

ISO 8033, *Rubber and plastics hoses — Determination of adhesion between components*

ISO 8308, *Rubber and plastics hoses and tubing — Determination of transmission of liquids through hose and tubing walls*

ISO 10619-1, *Rubber and plastics hoses and tubing — Measurement of flexibility and stiffness — Part 1: Bending tests at ambient temperature*

ISO 19013-2:2016, *Rubber hoses and tubing for fuel circuits for internal combustion engines — Specification — Part 2: Gasoline fuels*

ISO 30013, *Rubber and plastics hoses — Methods of exposure to laboratory light sources — Determination of changes in colour, appearance and other physical properties*

SAE J2260, *Non-metallic Fuel System Tubing with One or More Layers*

## 3 Classification and materials

The product shall consist of an extruded thermoplastic material with or without an integral reinforcement. The product may also have an inner veneer to impart improved fluid resistance and/or