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**SANS 9854-1:1994**

Edition 1 and nat. amdt 1

**ISO 9854-1:1994**

Edition 1

Any reference to SABS ISO 9854-1 is deemed  
to be a reference to this standard  
(Government Notice No. 1373 of 8 November 2002)

## **SOUTH AFRICAN NATIONAL STANDARD**

# **Thermoplastics pipes for the transport of fluids — Determination of pendulum impact strength by the Charpy method**

## **Part 1: General test method**

This national standard is the identical implementation of ISO 9854-1:1994 and is adopted with the permission of the International Organization for Standardization.

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**Table of changes**

<b>Change No.</b>	<b>Date</b>	<b>Scope</b>
Nat. amdt 1	2007	Amended to change the designation from SABS to SANS, with no technical changes.

**National foreword**

This South African standard was approved by National Committee SABS SC 138H, *Water and sanitation – Equipment and systems – Plastics pipes and fittings*, in accordance with procedures of the SABS Standards Division, in compliance with annex 3 of the WTO/TBT agreement.

This SANS document was published in xxxx 2007. This SANS document supersedes SABS ISO 9854-1:1994 (edition 1).

<p><b>Reaffirmed and reprinted in July 2012. This standard will be reviewed every five years and be reaffirmed, amended, revised or withdrawn.</b></p>
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**Thermoplastics pipes for the transport of  
fluids — Determination of pendulum  
impact strength by the Charpy method —**

**Part 1:**  
General test method

*Tubes thermoplastiques pour le transport des fluides — Détermination de  
la résistance aux chocs pendulaires par la méthode Charpy —*

*Partie 1: Méthode générale d'essai*



Reference number  
ISO 9854-1:1994(E)

## 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 9854-1 was prepared by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 5, *General properties of pipes, fittings and valves of plastic materials and their accessories — Test methods and basic specifications*.

ISO 9854 consists of the following parts, under the general title *Thermoplastics pipes for the transport of fluids — Determination of pendulum impact strength by the Charpy method*:

- Part 1: *General test method*
- Part 2: *Test conditions for pipes of various materials*

Annex A of this part of ISO 9854 is for information only.

# Thermoplastics pipes for the transport of fluids — Determination of pendulum impact strength by the Charpy method —

## Part 1: General test method

### 1 Scope

This part of ISO 9854 specifies the general test method to be used for the determination of the impact strength of unnotched test pieces cut from thermoplastics pipes for the transport of fluids.

It is not intended to be a reference test method for the determination of the impact strength of pipes.

ISO 3127, relating to the determination of the impact strength of pipes by means of a falling mass, is the reference method.

However, this part of ISO 9854 may be used for scientific research, materials testing or the examination of pipes when it is not possible to take measurements in accordance with the reference method.

This part of ISO 9854 may be applied to either isolated batches or continuous production of pipe, and the test may be carried out at  $-20\text{ }^{\circ}\text{C}$ ,  $0\text{ }^{\circ}\text{C}$  or  $23\text{ }^{\circ}\text{C}$ , depending on the pipe material and/or size.

For the test parameters, i.e. impact energy, test piece dimensions, shape and spacing of the test piece supports and type of test piece, to be used to determine the pendulum impact strength of pipes, the specifications for specific materials are given in ISO 9854-2, as appropriate.

NOTE 1 Data obtained from test pieces of different dimensions are not directly comparable.

### 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 9854. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 9854 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 179:1993, *Plastics — Determination of Charpy impact strength.*

ISO 2818:1994, *Plastics — Preparation of test specimens by machining.*

ISO 9854-2:1994, *Thermoplastics pipes for the transport of fluids — Determination of pendulum impact strength by the Charpy method — Part 2: Test conditions for pipes of various materials.*