



BSI Standards Publication

Reclaimed rubber — Coding and classification system

National foreword

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**Reclaimed rubber — Coding and
classification system**

Caoutchouc régénéré — Codage et système et de classification



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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).

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For an explanation on 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 the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 3, *Raw materials (including latex) for use in the rubber industry*.

Introduction

Reclaimed rubber has many variables. Therefore, it becomes difficult for users to differentiate the quality of reclaimed rubber. This classification system in this document will help users to specify the reclaimed rubber they want to use.

Reclaimed rubber — Coding and classification system

1 Scope

This document specifies:

- a coding system of reclaimed natural rubber and reclaimed isobutylene-isoprene (IIR) rubber;
- a numeric system to classify reclaimed rubber.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

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

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

4 Classification system

The reclaimed rubber shall be classified according to [Table 1](#).

The classification depends on:

- the type of the reclaimed rubber: reclaimed rubber derived from natural rubber or from isobutylene-isoprene rubber (IIR);
- the value of Mooney viscosity, tensile strength, rubber hydrocarbon content and acetone extract, determined according to ISO/TS 16095 or ISO/TS 16096.

Table 1 — Classification system

Type of rubber	Natural rubber	Isobutylene-isoprene (IIR) rubber
Class	1	2

Mooney viscosity ML(1+4) at 100 °C		Tensile strength		Rubber hydrocarbon content		Acetone extract	
Code	<i>MV</i>	Code	<i>TS</i> MPa	Code	<i>RHC</i> %	Code	<i>AE</i> %
MVA	$MV \leq 25$	TA	$TS \geq 12,0$	RH1	$RHC > 60$	AE1	$AE \leq 12$
MVB	$25,0 < MV \leq 35,0$	TB	$9,0 \leq TS < 12,0$	RH2	$50,0 < RHC \leq 60$	AE2	$12 < AE \leq 16,6$
MVC	$35,0 < MV \leq 50,0$	TC	$6,0 \leq TS < 9,0$	RH3	$40,0 < RHC \leq 50$	AE3	$16,6 < AE \leq 20,0$
MVD	$50,0 < MV \leq 65,0$	TD	$4,0 \leq TS < 6,0$	RH4	$RHC \leq 40$	AE4	$AE > 20$
MVE	$65,0 < MV \leq 80,0$	TE	$TS < 4,0$	—	—	—	—
MVF	$MV > 80,0$	—	—	—	—	—	—

EXAMPLE 1 A reclaimed rubber derived from natural rubber, with a Mooney viscosity of 42, a tensile strength of 8,0 MPa, a rubber hydrocarbon content of 52 % and an acetone extract of 14 % is designated as follows:

1 MVC TC RH2 AE2

EXAMPLE 2 A reclaimed rubber derived from isobutylene-isoprene (IIR) rubber, with a Mooney viscosity of 34, a tensile strength of 7,5 MPa, a rubber hydrocarbon content of 54 % and an acetone extract of 10 % is designated as follows:

2 MVB TC RH2 AE1

Bibliography

- [1] ISO/TS 16095, *Reclaimed rubber derived from products containing mainly natural rubber — Evaluation procedure*
- [2] ISO/TS 16096, *Reclaimed isobutene-isoprene (IIR) rubber — Evaluation procedure*

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