
**Film for wrapping rubber bales —
Part 2:
Natural rubber**

*Emballage des balles en caoutchouc —
Partie 2: Caoutchouc naturel*

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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

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.

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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*.

This second edition cancels and replaces the first edition (ISO 20299-2:2006), which has been technically revised with the following changes:

- specification of the wrapping material and physical requirements of polyethylene film used for the packing of natural rubber bales comprising of either ribbed smoked sheets or block rubber; the scope has been updated accordingly;
- change of thickness and addition of specific gravity in [5.1](#);
- change of the maximum peak melting temperature in [5.2.3](#);
- addition of a new [Clause 6](#) on marking.

A list of all parts in the ISO 20299 series can be found on the ISO website.

Introduction

Block natural rubber is prepared by comminuting large lumps, washed with plenty of water. It is then dried, baled and packed. The bales are wrapped in clear polyethylene film and packed into metal or wooden crates.

Bale coating on natural rubber ribbed smoked sheet bundles is to prevent stickiness between bales, fungus formation on the external sides and also to allow the stencilling of the grade mark and supplier code. The bale coating solution is a non-reinforcing filler which has no benefit in product manufacturing. Excess bale coating generate ash, which adversely affects the quality of end products and also creates environmental issues.

Shifting to polyethylene wrapping is an alternative option that is beneficial to all, as it is cost effective, environmental friendly, pollution free and healthy practice. However, because it is difficult and uneconomic to strip the film from each bale, an essential feature is that the film should disperse in the rubber compound during mixing. This means that its melting point has to be lower than the temperatures attained in internal mixing cycles, typically 120 °C to 160 °C.

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