



**International
Standard**

ISO 2004

**Natural rubber latex concentrate —
Centrifuged or creamed, ammonia-
preserved types — Specifications**

*Latex concentré de caoutchouc naturel — Types centrifugés ou
crémés, préservés à l'ammoniaque — Spécifications*

**Seventh edition
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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 document 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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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 seventh edition cancels and replaces the sixth edition (ISO 2004:2017), which has been technically revised.

The main changes are as follows:

- the reference to ISO 8053 has been replaced by ISO 6101-3 in Clause 2 and in Table 1;
- type XA has been replaced by type MA in [3.4](#) and in [Table 1](#);
- the total solid content of the creamed type latex has been added in [3.5](#) and in [3.6](#);
- the total solids content for type HA creamed and type LA creamed in [Table 1](#) has been changed from "65,0 %" to "65,0 % or as agreed between the two parties".

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Natural rubber latex concentrate — Centrifuged or creamed, ammonia-preserved types — Specifications

1 Scope

This document gives specifications for natural rubber latex concentrate types which are preserved wholly or in part with ammonia and which have been produced by centrifuging or creaming.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 35, *Natural rubber latex concentrate — Determination of mechanical stability*

ISO 123, *Rubber latex — Sampling*

ISO 124, *Latex, rubber — Determination of total solids content*

ISO 125, *Natural rubber latex concentrate — Determination of alkalinity*

ISO 126, *Natural rubber latex concentrate — Determination of dry rubber content*

ISO 127, *Rubber, natural latex concentrate — Determination of KOH number*

ISO 506, *Rubber latex, natural, concentrate — Determination of volatile fatty acid number*

ISO 706, *Rubber latex — Determination of coagulum content (sieve residue)*

ISO 2005, *Rubber latex, natural, concentrate — Determination of sludge content*

ISO 6101-3, *Rubber — Determination of metal content by atomic absorption spectrometry — Part 3: Determination of copper content*

ISO 7780, *Rubbers and rubber latices — Determination of manganese content — Sodium periodate photometric methods*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

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

3.1

natural rubber latex concentrate

natural rubber latex containing ammonia and/or other preservatives, which has been subjected to some process of concentration

3.2**type HA**

centrifuged latex preserved after concentration with ammonia only, with an alkalinity of at least 0,60 % (by mass) calculated with respect to the latex

3.3**type LA**

centrifuged latex preserved after concentration with ammonia together with other preservatives, with an alkalinity of not more than 0,29 % (by mass) calculated with respect to the latex

3.4**type MA**

centrifuged latex preserved after concentration with ammonia together with other preservatives, with an alkalinity between 0,30 % and 0,59 % (by mass) calculated with respect to the latex

3.5**creamed type HA**

creamed latex preserved after concentration with ammonia only, with an alkalinity of at least 0,55 % (by mass) calculated with respect to the latex

3.6**creamed type LA**

creamed latex preserved after concentration with ammonia together with one or more additional preservatives, with an alkalinity of not more than 0,35 % (by mass) calculated with respect to the latex

4 Requirements

The latex concentrate shall conform to all the requirements given in [Table 1](#).

If one or more preservatives other than ammonia are added to the latex concentrate, the chemical nature and approximate quantity of such preservative(s) shall be stated. The latex concentrate shall not contain fixed alkali added at any stage in its production.

Table 1 — Requirements

Characteristic	Type HA	Type LA	Type MA	Creamed Type HA	Creamed Type LA	Method of test
Total solids content, min., % (by mass)	61,0 or as agreed between the two parties			65,0 or as agreed between the two parties		ISO 124
Dry rubber content, min., % (by mass)	60,0	60,0	60,0	64,0	64,0	ISO 126
Non-rubber solids, max. ^a , % (by mass)	1,7	1,7	1,7	1,7	1,7	—
Alkalinity (as NH ₃), calculated with respect to the latex concentrate, % (by mass)	0,60 min.	0,29 max.	0,30 to 0,59	0,55 min.	0,35 max.	ISO 125
Mechanical stability, min. ^b , seconds	650	650	650	650	650	ISO 35
Coagulum content, max., % (by mass)	0,02	0,02	0,02	0,02	0,02	ISO 706
Copper content, max., mg/kg of total solids	8	8	8	8	8	ISO 6101-3
Manganese content, max., mg/kg of total solids	8	8	8	8	8	ISO 7780
^a The difference between the total solids content and the dry rubber content.						
^b The mechanical stability time normally stabilizes between 21 and 35 days when the latex is fully matured.						