



**International
Standard**

ISO 6472

**Rubber compounding ingredients —
Abbreviated terms**

Ingrédients de mélange du caoutchouc — Termes abrégés

**Sixth edition
2024-04**

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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 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).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*.

This sixth edition cancels and replaces the fifth edition (ISO 6472:2017), which has been technically revised.

The main changes are as follows:

- new ingredients and their abbreviations have been added;
- di-tert-butyl peroxide (DTBP) has been removed from [Table 1](#) due to its high risk of ignition in rubber applications.

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.

Rubber compounding ingredients — Abbreviated terms

1 Scope

This document establishes unambiguous abbreviated terms for commonly used rubber compounding ingredients of known, specific chemical composition.

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 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/>

4 Notation conventions used in this document

4.1 The abbreviated terms are derived from common usage in industry and commerce rather than from any systematic nomenclature. The list is not intended to conflict with, but rather to act as a supplement to, existing trade names and trademarks.

4.2 When abbreviated terms first appear in a text, they shall be enclosed in parentheses and shall be preceded by the chemical name written in full.

4.3 The list does not purport to be comprehensive, and abbreviated terms for other compounding ingredients will be added in future revisions of this document.

4.4 International Union of Pure and Applied Chemistry (IUPAC) nomenclature is provided where this is available, in addition to the commonly used chemical name or names. In some instances, alternative commonly used chemical names are given where they are recognized. For those materials whose chemical formula cannot be specified, such as reaction products or polymerized products, the identification of IUPAC is “not possible”. Chemical Abstracts Service Registry Number (CAS RN) is also provided unless “not available”.

4.5 Unlike ISO 1043-3, which uses the letter F for phosphates, this document uses the letter P, because P is used universally to designate phosphates and other phosphorous compounds and the letter F is used universally to designate fluorine and its compounds; this usage would thus minimize the confusion among those using this document.

5 Accelerators, co-agents and vulcanizing agents

See [Table 1](#).

Table 1 — Accelerators, co-agents and vulcanizing agents

Number	Abbreviated term	Common chemical name, IUPAC name and CAS RN (where available)
1	AB	ammonium benzoate IUPAC: ammonium benzoate CAS RN: 1863-63-4
2	BA	butyraldehyde-aniline condensate IUPAC: not possible CAS RN: 68411-20-1
3	BiDMC	bismuth dimethyldithiocarbamate IUPAC: bismuth tris(dimethyldithiocarbamate) CAS RN: 21260-46-8
4	BPEH	<i>OO-tert-Butyl O-(2-ethylhexyl) peroxy</i> carbonate IUPAC: <i>tert-butoxy 2-ethylhexyl carbonate</i> CAS RN: 34443-12-4
5	BPO	benzoyl peroxide IUPAC: dibenzoyl peroxide CAS RN: 94-36-0
6	BPV	<i>n</i> -butyl bis(4,4- <i>tert</i> -butylperoxy)valerate; 3,3-bis(<i>tert</i> -butylperoxy)butane carboxylic acid <i>n</i> -butyl ester IUPAC: butyl 4,4-bis(<i>tert</i> -butyldioxy)valerate CAS RN: 995-33-5
7	BQD	<i>p</i> -benzoquinone dioxime IUPAC: <i>p</i> -benzoquinone dioxime CAS RN: 105-11-3
8	CBS	<i>N</i> -cyclohexylbenzothiazole-2-sulfenamide; <i>N</i> -cyclohexylbenzothiazyl sulfenamide IUPAC: <i>N</i> -cyclohexyl-1,3-benzothiazole-2-sulfenamide CAS RN: 95-33-0
9	CdDEC	cadmium diethyldithiocarbamate IUPAC: cadmium bis(diethyldithiocarbamate) CAS RN: 14239-68-0
10	CdDMC	cadmium dimethyldithiocarbamate IUPAC: cadmium bis(dimethyldithiocarbamate) CAS RN: 14949-60-1
11	CuDMC	copper dimethyldithiocarbamate IUPAC: copper bis(dimethyldithiocarbamate) CAS RN: 137-29-1
12	CLD	caprolactam disulfide IUPAC: 1,1'-dithiobis(hexahydro-2 <i>H</i> -azepin-2-one) CAS RN: 23847-08-7
13	CMBT	dicyclohexylammonium 1,3-benzothiazole-2-thiolate IUPAC: dicyclohexylammonium 1,3-benzothiazole-2-thiolate CAS RN: 37437-20-0
14	DBA	dibenzylamine IUPAC: dibenzylamine CAS RN: 103-49-1
15	DBBS	dibenzyl-2-benzothiazole sulfenamide IUPAC: <i>N,N</i> -dibenzyl-2-benzothiazol sulfenamide CAS RN: 180591-20-2
16	DBMEB	bis(1- <i>tert</i> -butylperoxy-1-methylethyl)benzene IUPAC: 1,4-Bis(2- <i>tert</i> -butylperoxypropan-2-yl)benzene CAS RN: 25155-25-3

NOTE CAS Registry Number® is a trademark of the American Chemical Society (ACS). This information is given for the convenience of users of this document and does not constitute an endorsement by ISO of the product named. Equivalent products may be used if they can be shown to lead to the same results.

Table 1 (continued)

Number	Abbreviated term	Common chemical name, IUPAC name and CAS RN (where available)
17	DBPB	Di- <i>tert</i> -butyl sec-butylidene diperoxide IUPAC: 2,2-Bis(<i>tert</i> -butylperoxy)butane CAS RN: 2167-23-9
18	DBPC	1,1-bis(<i>tert</i> -butylperoxy)-3,5,5-trimethylcyclohexane; 1,3,3-trimethyl-5,5-di- <i>tert</i> -butylperoxycyclohexane IUPAC: di- <i>tert</i> -butyl 3,3,5-trimethylcyclohexylidene diperoxide CAS RN: 6731-36-8
19	DBQD	<i>p,p'</i> -dibenzoyl- <i>p</i> -benzoquinone dioxime; quinone dioxime dibenzoate IUPAC: <i>p</i> -benzoquinone bis(<i>O</i> -benzoyloxime) CAS RN: 120-52-5
20	DBTU	1,3-dibutylthiourea IUPAC: 1,3-dibutyl-2-thiourea CAS RN: 109-46-6
21	DBXD	dibutylxanthogen disulfide IUPAC: <i>O,O</i> -dibutyl dithiobis(thioformate) CAS RN: 105-77-1
22	DCBP	2,4-dichlorobenzoyl peroxide IUPAC: bis(2,4-dichlorobenzoyl) peroxide CAS RN: 133-14-2
23	DCBS	<i>N,N</i> -dicyclohexylbenzothiazole-2-sulfenamide; <i>N,N</i> -dicyclohexylbenzothiazyl sulfenamide IUPAC: <i>N,N</i> -cyclohexyl-1,3-benzothiazole-2-sulfenamide CAS RN: 4979-32-2
24	DCP	dicumyl peroxide IUPAC: bis(1-methyl-1-phenylethyl) peroxide CAS RN: 80-43-3
25	DETU	1,3-diethylthiourea IUPAC: 1,3-diethyl-2-thiourea CAS RN: 105-55-5
26	DIBS	<i>N,N</i> -diisopropylbenzothiazole-2-sulfenamide; <i>N,N</i> -diisopropylbenzothiazyl sulfenamide IUPAC: <i>N,N</i> -diisopropyl-1,3-benzothiazole-2-sulfenamide CAS RN: 95-29-4
27	DMBHa	2,5-dimethyl-2,5-di-(<i>tert</i> -butylperoxy)-hexane; 2,5-di-(<i>tert</i> -butylperoxy)-2,5-dimethylhexane IUPAC: di- <i>tert</i> -butyl-1,1,4,4-tetramethyltetramethylene diperoxide CAS RN: 78-63-7
28	DMBPhy	2,5-dimethyl-2,5-di-(<i>tert</i> -butylperoxy)-hexyne-3; 2,5-di-(<i>tert</i> -butylperoxy)-2,5-dimethylhexyne-3 IUPAC: di- <i>tert</i> -butyl 1,1,4,4-tetramethylbut-2-ynylene diperoxide CAS RN: 1068-27-5
29	DMTU	1,3-dimethylthiourea IUPAC: 1,3-dimethyl-2-thiourea CAS RN: 534-13-4
30	DOTG	di- <i>o</i> -tolylguanidine IUPAC: 1,3-di- <i>o</i> -tolylguanidine CAS RN: 97-39-2
31	DPG	diphenylguanidine IUPAC: 1,3-diphenylguanidine CAS RN: 102-06-7

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Table 1 (continued)

Number	Abbreviated term	Common chemical name, IUPAC name and CAS RN (where available)
32	DPTD	dipentamethylenethiuram disulfide IUPAC: bis[piperidino(thiocarbonyl)] disulfide CAS RN: 94-37-1
33	DPTH	dipentamethylenethiuram hexasulfide IUPAC: bis[piperidino(thiocarbonyl)] hexasulfide CAS RN: 971-15-3
34	DPTM	dipentamethylenethiuram monosulfide IUPAC: di-(piperidino-1-carbothioic) thioanhydride CAS RN: 725-32-6
35	DPTT	dipentamethylenethiuram tetrasulfide IUPAC: bis[piperidino(thiocarbonyl)] tetrasulfide CAS RN: 120-54-7
36	DPTU	1,3-diphenylthiourea IUPAC: 1,3-diphenyl-2-thiourea CAS RN: 102-08-9
37	DTBPC	1,1-bis (<i>tert</i> -butylperoxy) cyclohexane IUPAC: 1,1-bis (<i>tert</i> -butylperoxy) cyclohexane CAS RN: 3006-86-8
38	DTDM	4,4'-dithiodimorpholine IUPAC: 4-(morpholinodithio)morpholine CAS RN: 103-34-4
39	DTGCB	1,3-di- <i>o</i> -tolylguanidinium bis[benzene-1,2-diolato(2-)- <i>O,O'</i>] borate IUPAC: 1,3-di- <i>o</i> -tolylguanidinium bis[benzene-1,2-diolato(2-)- <i>O,O'</i>] borate CAS RN: 16971-82-7
40	DTTU	1,3-di- <i>o</i> -tolylthiourea IUPAC: 1,3-di- <i>o</i> -tolyl-2-thiourea CAS RN: 137-97-3
41	EBPB	ethyl 3,3-bis(<i>tert</i> -butylperoxy)-butyrate IUPAC: ethyl 3,3-bis(<i>tert</i> -butyldioxy) butyrate CAS RN: 55794-20-2
42	FeDMC	iron (III) <i>N,N</i> -dimethyldithiocarbamate IUPAC: iron (III) <i>N,N</i> -dimethyldithiocarbamate CAS RN: 14484-64-1
43	EFA	ethyl chloride, formaldehyde and ammonia reaction product IUPAC: not possible CAS RN: 63512-71-0
44	EPTD	<i>N,N'</i> -diethyl- <i>N,N'</i> -diphenylthiuram disulfide IUPAC: <i>N,N'</i> -diethyl- <i>N,N'</i> -diphenylthiuram disulfide CAS RN: 41365-24-6
45	ETU	ethylene thiourea IUPAC: imidazolidine-2-thione CAS RN: 96-45-7
46	HMD	hexamethylenediamine IUPAC: Hexane-1,6-diyldiamine CAS RN: 124-09-4
47	HMDC	hexamethylenediamine carbamate IUPAC: <i>N</i> -carboxy-1,6-hexanediamine CAS RN: 143-06-6

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Table 1 (continued)

Number	Abbreviated term	Common chemical name, IUPAC name and CAS RN (where available)
48	HMMA	<i>N,N'</i> -hexamethylene-bis-methacrylamide IUPAC: <i>N,N'</i> -hexamethylenedimethacrylamide CAS RN: 16069-15-1
49	HMT	hexamethylenetetramine IUPAC: 1,3,5,7-tetraazatricyclo[3.3.1.1 ^{3,7}]decane CAS RN: 100-97-0
50	MBOCA	4,4'-methylene-bis(<i>o</i> -chloroaniline) IUPAC: 2,2'-dichloro-4,4'-methylenedianiline CAS RN: 101-14-4
51	pMBPO	di-(4-methylbenzoyl)peroxide IUPAC: bis(4-methylbenzoyl)peroxide CAS RN: 895-85-2
52	MBPP	4-methyl-2,2-bis(<i>tert</i> -butylperoxy)-pentane IUPAC: di- <i>tert</i> -butyl 1,3-dimethylbutylidene diperoxide CAS RN: 36799-28-7
53	MBS	<i>N</i> -oxydiethylenebenzothiazole-2-sulfenamide; 2-morpholinothiobenzothiazole IUPAC: 2-morpholinothio-1,3-benzothiazole CAS RN: 102-77-2
54	MBSS	2-morpholinodithio-1,3-benzothiazole; 4-morpholino-2-benzothiazyl disulfide IUPAC: 2-morpholinodithio-1,3-benzothiazole CAS RN: 95-32-9
55	MBT	2-mercaptobenzothiazole; 2-benzothiazolinethione IUPAC: 1,3-benzothiazole-2-thiol (enol form); 1,3-benzothiazole-2(3H)-thione (keto form) CAS RN: 149-30-4
56	MBTS	benzothiazole disulfide; benzothiazyl disulfide; dibenzothiazole disulfide; dibenzothiazyl disulfide; IUPAC: bis(1,3-benzothiazol-2-yl) disulfide CAS RN: 120-78-5
57	MPBM	<i>N,N'</i> - <i>m</i> -phenylene-bis-maleimide IUPAC: <i>N,N'</i> - <i>m</i> -phenylenedimaleimide CAS RN: 3006-93-7
58	MPTD	<i>N,N'</i> -dimethyl- <i>N,N'</i> -diphenylthiuram disulfide IUPAC: <i>N,N'</i> -dimethyl- <i>N,N'</i> -diphenylthiuram disulfide CAS RN: 10591-84-1
59	MTT	3-methylthiazolidine-thione-2 IUPAC: 3-methylthiazolidine-2-thione CAS RN: 1908-87-8
60	OTBG	<i>o</i> -tolylbiguanide IUPAC: 1- <i>o</i> -tolylbiguanide CAS RN: 93-69-6
61	OTOS	<i>N</i> -oxydiethylene thiocarbonyl- <i>N'</i> -oxydiethylene sulfenamide IUPAC: 4-[morpholino(thiocarbonyl)thio]-morpholine CAS RN: 13752-51-7

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Table 1 (continued)

Number	Abbreviated term	Common chemical name, IUPAC name and CAS RN (where available)
62	PAX	potassium amylxanthate IUPAC: <i>O</i> -pentyl ester carbonodithioic acid, potassium salt (1:1) CAS RN: 2720-73-2
63	PbDAC	lead diamyldithiocarbamate IUPAC: lead bis(dipentyldithiocarbamate) CAS RN: 36501-84-5
64	PbDMC	lead dimethyldithiocarbamate IUPAC: lead bis(dimethyldithiocarbamate) CAS RN: 19010-66-3
65	PEX	potassium ethylxanthate IUPAC: <i>O</i> -ethyl ester carbonodithioic acid, potassium salt (1:1) CAS RN: 140-89-6
66	PIBX	potassium isobutylxanthate IUPAC: <i>O</i> -(2-methylpropyl) ester carbonodithioic acid, potassium salt (1:1) CAS RN: 13001-46-2
67	PMPDC	2-methylpiperidinium 2-methylpiperidine-1-carbodithiolate IUPAC: 2-methylpiperidinium 2-methylpiperidine-1-carbodithiolate CAS RN: 69039-25-4
68	PPDC	piperidinium pentamethylendithiocarbamate; piperidine pentamethylendithiocarbamate IUPAC: piperidinium piperidine-1-carbodithioate CAS RN: 98-77-1
69	SDBC	sodium dibutyldithiocarbamate IUPAC: sodium dibutyldithiocarbamate CAS RN: 136-30-1
70	SDBzC	sodium dibenzoyldithiocarbamate IUPAC: <i>N,N</i> -bis(phenylmethyl)-carbomodithioic acid, sodium salt (1:1) CAS RN: 55310-46-8
71	SDEC	sodium diethyldithiocarbamate IUPAC: sodium diethyldithiocarbamate CAS RN: 148-18-5
72	SDMC	sodium dimethyldithiocarbamate IUPAC: sodium dimethyldithiocarbamate CAS RN: 128-04-1
73	SeDEC	selenium diethyldithiocarbamate IUPAC: selenium tetrakis(diethyldithiocarbamate) CAS RN: 5456-28-0
74	SeDMC	selenium dimethyldithiocarbamate IUPAC: selenium tetrakis(dimethyldithiocarbamate) CAS RN: 144-34-3
75	SIBX	sodium isobutylxanthate IUPAC: <i>O</i> -(2-methylpropyl) ester carbonodithioic acid, sodium salt (1:1) CAS RN: 25306-75-6
76	SIX	sodium isopropylxanthate IUPAC: sodium <i>O</i> -isopropyl dithiocarbonate CAS RN: 140-93-2
77	SMBT	sodium 2-mercaptobenzothiazole IUPAC: 2(3 <i>H</i>)-benzothiazolethione, sodium salt (1:1) CAS RN: 2492-26-4

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