

ISO 17257:2020-01 (E)

Rubber - Identification of polymers - Pyrolytic gas-chromatographic method using mass-spectrometric detection

Contents		Page
	Foreword	v
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	List of rubbers	1
4.1	Group M	1
4.1.1	Chloropolyethylene (CM)	1
4.1.2	Chlorosulfonylpolyethylene (CSM)	1
4.1.3	Ethylene-propylene copolymer (EPM) and Ethylene-propylene-diene terpolymer (EPDM)	1
4.1.4	Fluorocarbon rubber having substituent fluoro, perfluoroalkyl, or perfluoroalkoxy groups on the polymer chain (FKM)	2
4.2	Group O	2
4.2.1	Homopolymer of epichlorhydrin (CO), copolymer of epichlorhydrin-ethylene oxide (ECO), terpolymer of epichlorhydrin-ethylene oxide-allyl glycidyl ether (GECO)	2
4.3	Group Q	2
4.3.1	Polysiloxanes (MQ, VMQ, PVMQ)	2
4.4	Group R	2
4.4.1	Butadiene rubber (BR)	2
4.4.2	Chloroprene rubber (CR)	2
4.4.3	Isobutene-isoprene rubber (IIR), chlorinated IIR (CIIR) and brominated IIR (BIIR)	2
4.4.4	Natural rubber (NR) and synthetic isoprene rubber (IR)	2
4.4.5	Acrylonitrile-butadiene rubber (NBR), hydrogenated NBR (HNBR) and carboxylated NBR (XNBR)	2
4.4.6	Styrene-butadiene rubber (SBR)	2
4.5	Rubber blends	2
5	Principle	2
6	Reagents	3
7	Equipment	3
8	Operating conditions	4
8.1	General	4
8.2	Gas chromatograph adjustment	4
8.3	Extraction	4
8.4	Test portion	4
8.5	Pyrolysis	4
9	Interpretation of results	4
9.1	General	4
9.2	Group M	5
9.2.1	Chloropolyethylene (CM) and chlorosulfonylpolyethylene (CSM)	5
9.2.2	Ethylene-propylene copolymer (EPM) and Ethylene-propylene-diene terpolymer (EPDM)	5
9.2.3	Fluorocarbon rubber having substituent fluoro, perfluoroalkyl, or perfluoroalkoxy groups on the polymer chain (FKM)	5
9.3	Group O	5

9.3.1	Homopolymer of epichlorhydrin (CO), copolymer of epichlorhydrin-ethylene oxide (ECO), terpolymer of epichlorhydrin-ethylene oxide-allyl glycidyl ether (GECO).....	5
9.4	Group Q.....	5
9.4.1	Polysiloxanes (MQ, VMQ, PVMQ).....	5
9.5	Group R.....	5
9.5.1	Butadiene rubber (BR).....	5
9.5.2	Chloroprene rubber (CR).....	6
9.5.3	Isobutene-isoprene rubber (IIR), chlorinated IIR (CIIR) and brominated IIR (BIIR).....	6
9.5.4	Natural rubber (NR) or synthetic isoprene rubber (IR).....	6
9.5.5	Acrylonitrile-butadiene rubber (NBR), hydrogenated NBR (HNBR) and carboxylated NBR (XNBR).....	6
9.5.6	Styrene-butadiene rubber (SBR).....	6
10	Test report	6
	Annex A (informative) Schematic diagram of the chromatographic equipment	8
	Annex B (informative) Examples of operating conditions	9
	Annex C (informative) Chromatogram examples	10
	Annex D (informative) Chemical compounds identified in rubber pyrolysates	12