

DIN EN ISO 9994:2019-08 (E)

Lighters - Safety specifications (ISO 9994:2018)

Contents

Page

European foreword.....	4
Foreword.....	5
Introduction.....	6
1 Scope.....	7
2 Normative references.....	7
3 Terms and definitions.....	7
4 Functional requirements.....	9
4.1 Flame generation.....	9
4.2 Flame heights.....	9
4.2.1 Non-adjustable lighters.....	10
4.2.2 Adjustable lighters.....	10
4.3 Flame-height adjustment.....	12
4.4 Resistance to spitting or sputtering and flaring.....	13
4.5 Flame extinction.....	13
4.6 Volumetric displacement of fuel.....	14
4.7 Mass of fuel.....	14
5 Structural integrity requirements.....	14
5.1 External finish.....	14
5.2 Compatibility with fuel.....	14
5.3 Resistance to fuel loss.....	14
5.4 Resistance to dropping.....	15
5.5 Resistance to elevated temperature.....	15
5.6 Resistance to internal pressure.....	15
5.7 Burning behaviour.....	15
5.8 Resistance to cyclic burning.....	16
5.9 Resistance to continuous burning.....	16
6 Test methods.....	17
6.1 Test specimens and test sequencing.....	17
6.1.1 Test specimens.....	17
6.1.2 Test sequencing.....	17
6.2 Flame height measurement.....	17
6.2.1 Apparatus.....	17
6.2.2 Procedure.....	17
6.3 Spitting, sputtering and flaring tests.....	17
6.3.1 General.....	17
6.3.2 Procedure.....	17
6.4 Flame extinction test.....	18
6.4.1 Apparatus.....	18
6.4.2 Procedure.....	18
6.5 Fuel compatibility test.....	19
6.5.1 General.....	19
6.5.2 Apparatus.....	19
6.5.3 Procedure.....	19
6.6 Refilling test.....	21
6.6.1 General.....	21
6.6.2 Apparatus.....	21
6.6.3 Procedure.....	21

6.7	Volumetric fuel-displacement test.....	22
6.7.1	General.....	22
6.7.2	Test specimens.....	22
6.7.3	Apparatus.....	22
6.7.4	Procedure.....	22
6.8	Drop test.....	23
6.8.1	General.....	23
6.8.2	Apparatus.....	23
6.8.3	Procedure.....	24
6.9	Elevated-temperature test.....	25
6.9.1	General.....	25
6.9.2	Apparatus.....	25
6.9.3	Procedure.....	25
6.10	Internal-pressure test.....	26
6.10.1	General.....	26
6.10.2	Test specimens.....	26
6.10.3	Apparatus.....	26
6.10.4	Procedure.....	26
6.11	Cyclic-burning-time test.....	27
6.11.1	General.....	27
6.11.2	Procedure.....	27
6.12	Continuous-burning-time test.....	28
6.12.1	General.....	28
6.12.2	Apparatus.....	28
6.12.3	Procedure.....	28
7	Instructions and warnings.....	29
7.1	General.....	29
7.2	Location.....	29
7.3	Content.....	29
7.4	Safety signs.....	30
7.5	Refilling instructions.....	31
7.5.1	General.....	31
7.5.2	Fluid lighters.....	31
7.5.3	Gas lighters.....	31
8	Product marking.....	31
	Annex A (normative) Test sequencing.....	32