

DIN EN 1568-3:2018-05 (E)

Fire extinguishing media - Foam concentrates - Part 3: Specification for low expansion foam concentrates for surface application to water-immiscible liquids

	Contents	Page
European foreword.....	5	
Introduction	7	
1 Scope	8	
2 Normative references.....	8	
3 Terms and definitions	9	
4 Sediment in the foam concentrate	10	
4.1 Sediment before ageing	10	
4.2 Sediment after ageing.....	11	
5 Freezing point.....	11	
6 Viscosity of the foam concentrate	11	
6.1 Newtonian foam concentrates.....	11	
6.2 Pseudo-plastic foam concentrates	11	
7 pH of the foam concentrate	11	
8 Surface tension of the foam solution.....	11	
9 Stability/separation test of foam concentrate.....	11	
10 Determination of expansion and drainage time	11	
10.1 Before temperature conditioning	11	
10.2 After temperature conditioning	12	
11 Test fire performance.....	12	
12 Evaluation of aqueous film formation	13	
13 Occupational health and ecotoxicological information	13	
14 Technical data sheet	13	
15 Container marking.....	14	
Annex A (informative) Grades of foam concentrate and performance.....	15	
A.1 Grades.....	15	
A.2 Typical performance.....	15	
Annex B (normative) Sampling of foam concentrates	17	
Annex C (normative) Determination of percentage sediment.....	18	
C.1 Sampling.....	18	
C.2 Apparatus.....	18	
C.3 Procedure.....	18	
Annex D (normative) Determination of Viscosity for pseudo-plastic foam concentrates	19	
D.1 Pseudo-plastic foam concentrates	19	
D.2 Viscosity determination.....	19	
D.2.1 Apparatus.....	19	

D.2.2	Test temperatures.....	19
D.2.3	Viscosity measurement	19
D.2.4	Results	20
	Annex E (normative) Temperature conditioning of foam concentrates.....	21
E.1	General	21
E.2	Low temperature conditioning.....	21
E.2.1	Apparatus	21
E.2.2	Procedure.....	21
E.3	High temperature conditioning.....	21
E.3.1	Apparatus	21
E.3.2	Procedure.....	21
E.4	Division into top and bottom half-samples	22
E.4.1	Apparatus.....	22
E.4.1.1	Top half-sample container(s).....	22
E.4.1.2	Divider device	22
E.4.2	Procedure	23
	Annex F (normative) Determination of surface tension.....	24
F.1	Solution of foam concentrate	24
F.2	Procedure — Surface tension.....	24
	Annex G (normative) Determination of expansion and drainage time.....	25
G.1	Apparatus	25
G.2	Temperature conditions	25
G.3	Procedure	25
G.4	Simulated fresh and sea water.....	26
	Annex H (normative) Determination of test fire performance	30
H.1	General	30
H.2	General conditions	30
H.2.1	Test series and criteria for success	30
H.2.1.1	Foam concentrates not compatible with sea water.....	30
H.2.1.2	Foam concentrates compatible with sea water	30
H.2.2	Temperature and wind speed.....	30
H.2.3	Records.....	30
H.2.4	Foam solution.....	31
H.2.5	Fuel	31
H.3	Gentle application fire test.....	32
H.3.1	Apparatus	32

H.3.2	Test procedure	32
H.4	Forceful application fire test.....	33
H.4.1	Apparatus.....	33
H.4.2	Procedure.....	33
Annex I (informative) Small scale fire test.....		35
I.1	Apparatus.....	35
I.2	Test procedure	35
I.2.1	Test conditions.....	35
I.2.2	Set up	36
I.2.3	Fire test.....	36
Annex J (informative) Description of a radiation measurement method.....		45
J.1	Evaluation.....	45
J.2	General arrangement of test	45
J.3	Technical data for radiometers	46
J.4	Procedure.....	47
Annex K (normative) Freezing point determination.....		49
K.1	General.....	49
K.2	Apparatus.....	49
K.3	Procedure.....	49
K.4	Example of a temperature against time curve for evaluation	50
Annex L (normative) Evaluation of film formation.....		51
L.1	Sampling.....	51
L.2	Apparatus.....	51
L.3	Materials.....	51
L.4	Procedure.....	51
Annex M (normative) Stability/Separation test of foam concentrate.....		53
M.1	General.....	53
M.2	Apparatus.....	53
M.3	Procedure.....	53
Annex N (normative) Occupational health and ecotoxicological testing.....		54
Annex O (informative) Example for a technical data sheet.....		55
Annex P (informative) A-Deviations.....		57
Bibliography.....		59