

# 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

---

<b>Contents</b>		<b>Page</b>
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
<b>Annex E (normative) Temperature conditioning of foam concentrates.....</b>		<b>21</b>
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
<b>Annex F (normative) Determination of surface tension.....</b>		<b>24</b>
F.1	Solution of foam concentrate .....	24
F.2	Procedure — Surface tension.....	24
<b>Annex G (normative) Determination of expansion and drainage time.....</b>		<b>25</b>
G.1	Apparatus .....	25
G.2	Temperature conditions .....	25
G.3	Procedure .....	25
G.4	Simulated fresh and sea water.....	26
<b>Annex H (normative) Determination of test fire performance.....</b>		<b>30</b>
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
	<b>Annex I (informative) Small scale fire test.....</b>	<b>35</b>
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
	<b>Annex J (informative) Description of a radiation measurement method.....</b>	<b>45</b>
J.1	Evaluation .....	45
J.2	General arrangement of test .....	45
J.3	Technical data for radiometers .....	46
J.4	Procedure.....	47
	<b>Annex K (normative) Freezing point determination.....</b>	<b>49</b>
K.1	General.....	49
K.2	Apparatus.....	49
K.3	Procedure.....	49
K.4	Example of a temperature against time curve for evaluation .....	50
	<b>Annex L (normative) Evaluation of film formation.....</b>	<b>51</b>
L.1	Sampling.....	51
L.2	Apparatus.....	51
L.3	Materials.....	51
L.4	Procedure.....	51
	<b>Annex M (normative) Stability/Separation test of foam concentrate.....</b>	<b>53</b>
M.1	General.....	53
M.2	Apparatus.....	53
M.3	Procedure.....	53
	<b>Annex N (normative) Occupational health and ecotoxicological testing.....</b>	<b>54</b>
	<b>Annex O (informative) Example for a technical data sheet.....</b>	<b>55</b>
	<b>Annex P (informative) A-Deviations.....</b>	<b>57</b>
	<b>Bibliography.....</b>	<b>59</b>