

International Standard

ISO 7745

Third edition 2024-02

Hydraulic fluid power — Fireresistant fluids — Requirements and guidelines for use

Transmissions hydrauliques — Fluides difficilement inflammables — Exigences et recommandations pour leur utilisation

ISO 7745:2024(en)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2024

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office CP 401 • Ch. de Blandonnet 8 CH-1214 Vernier, Geneva Phone: +41 22 749 01 11 Email: copyright@iso.org

Website: www.iso.org
Published in Switzerland

ISO 7745:2024(en)

Contents			
Fore	eword		v
Intr	oductio		v i
1	Scop		1
2	Norr	ative references	1
3		and definitions	
4	Hydraulic systems — Fire hazards		
	4.1	General	1
	4.2	Fault conditions	
	4.3	Sources of ignition	
5	_	rements for fire-resistant fluids	
	5.1	General fluid requirements 5.1.1 General	
		5.1.2 Viscosity	
		5.1.3 Lubrication	
		5.1.4 Compatibility	
		5.1.5 Chemical and thermal stability	
		5.1.7 Shear stability	
	5.2	Other fluid properties which may impact upon system design	3
		5.2.1 General	
		5.2.2 Filterability	
		5.2.4 Vapour pressure	
6	Char	cteristics of fire-resistant hydraulic fluids and factors affecting their selection	
U	6.1	General	
		6.1.1 Composition	4
		6.1.2 Classification of fire-resistance fluids	
	6.2	6.1.3 Fluid mixing	
	0.2	6.2.1 HFAE — Oil in water emulsions (thickened and un-thickened)	5
		6.2.2 HFAS — Chemical solutions in water (thickened and un-thickened)	7
		6.2.3 HFB — Water-in-oil emulsions (invert emulsions)	9
		6.2.4 HFC — Water polymer solutions.	
		6.2.5 HFDR — Synthetic fluids containing no water and consisting of phosphate esters 6.2.6 HFDU — Synthetic fluids containing no water and of other composition	
7	Hydi	ulic systems — General precautions	
7	7.1	Assembly work	
	7.2	Pipework and hoses	
	7.3	Seals and gaskets	
	7.4	High fluid temperatures	
8		ulic circuit requirements for fire-resistant fluids	
	8.1 8.2	Reservoir Pipework and hoses	
	8.3	Pump suction	
	8.4	Strainers and filters	
	8.5	Equipment performance	17
9	Char	ing the fluid in a hydraulic system	
	9.1	General	17
	9.2 9.3	Draining and cleaning the circuitFlushing and draining the circuit	
	9.3 9.4	Filling and re-commissioning the circuit	19