
International Standard



3808/2

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Road vehicles — Unscreened high-tension ignition cables — Part 2 : Cable classes, types, applicable tests and special requirements

*Véhicules routiers — Câbles d'allumage haute tension non blindés —
Partie 2 : Classes de câble, types, essais applicables et spécifications particulières*

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Descriptors : road vehicles, electric cables, ignition cables, classification, specifications.

Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 3808/2 was developed by Technical Committee ISO/TC 22, *Road vehicles*, and was circulated to the member bodies in June 1979.

It has been approved by the member bodies of the following countries :

Australia	Germany, F.R.	Romania
Austria	Italy	Spain
Belgium	Korea, Dem. P. Rep. of	Sweden
Chile	Korea, Rep. of	Switzerland
China	Mexico	United Kingdom
Czechoslovakia	Netherlands	USA
France	Poland	USSR

The member body of the following country expressed disapproval of the document on technical grounds :

Japan

Road vehicles — Unscreened high-tension ignition cables —

Part 2 : Cable classes, types, applicable tests and special requirements

1 Introduction

The present International Standard specifies cable classes, types, applicable tests and special requirements for unscreened high-tension ignition cables.

The general requirements and test methods are specified in ISO 3808/1.

2 Scope and field of application

This International Standard applies to cable classes, types, applicable tests and special requirements for unscreened high-tension ignition cables used in automotive vehicle applications.

3 Reference

ISO 3808/1, *Unscreened high-tension ignition cables — Dimensions, general requirements and test methods.*

4 Applicable tests and special requirements

If tested according to the test methods specified in ISO 3808/1, the cables shall comply with the requirements specified in the following table.

Table

Test	Class	A				B				C				D				E				F				Remarks			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Type ¹⁾																													
5.1 Test for insulation faults of the total delivery		to be applied		not to be applied		to be applied		not to be applied		to be applied		not to be applied		to be applied		not to be applied		to be applied		not to be applied		to be applied		not to be applied					
5.2 30 min test voltage and breakdown voltage		to be applied				to be applied				to be applied				to be applied				to be applied				to be applied				to be applied			
5.3 Capacity																													
		cable Ø 5 mm (23 ± 2) °C (70 ± 2) °C																											
		cable Ø 7 mm (23 ± 2) °C (70 ± 2) °C																											
		cable Ø 8 mm (23 ± 2) °C (70 ± 2) °C																											
The capacity values shall be agreed between the engine and the cable manufacturers.																													
5.4 Resistance to corona effect																													
		cable Ø 5 mm																											
		cable Ø 7 mm																											
		cable Ø 8 mm																											
12 kV (r.m.s.), 50 or 60 Hz																													
15 kV (r.m.s.), 50 or 60 Hz																													
18 kV (r.m.s.), 50 or 60 Hz																													
5.5 Pressure test at high temperature		(70 ± 2) °C				(105 ± 2) °C				(120 ± 2) °C				—				—				—				—			
5.6 Thermal overload test		(105 ± 2) °C				(120 ± 2) °C				(155 ± 2) °C				(180 ± 2) °C				(220 ± 3) °C				(250 ± 3) °C							
		—		+50% -30%		—		+50% -30%		—		+50% -30%		—		+50% -30%		—		+50% -30%		—		+50% -30%					
5.7 Shrinkage by heat		(155 ± 2) °C				(155 ± 2) °C				—				—				—				—				—			
		2 %				2 %				—				—				—				—				—			
5.8 Resistance to flame propagation		30 s				30 s				15 s				15 s				15 s				15 s							
		30 s				30 s				30 s				70 s				70 s				70 s							
5.9 Flexibility at low temperature		(−20 ± 3) °C				(−20 ± 3) °C				(−30 ± 3) °C				(−30 ± 3) °C				(−40 ± 3) °C				(−50 ± 3) °C							

1) See below the end of the table.

5.10 Mechanical tensile test	weight to be applied	not to be applied			not to be applied			not to be applied			not to be applied			not to be applied			not to be applied		
		180 N	250 N	not to be applied	180 N	250 N	not to be applied	180 N	250 N	not to be applied	180 N	250 N	not to be applied	180 N	250 N	not to be applied	180 N	250 N	not to be applied
	for cable ϕ 5 mm																		
	for cable ϕ 7 mm																		
	for cable ϕ 8 mm																		
Maximum allowable change of resistance		0 to +30 %			0 to +30 %			0 to +30 %			0 to +30 %			0 to +30 %			0 to +30 %		
	for cable ϕ 5 mm																		
	for cable ϕ 7 mm																		
	for cable ϕ 8 mm																		
see ISO 3808/1																			
5.11 Stripping of insulation																			
5.12 Resistance to oil	Maximum alteration	+ 4 % - 1 %			+ 4 % - 1 %			+ 4 % - 1 %			+ 4 % - 1 %			+ 4 % - 1 %			+ 4 % - 1 %		
5.13 Resistance to fuel	Maximum alteration	6 %			6 %			6 %			6 %			6 %			6 %		
5.14 Accelerated life test		to be applied			to be applied			to be applied			to be applied			to be applied			to be applied		
5.14.2.1 Resistance to salt water																			
5.14.2.2 Resistance to oil																			
5.14.2.3 Resistance to fuel																			
5.14.2.4 Heat ageing test	Test temperature	(90 $\pm$ 2) °C			(105 $\pm$ 2) °C			(120 $\pm$ 2) °C			(155 $\pm$ 2) °C			(180 $\pm$ 2) °C			(220 $\pm$ 3) °C		
5.14.2.5 Low temperature test	Test temperature	(- 10 $\pm$ 3) °C			(- 15 $\pm$ 3) °C			(- 20 $\pm$ 3) °C			(- 20 $\pm$ 3) °C			(- 30 $\pm$ 3) °C			(- 40 $\pm$ 3) °C		

Types 1 : Cables with copper conductor

Types 2 : Cables with steel conductor

Types 3 : Resistive cables

Types 4 : Reactive cables

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