INTERNATIONAL STANDARD

ISO 14726

First edition 2008-05-01

Ships and marine technology — Identification colours for the content of piping systems

Navires et technologie maritime — Couleurs pour l'identification du contenu des systèmes de tuyauterie

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<u>ISO 14726:2008</u> https://standards.iteh.ai/catalog/standards/sist/c08a6ad3-5b77-4e18-99fec7634de51d4c/iso-14726-2008



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Published in Switzerland

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 14726 was prepared by Technical Committee ISO/TC 8, *Ships and marine technology*, Subcommittee SC 3, *Piping and machinery*.

This first edition cancels and replaces ISO 14726-1:1999 and ISO 14726-2:2002, which have been technically revised.

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Ships and marine technology — Identification colours for the content of piping systems

1 Scope

This International Standard specifies main colours and additional colours for identifying piping systems in accordance with the content or function on board ships and marine structures.

These colours can also be used for piping systems on drawings and diagrams.

This International Standard does not apply to piping systems for medical gases, industrial gases and cargo.

This International Standard can also be used for land installations.

2 Normative references iTeh STANDARD PREVIEW

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60757, Code for designation of colours is standards/sist/c08a6ad3-5b77-4e18-99fe-c7634de51d4c/iso-14726-2008

CIE 015, Colorimetry

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

main colour

colour used to indicate a group of similar media

3.2

additional colour

colour used in combination with the main colour to indicate a specific medium

4 Colours

The main colours represented in the electronic file of this International Standard are reference colours; colours of a similar shade and tone may also be used for marking pipes (see Table 1).

Table 1 — Chromaticity

Main Letter		Co-ordinate points of chromaticity areas ^b								Luminance	
		1		2		3		4		factor	Example
		x	у	х	у	х	у	х	у	β	
Black	ВК	0,385	0,355	0,300	0,270	0,260	0,310	0,345	0,395	≤ 0,03	
Blue	BU	0,078	0,171	0,196	0,250	0,225	0,184	0,137	0,038	≥ 0,05	
Brown	BN	0,510	0,370	0,427	0,353	0,407	0,373	0,475	0,405	≥ 0,04	
Green	GN	0,313	0,682	0,313	0,453	0,209	0,383	0,013	0,486	≥ 0,10	
Grey	GY	0,350	0,360	iTe 0,300	h S 0,310	4	DA 0,320 dar	RD 0,340	PR 0,370 eh.2	$0,15 \leqslant \beta \leqslant 0,50$	
Maroon	MN	0,302	0,064 htt	0,307 ps://stan	0,203 dards.ite		1 9,247 4 log/stand	7 0:457 0 ards/sist	_	≥ 0,10 l3-5b77-4e18-99fe	
Orange	OG	0,610	0,390	0,535	0,375	c76346 0,506	de51d4c 0,404	iso-147 0,570	26-2008 0,429	<i>≽</i> 0,25	
Silver	SR				Lum	ninance	factor β	?> 0,50			
Red	RD	0,690	0,310	0,595	0,315	0,569	0,341	0,655	0,345	≥ 0,07	
Violet	VT	0,250	0,160	0,286	0,146	0,293	0,273	0,304	0,275	0,10 ≤ <i>β</i> ≤ 0,36	
White	WH	0,350	0,360	0,300	0,310	0,290	0,320	0,340	0,370	<i>≽</i> 0,75	
Yellow	YE	0,522	0,477	0,470	0,440	0,427	0,483	0,465	0,534	<i>≽</i> 0,45	

a As given in IEC 60757.

b CIE 1931 chromaticity co-ordinates for standard illuminant D65 and 45/0 or d/8 measurement geometry in accordance with CIE 015.

Table 2 — Main colours and media

Main colour	Medium		
Black	Waste media ^a		
Blue	Fresh water		
Brown	Fuel		
Green	Sea water ^b		
Grey	Non-flammable gases		
Maroon	Air and sounding pipes		
Orange	Oils other than fuels		
Silver	Steam		
Red	Fire fighting		
Violet	Acids, alkalis		
White	Air in ventilation systems		
Yellow	Flammable gases		
Examples: black water, grey water, waste oil, exhaust gas.			

For ships with mixed navigation (sea-river ships): all outside waters.

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Table 3 — Additional colours for different media or functions

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Waste media	BK (main colour)
Black water	BK – BU – BK
Waste oil/used oil	BK – BN – BK
Bilge water	BK – GN – BK
Exhaust gas	BK – GY – BK
	BK – MN – BK
	BK – OG – BK
	BK – SR – BK
	BK – RD – BK
	BK – VT – BK
Grey water	BK – WH – BK
Sewage, contaminated	BK – YE – BK

Fresh water	BU (main colour)
	BU – BK – BU
Fresh water, sanitary	BU – BN – BU
Potable water	BU – GN – BU
Distillate	BU – GY – BU
	BU – MN – BU
Gas-turbine wash water	BU – OG – BU
Feed water	BU - SR - BU
	BU – RD – BU
Cooling fresh water	BU – VT – BU
Chilled water	BU – WH – BU
Condensate	BU – YE – BU

F	
Fuel	BN (main colour)
Heavy fuel oil (HFO)	BN – BK – BN
Aviation fuel	BN – BU – BN
	IBNC GN BNA
	BN - GY - BN
	BN – MN – BN
	BN – OG – BN
h	tps:BNand SR s.itBNai/ca
	$BN - RD - BN^{76}$
Biological fuel	BN – VT – BN
Gas-turbine fuel	BN – WH – BN
Marine diesel oil (MDO)	BN – YE – BN

Sea water	GN (main colour)
	GN – BK – GN
Decontamination water	GN – BU – GN
Sea water, sanitary	GN – BN – GN
s.iteh.ai)	GN – GY – GN
Strought the strong str	GN – MN – GN
6:2008	GN – OG – GN
ds/sist/c08a6ad3-5b77-4e18-99fe-	GN – SR – GN
b-14726-2008	GN – RD – GN
Ballast water	GN – VT – GN
	GN – WH – GN
Cooling sea water	GN – YE – GN

Non-flammable gases	GY (main colour)
	GY – BK – GY
Oxygen	GY – BU – GY
Inert gas	GY – BN – GY
Nitrogen	GY – GN – GY
Refrigerant	GY – MN – GY
Compressed air LP (Low pressure)	GY – OG – GY
	GY – SR – GY
Compressed air HP (High pressure)	GY – RD – GY
Control air/regulating air	GY – VT – GY
Breathing air a	GY – WH – GY
Breathing gas ^a	GY – YE – GY

Air and sounding pipes	MN (main colour)
Waste media	MN – BK – MN
Fresh water	MN – BU – MN
Fuel	MN – BN – MN
Sea water	MN – GN – MN
Non-flammable gases	MN – GY – MN
Oil other than fuels	MN – OG – MN
Steam	MN – SR – MN
Fire fighting	MN – RD – MN
Acids, alkalis	MN – VT – MN
Ventilation system	MN – WH – MN
Flammable gases	MN – YE – MN

^a This marking is used in submarines for distribution systems of breathing air from cylinders.

Table 3 (continued)

Oils other than fuels	OG (main colour)
	OG – BK – OG
Thermal fluid	OG – BU – OG
	OG – BN – OG
Lubrication oil for gas turbines	OG – GN – OG
Hydraulic fluid	OG – GY – OG
	OG – MN – OG
Lubrication oil for steam turbines	OG – SR – OG
	OG – RD – OG
Lubrication oil for gears	OG – VT – OG
	OG – WH – OG
Lubrication oil for internal combustion engines	OG – YE – OG

Steam	SR (main colour)
Steam for heating purposes	SR – BK – SR
	SR – BU – SR
	SR – BN – SR
Driving steam	SR – GN – SR
	SR – GY – SR
	SR – MN – SR
	SR – OG – SR
	SR – RD – SR
	SR – VT – SR
Exhaust steam	SR – WH – SR
Supply steam	SR – YE – SR

Fire fighting/ fire protection	RD (main colour)	
	RD – BK – RD	
iTeh	RD-BU-RD	RD P
	RD – BN – RD	Ja ita
Fire-fighting water	RD-GN-RD	ds.ite
Fire-fighting gas	RD – GY – RD	726,2009
https://standa	RD – MN – RD	<u>726:2008</u> ards/sist/c0[
Sprinkler water	RD & OGIdeR Pd4c	
	RD – SR – RD	
Spray water	RD – VT – RD	
Fire-fighting powder	RD – WH – RD	
Fire-fighting foam	RD – YE – RD	

Acids, alkalis	VT (main colour)
	VT – BK – VT
REVIEW	VT – BU – VT
	VT – BN – VT
n.ai)	VT – GN – VT
	VT – GY – VT
Ra6ad3-5b77-4e18-99fe-	VT – MN – VT
-2008	VT – OG – VT
	VT – SR – VT
	VT – RD – VT
	VT – WH – VT
	VT – YE – VT

Air in ventilation systems	WH (main colour)
Discharge air	WH – BK – WH
Mechanical supply air, cold	WH – BU – WH
Natural exhaust air	WH – BN – WH
Atmospheric air	WH – GN – WH
Mechanical exhaust air	WH – GY – WH
Decontaminated supply air	WH – MN – WH
Mechanical recirculated air	WH – OG – WH
Mechanical supply air, warm	WH – SR – WH
Smoke clearance	WH – RD – WH
Conditioned supply air	WH – VT – WH
Natural supply air	WH – YE – WH

a	
Flammable gases	YE (main colour)
	YE – BK – YE
Hydrogen	YE – BU – YE
	YE – BN – YE
	YE – GN – YE
Acetylene	YE – GY – YE
	YE - MN - YE
	YE – OG – YE
	YE – SR – YE
	YE – RD – YE
Liquid gas	YE – VT – YE
	YE – WH – YE

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