JOINT CANADA-UNITED STATES
NATIONAL STANDARD

ANSI/CAN/UL 1191:2026

STANDARD FOR SAFETY

Components for Personal Flotation Devices

ANSI/UL 1191-2026

SCC FOREWORD

National Standard of Canada

A National Standard of Canada is a standard developed by a Standards Council of Canada (SCC) accredited Standards Development Organization, in compliance with requirements and guidance set out by SCC. More information on National Standards of Canada can be found at www.scc.ca.

SCC is a Crown corporation within the portfolio of Innovation, Science and Economic Development (ISED) Canada. With the goal of enhancing Canada's economic competitiveness and social well-being, SCC leads and facilitates the development and use of national and international standards. SCC also coordinates Canadian participation in standards development, and identifies strategies to advance Canadian standardization efforts.

Accreditation services are provided by SCC to various customers, including product certifiers, testing laboratories, and standards development organizations. A list of SCC programs and accredited bodies is publicly available at www.scc.ca.

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

UL Standard for Safety for Components for Personal Flotation Devices, ANSI/CAN/UL 1191

Fifth Edition, Dated May 28, 2019

Summary of Topics

This revision of ANSI/CAN/UL 1191 dated August 28, 2026 replaces the revisions dated August 27, 2026. This correction removes the revisions related to Electronic Inflation Controls topic which did not reach consensus in the ballot dated March 13, 2026.

Revisions from the August 27, 2026 publish are still identified by a vertical line in the margin and include the following:

– AATCC Detergent; Table 8.1, Table 17.1, Table 19.2, Table 20.1, Table 21.1, Table 22.1, Table 32.1, Table 32.3, Table 32.4, Table 32.5, Table 32.6, Table 36.1, Table 36.2, and A.2.

– Compartment material accelerated aging test method; Table 29.1.

Text that has been changed in any manner or impacted by ULSE's electronic publishing system is marked with a vertical line in the margin.

The new and revised requirements are substantially in accordance with Proposal(s) on this subject dated March 13, 2026.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form by any means, electronic, mechanical photocopying, recording, or otherwise without prior permission of ULSE Inc. (ULSE).

ULSE provides this Standard "as is" without warranty of any kind, either expressed or implied, including but not limited to, the implied warranties of merchantability or fitness for any purpose.

In no event will ULSE be liable for any special, incidental, consequential, indirect or similar damages, including loss of profits, lost savings, loss of data, or any other damages arising out of the use of or the inability to use this Standard, even if ULSE or an authorized ULSE representative has been advised of the possibility of such damage. In no event shall ULSE's liability for any damage ever exceed the price paid for this Standard, regardless of the form of the claim.

Users of the electronic versions of UL's Standards for Safety agree to defend, indemnify, and hold ULSE harmless from and against any loss, expense, liability, damage, claim, or judgment (including reasonable attorney's fees) resulting from any error or deviation introduced while purchaser is storing an electronic Standard on the purchaser's computer system.

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

No Text on This Page

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.



ANSI/UL 1191-2026

MAY 28, 2019
(Title Page Reprinted: August 28, 2026)



1

ANSI/CAN/UL 1191:2026

Standard for Components for Personal Flotation Devices

First Edition – January, 1976
Second Edition – May, 1993
Third Edition – June, 1997
Fourth Edition – December, 2008

Fifth Edition

May 28, 2019

This ANSI/CAN/UL Safety Standard consists of the Fifth Edition including revisions through August 28, 2026.

The most recent designation of ANSI/UL 1191 as an American National Standard (ANSI) occurred on August 27, 2026. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page, Preface or SCC Foreword.

This standard has been designated as a National Standard of Canada (NSC) on August 27, 2026.

© 2026 ULSE Inc. All rights reserved.

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

No Text on This Page

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

CONTENTS

Preface 7

INTRODUCTION

1 Scope 9
2 General 9
2.1 Units of measurement 9
2.2 Use codes/product classifications 9
2.3 Material 10
2.4 Color – sample conditioning 10
2.5 Color – conspicuity 11
3 Definitions 13

THREAD

4 Construction 14
5 Performance 15
6 Marking 15

FABRIC

7 Construction 16
8 Performance 16
8.1 General 16
8.2 Yarn slippage – woven fabric only 16
8.3 Openness of weave 16
9 Marking 20

WEBBING AND TIE TAPE

10 Construction 20
11 Performance 20
11.1 General 20
11.2 Friction 20
11.3 Flexibility 20
11.4 Strength/slippage 21
11.5 Torsional stiffness 21
12 Marking 23

LACING

13 Construction 23
14 Performance 23
14.1 General 23
14.2 Untieability 24
15 Marking 24

ZIPPERS

16 Construction 25
17 Performance 25
17.1 General 25

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

17.2 Operability force test 27
17.3 Crosswise strength test 27
18 Marking 28

HARDWARE

19 Webbing Closures and Adjusters 29
19.1 General 29
19.2 Construction 29
19.3 Performance 29
19.4 Marking 32
20 Lacing Closures and Adjusters 33
20.1 General 33
20.2 Construction 33
20.3 Performance 33
20.4 Marking 36
21 Sailboard Harness Hooks 36
21.1 General 36
21.2 Performance 36
21.3 Marking 42
22 Multi-Eyelet Guides 42
22.1 General 42
22.2 Performance 42
22.3 Marking 43

FOAM FLOTATION MATERIAL

23 General 44
24 Performance 45
24.1 Density 45
24.2 Specific buoyancy 46
24.3 Buoyancy retention factors 47
24.4 Tensile strength 48
24.5 Oil resistance 49
24.6 Flexibility 50
24.7 Compression deflection 50
24.8 Dimensional analysis 50
24.9 Thickness 51
25 Marking 51

POLYMERIC ENCLOSURES FOR KAPOK

26 Performance 51
26.1 General 51
26.2 Air-leakage 52
26.3 Cold crack 54
27 Marking 57

RF WELDED, URETHANE COATED NYLON COMPARTMENT MATERIALS FOR HYBRID AND FULLY INFLATABLE RECREATIONAL PFDS

28 General 57
29 Performance 57
29.1 Breaking load test 57
29.2 Trapezoid tear strength test 61

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

29.3 Weight loss 61
30 Marking 62

INFLATION SYSTEMS FOR HYBRID AND FULLY INFLATABLE RECREATIONAL PFDS

31 Construction 62
31.1 General 62
31.2 Materials 63
31.3 Oral inflation systems 63
31.4 Actuation and rearming of manual, manual-auto, and automatic inflation systems 64
31.5 Means for verification of mechanism operation 64
31.6 Inflation medium and cylinders 65
31.7 Indicators 65
31.8 Window material 66
32 Performance 67
32.1 General 67
32.2 Use characteristics test – automatic, manual-auto, and manual inflation systems 67
32.3 Automatic operability test – automatic and manual-auto inflation systems 82
32.4 Conditioning test – cylinder seal indicating cylinders 83
32.5 Manual operability test – manual and manual-auto inflation systems 83
32.6 Operability test – oral systems 83
32.7 Discharge test – automatic, manual-auto, and manual inflation systems 83
32.8 Parallel and perpendicular strength of attachment – automatic, manual-auto, manual, oral inflation systems, and over-pressure relief valve systems 85
32.9 Humid atmosphere test – automatic and manual-auto inflation systems 85
32.10 System durability test – automatic, manual, and manual-auto inflation systems 88
32.11 Operability test – over-pressure relief valves 88
32.12 Pull test – automatic, manual-automatic and manual inflation systems, and cylinder seal indicating cylinders 88
32.13 Piercing test – cylinders 88
32.14 Inadvertent Puncture Test 95
32A Solid-State Circuitry Test – Electronic Inflation Systems 95
32B Battery Discharge Test – Electronic Inflation Systems 96
33 Marking 96

POLYMERIC COATINGS

34 Performance 97
34.1 General 97
34.2 Flexibility 98
34.3 Blocking 98
35 Marking 99

KNITTED FABRIC LAMINATED TO FOAM FLOTATION MATERIAL

36 Performance 100
36.1 Performance 100
36.2 Thermal insulation test 102
37 Marking 104

ANNEX A – NORMATIVE REFERENCES

ANNEX B (CAN) (NORMATIVE) MARKINGS – FRENCH TRANSLATION

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

No Text on This Page

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

Preface

This is the Fifth Edition of the ANSI/CAN/UL 1191, Standard for Components for Personal Flotation Devices.

ULSE is accredited by the American National Standards Institute (ANSI) and the Standards Council of Canada (SCC) as a Standards Development Organization (SDO).

This Standard has been developed in compliance with the requirements of ANSI and SCC for accreditation of a Standards Development Organization.

This ANSI/CAN/UL 1191 Standard is under continuous maintenance, whereby each revision is approved in compliance with the requirements of ANSI and SCC for accreditation of a Standards Development Organization. In the event that no revisions are issued for a period of four years from the date of publication, action to revise, reaffirm, or withdraw the standard shall be initiated.

In Canada, there are two official languages, English and French. All safety warnings must be in French and English. Attention is drawn to the possibility that some Canadian authorities may require additional markings and/or installation instructions to be in both official languages.

Comments or proposals for revisions on any part of the Standard may be submitted to ULSE at any time. Proposals should be submitted via a Proposal Request in the Collaborative Standards Development System (CSDS) at https://csds.ul.org.

Our Standards for Safety are copyrighted by ULSE Inc. Neither a printed nor electronic copy of a Standard should be altered in any way. All of our Standards and all copyrights, ownerships, and rights regarding those Standards shall remain the sole and exclusive property of ULSE Inc.

This Edition of the Standard has been formally approved by the Technical Committee (TC) on Personal Flotation Devices, TC 1123.

This list represents the TC 1123 membership when the final text in this standard was balloted. Since that time, changes in the membership may have occurred.

TC 1123 MEMBERSHIP

Name	Representing	Interest Category	Region
David Broadbent	ABYC	Testing & Standards Org.	USA
Dennis Campbell	IMANNA Laboratory	Testing & Standards Org.	USA
Gordon Colby	Mustang Survival	Producer	USA
Thomas Dardis	US Coast Guard Headquarters	Government	USA
Jack Davis	Takashina Life Preservers Company, Ltd., DBA TLPC Japan	Producer	Japan
Lisette Delgado	UL Standards & Engagement	TC Project Manager – Non-voting	USA
Brenda Espelien	PFD Consultants, Inc.	General Interest	USA
Troy Faletra	Throw Raft LLC	Producer	USA
John Fetterman	Nasbla	General Interest	USA

TC 1123 MEMBERSHIP Continued on Next Page

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

TC 1123 MEMBERSHIP Continued

Name	Representing	Interest Category	Region
Sam Fowlkes	American Canoe Association	Commercial / Industrial User	USA
Lisa Hanson Ouellette	Lifesaving Society Ontario Branch	General Interest	Canada
Joel Hawk	UL Solutions	Testing & Standards Org	USA
Robin Holcomb	Sport Dimension	Producer	USA
Betty Holthouser	Standards Individuals	Consumer	USA
Ross Johnston	Industry Consultant Life Jackets & Survival Gear	Producer	Canada
Daniel Lanternari	Erez Thermoplastic Products	Supply Chain	Israel
Leon Larson	USA Water Ski	Commercial / Industrial User	USA
Allan Laursen	FORCE Certification A/S	Testing & Standards Org.	Denmark
Joshua Leblanc	West Jackson Fire Department	Authorities Having Jurisdiction / Regulator	USA
Emilie Letourneau	Transport Canada	Government	Canada
Astrid Lozano	Public Works & Government Services Canada	Non-Voting	Canada
Robert Markle	Markle Marine Safety Services LLC	General Interest	USA
Tony McCormick	Standards Individuals	General Interest	Canada
Michelle McShane	Paddle Canada	Commercial / Industrial User	Canada
Patrick Platteuw	UL Standards & Engagement	TC Chair – Non-Voting	USA
Robert Rippy	The Coleman Company INC	Producer	USA
Steve Rogier	Halkey-Roberts Corp	Producer	USA
Chris Smith	US Navy	Government	USA
Lee Stanford	Leland LTD INC	Producer	USA
Joseph Stimatz	Standards Individuals	Consumer	USA
Garfield Tam	Department of National Defence	Government	Canada
Myles Uren	SPINLOCK	Producer	United Kingdom
Allen Van Camp	AJV INC	Producer	USA
Wayne Walters	Kent Outdoors	Producer	USA
Samuel Wehr	Standards Individuals	Consumer	USA
Sharon White	U.S. Consumer Product Safety Commission (CPSC)	Non-Voting	USA
Jacqi Yurkovich	US Coast Guard Headquarters	Government	USA

International Classification for Standards (ICS): 13.340.70

For information on ULSE Standards, visit http://www.shopulstandards.com, call toll free 1-888-853-3503 or email us at ClientService@shopULStandards.com.

This Standard is intended to be used for conformity assessment.

The intended primary application of this standard is stated in its scope. It is important to note that it remains the responsibility of the user of the standard to judge its suitability for this particular application.

CETTE NORME NATIONALE DU CANADA EST DISPONIBLE EN VERSIONS FRANÇAISE ET ANGLAISE

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

INTRODUCTION

1 Scope

1.1 These requirements cover components intended for use in the manufacturer of personal flotation devices and immersion suits. Compliance with these requirements does not indicate that the product is intended for use as a component of an end product without further investigation. The requirements shall be applied to other components if found to be appropriate.

1.2 The components addressed in this Standard are intended for use in personal flotation devices and immersion suits which comply with the requirements of Underwriters Laboratories Inc., the United States Coast Guard Subparts of Chapter I, Title 46, Code of Federal Regulations, and Transport Canada. These include:

a) USCG Subparts 160.002, 160.047, 160.048, 160.049, 160.050, 160.052, 160.053, 160.055, 160.060, 160.064, 160.076, 160.077, 160.150, 160.155, 160.171, and 160.176.

b) The requirements for:

1) Marine Buoyant Devices, UL 1123;

2) Buoyant Cushions, UL 1175;

3) Buoyant Vests, UL 1177;

4) Hybrid Personal Flotation Devices, UL 1517; and

5) Fully Inflatable Recreational Personal Flotation Devices, UL 1180.

6) Immersion Suits, UL 1197.

7) Personal Flotation Devices – Part 5: Buoyancy Aids (Level 50) – Safety Requirements, UL 12402-5.

1.3 These requirements also cover personal flotation device components intended to meet the requirements of the United States Coast Guard Subparts of Chapter I, Title 46, Code of Federal Regulations. These include USCG Subparts 164.019 and 164.023.

1.4 The components addressed in this Standard are not prohibited from being used on devices that comply with other regulations and requirements (other than those tabulated in 1.2) when the component meets the intent of the requirements of Underwriters Laboratories Inc., the United States Coast Guard, and Transport Canada.

2 General

2.1 Units of measurement

2.1.1 Values stated without parentheses are the requirement. Values in parentheses are explanatory or approximate information.

2.2 Use codes/product classifications

2.2.1 One or more use codes shall be assigned to each device component to show the classification of PFD or immersion suit for which it is intended. See Table 2.1.

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.