



# SHIP SAFETY BULLETIN

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**Subject: IACS UNIFIED REQUIREMENTS FOR POLAR CLASS SHIPS**  
**Application in Canadian Arctic Waters**

**Purpose**

This Bulletin explains Transport Canada's policy towards the application of new rules respecting structural and machinery requirements for polar ships, promulgated by the International Association of Classification Societies (IACS), as referenced from an International Maritime Organization (IMO) document.

**Background**

IACS Unified Requirements (URs) for Polar Class Ships (UR I1, I2 and I3) took effect in March 2008. New ships built to these URs will be assigned a Polar Class (PC) notation ranging from PC1 to PC7. A Polar Class notation may also be assigned to an existing vessel by applying to an IACS member to have the vessel assessed in accordance with the URs for Polar Class Ships.

Under authorities vested by the *Arctic Waters Pollution Prevention Act* (AWPPA), Transport Canada administers several regulations and standards that are aimed at preventing pollution and damage to the Arctic marine environment. Currently, these regulations and standards are based on a mix of unique Canadian Arctic Categories (AC & CAC), and Types that are based on the Finnish-Swedish (Baltic) Rules. Vessels designed to any other ice class are only considered for equivalency on a case-by-case basis. Vessels with the new Polar Class notations will be treated as described in this Bulletin.

The IACS URs for Polar Class Ships were developed as a result of international efforts originating at IMO to harmonize the many systems of requirements for polar ice-classed vessels. Working groups were set up, including representatives from national administrations, classification societies, industry, academia, and research organizations. In order to represent Canadian Arctic interests, Transport Canada provided a leading role at these IMO meetings and strongly supported the harmonization initiative.

**Keywords:**

1. Unified Requirements
2. Polar Class
3. Ice-covered waters

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Owners of commercial vessels automatically receive Bulletins.

It was agreed that IMO would develop overall guidelines for ships operating in ice-covered waters. The resulting document was published by IMO as a joint Circular MSC 1056/MEPC 399 - Guidelines for Ships Operating in Arctic Ice-covered Waters – in December 2002. It was also agreed that details of hull and machinery construction would be coordinated through IACS, and the (then draft) URs are referenced in the IMO Guidelines. The Guidelines and URs both utilize the seven Polar Classes - PC 1 through PC 7. PC 1 is the most capable class, capable of year-round operation in all ice conditions. PC 6/7 are for use in summer/autumn operations in medium/thin first-year ice, which may include old ice inclusions. The IMO Guidelines are currently under review for updates and application in all Arctic and Antarctic waters.

The development of the URs incorporates a great deal of Canadian operational experience, field data, research and development. Transport Canada has a full understanding of the technical background to the requirements, and remains a partner in ongoing development work.

### **Transport Canada Policy**

Transport Canada supports the full implementation of the URs and of other relevant state-of-the-art knowledge incorporated in the IMO Guidelines through appropriate revisions to the *Arctic Shipping Pollution Prevention Regulations* (ASPPR) and to other related standards. Implementation will follow the Government of Canada's regulatory process including consultation and various forms of impact and benefit/cost analysis.

As an interim measure for navigation purposes, Transport Canada will consider that PC 6 and 7 vessels will be allowed to operate as Type A and B vessels (Baltic 1AS and 1A construction) respectively. This approach is valid both for access under the current ASPPR Zone/Date system and also under the Arctic Ice Regime Shipping System (AIRSS) Standards defined in Transport Publication (TP) 12259. The PC vessels are intended to be more suited to polar operations than are their Baltic equivalents, so this approach is conservative, and it may be revised for full implementation, giving access advantage to PC vessels.

For other Polar Class vessels, the two highest classes (PC 1 and PC 2) will be permitted to operate throughout the Arctic at any time of year, provided they comply with other provisions of the Standard TP 12259 and with the damaged stability, subdivision, and pollutant segregation requirements of the current Canadian regulations and Equivalent Standards, or the IMO guidelines. This approach corresponds to the access granted to vessels of Canadian Arctic Categories CAC 1 and CAC 2 under the current system.

Vessels constructed as PC 3, 4, and 5 will also be permitted to operate under the AIRSS (TP 12259) subject to compliance with damaged stability, subdivision, and pollutant segregation. In the interim, it will be necessary to assign ice multipliers on a case-by-case basis, subject to the general principle that a PC 3's multipliers and resulting ice numerals will be no more onerous than those for CAC 3, and those for PC 4 will be no more onerous than those for CAC 4. PC 5 vessels will be expected to have multipliers between those for CAC 4 and Type A. No modifications will be made to the Zone/Date system to address PC 3, 4 and 5 vessels during the interim period, but such PC vessels will be permitted access during Type A seasons without needing to comply with the requirements of the Standard TP 12259. Verification of AIRSS ice multipliers for PC 3, 4 and 5 vessels will be undertaken by Transport Canada, Marine Safety based on submissions from vessel owners.

Note: this policy does not affect the access dates/limits of non-Polar class vessels.

The choosing and assignment of an appropriate PC notation for new and existing vessels is the responsibility of vessel owners and their preferred IACS member classification society.