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Ships and marine technology — Risk assessment on anti- fouling systems on ships

Part 2: Marine environmental risk
assessment method for anti-fouling systems
on ships using biocidally active substances

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National foreword

This British Standard is the UK implementation of ISO 13073-2:2013.

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A list of organizations represented on this committee can be obtained on request to its secretary.

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**Ships and marine technology — Risk
assessment on anti-fouling systems on
ships —**

**Part 2:
Marine environmental risk
assessment method for anti-fouling
systems on ships using biocidally
active substances**

*Navires et technologie maritime — Évaluation des risques pour les
systèmes antisalissure sur les navires —*

*Partie 2: Méthode d'évaluation des risques environnementaux
maritimes pour les systèmes antisalissure sur les navires utilisant des
substances actives biocides*





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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2. www.iso.org/directives

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The committee responsible for this document is ISO/TC 8, *Ships and marine technology*, SC 2, *Marine environment protection*.

ISO 13073 consists of the following parts, under the general title *Marine environment protection — Risk assessment on anti-fouling systems on ships*:

- *Part 1: Marine environmental risk assessment method of biocidally active substances used for anti-fouling systems on ships*
- *Part 2: Marine environmental risk assessment method for anti-fouling systems on ships using biocidally active substances*
- *Part 3: Human health risk assessment for the application and removal of anti-fouling systems (under development)*

Introduction

The attachment of fouling organisms such as barnacles and algae on the submerged parts of a ship's hull increases the propulsive resistance of the hull against water, leading to increased fuel consumption and accidental introduction of non-indigenous species to a foreign marine environment, which may cause significant and harmful changes. As a means of preventing such circumstances, an anti-fouling system that relies on biocidally active substances (e.g. anti-fouling paint) to prevent attachment of fouling organisms can be applied onto the hull of the ship. The harmful effects of organotin compounds used as biocides (historically used in anti-fouling paint) on marine organisms and human health have been of global concern. To prevent the continued use of these compounds, a legally-binding international framework regulating the use of anti-fouling systems containing harmful substances was enacted by the International Maritime Organization (IMO). Consequently, the International Convention on the Control of Harmful Anti-fouling Systems on Ships (the AFS Convention) was adopted at the IMO diplomatic conference held in London in October 2001, and entered into force in September 2008.

The Convention envisages handling various harmful anti-fouling systems within its framework and lays out a process by which anti-fouling systems can be risk assessed. Annexes 2 and 3 of the Convention include the list of information needed to determine whether an anti-fouling system is harmful to the environment and should be restricted from use on ships, but a marine environmental risk assessment method for making this decision is not provided. Furthermore, Resolution 3, adopted by IMO along with the AFS Convention recommends that contracting Parties continue to work in appropriate international fora for harmonization of test methods and assessment methodologies, and performance standards for anti-fouling systems containing biocidally active substance(s).

Based on this, there is a global need for an international method for conducting scientific environmental risk assessments for anti-fouling systems substituting organotin-based anti-fouling systems. This part of 13073 allows a pragmatic approach to introducing systems (i.e., self-regulation or approval systems) in countries where either no system exists, or a less developed system is in place and would allow such countries to improve protection of the aquatic environment.