



# TECHNICAL INFORMATION

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**Subject : Guideline for Amendment(control of cybutryne) of IAFS  
(International Convention on the control of harmful anti-fouling  
systems on ships)**

## 1. Background

As with control of organotin compounds, Resolution MEPC.331(76) was adopted on 17 June 2021 and it enter into force on 1 January 2023. In relation to the amendment to IAFS Convention, we decided to provide technical-information for Ship owners, Manufacturers, Surveyors and Other relevant parties.

## 2. Control measures & Application

(1) Cybutryne(CAS No. 28159-98-0)

(2) Control measures :

- 1) Ships shall not apply or re-apply anti-fouling systems containing cybutryne
- 2) Ships bearing an anti-fouling system that contains cybutryne in the external coating layer of their hulls or external parts or surfaces on 1 January 2023 shall either **remove the anti-fouling system** or **apply a coating (external coating layer or sealer coat) that forms a barrier to cybutryne leaching from the underlying non-compliant anti-fouling system.**

(3) Application

1) **All ships**

2) All ships except:

- a) fixed and floating platforms, FSUs, and FPSOs that have been constructed prior to 1 January 2023 and that have not been in dry-dock on or after 1 January 2023;
- b) ships not engaged in international voyages;
- c) ships of less than 400 gross tonnage engaged in international voyages, if accepted by the coastal State(s)

### 3. Content(s)

#### (1) Allowance

- In accordance with Res. MEPC.356(78), threshold and tolerance are applied below

##### 1) Sample taken from existing ships (dry paint)

###### a) Organotin compound

- threshold : below 2500mg(measured as Sn) per 1kg of dry paint

- tolerance range : below 500mg Sn per 1kg of dry paint(20%)

*∴ 'Result of analysis' < '3000mg Sn(threshold + tolerance range) per 1kg of dry paint'*

###### b) Cybutryne

- threshold : below 1000mg per 1kg of dry paint

- tolerance range : below 250mg per 1kg of dry paint(20%)

*∴ 'Result of analysis' < '1500mg(threshold + tolerance range) per 1kg of dry paint'*

##### 2) Paint taken from can or container (wet paint)

###### (a) Organotin compound : Non applicable

- Threshold of organotin compounds acting as chemical catalyst not more than 2500mg(measured as Sn) are allowed.

###### (b) Cybutryne : Non applicable

- Allowance range of 200mg per 1kg of paint for ingredient analysis is allowed.

#### (2) Requirements for survey

##### 1) ships engaged in international voyage (except Korean flagged ship)

(a) A copy of type approval certificate issued by this Society (Organotin compound)

(b) Declaration of Compliance for cybutryne or equivalent or higher data of antifouling system

(c) In case of applying sealer coat, documents pertaining to the below information.

- Type of the Sealer Coat, Name of the Sealer Coating manufacturer, Name and colour of the Sealer Coat, Active ingredient(s) and their Chemical Abstract Service Registry Number (CAS number (s)), Manufacturer's declaration including date, sign by the person in QA charge, As far as possible, manufacturer's own test results

##### 2) Korean flagged vessel :

(a) A copy of type approval certificate issued by the Commissioner of Local Maritime and Port in accordance with the Performance Test and Examination Standards for the Type Approval of Marine Pollution Prevention Equipment (Organotin compound)

(b) Declaration of Compliance for cybutryne or equivalent or higher data of antifouling system

(c) In case of applying sealer coat, documents pertaining to the below information.

- Type of the Sealer Coat, Name of the Sealer Coating manufacturer, Name and color of the Sealer Coat, Active ingredient(s) and their Chemical Abstract Service Registry Number (CAS number (s)), Manufacturer's declaration including date, sign by the person in QA charge, As far as possible, manufacturer's own test results

※ If domestic law of Republic of Korea is amended, information for amendments will be guided accordingly.

(3) Certificate

- In accordance with amendment of Resolution MEPC.331(76), all IAFS Certificate shall be re-issued by Administration or by any person or organization duly authorized by Administration not later than two years after entry into force of cybutryne related control (1 Jan 2025)

(1) An anti-fouling system controlled under Annex 1 has not been applied during or after construction of this ship .....	<input type="checkbox"/>
(2) An anti-fouling system controlled under Annex 1 has been applied on this ship previously, but has been removed by _____ on _____ .....	<input type="checkbox"/>
(3) An anti-fouling system controlled under Annex 1 has been applied on this ship previously, but has been covered with a sealer coat applied by _____ on _____ .....	<input type="checkbox"/>
(4) An anti-fouling system controlled under Annex 1 was applied on this ship prior to _____ but must be removed or covered with a sealer coat prior to _____ .....	<input type="checkbox"/>

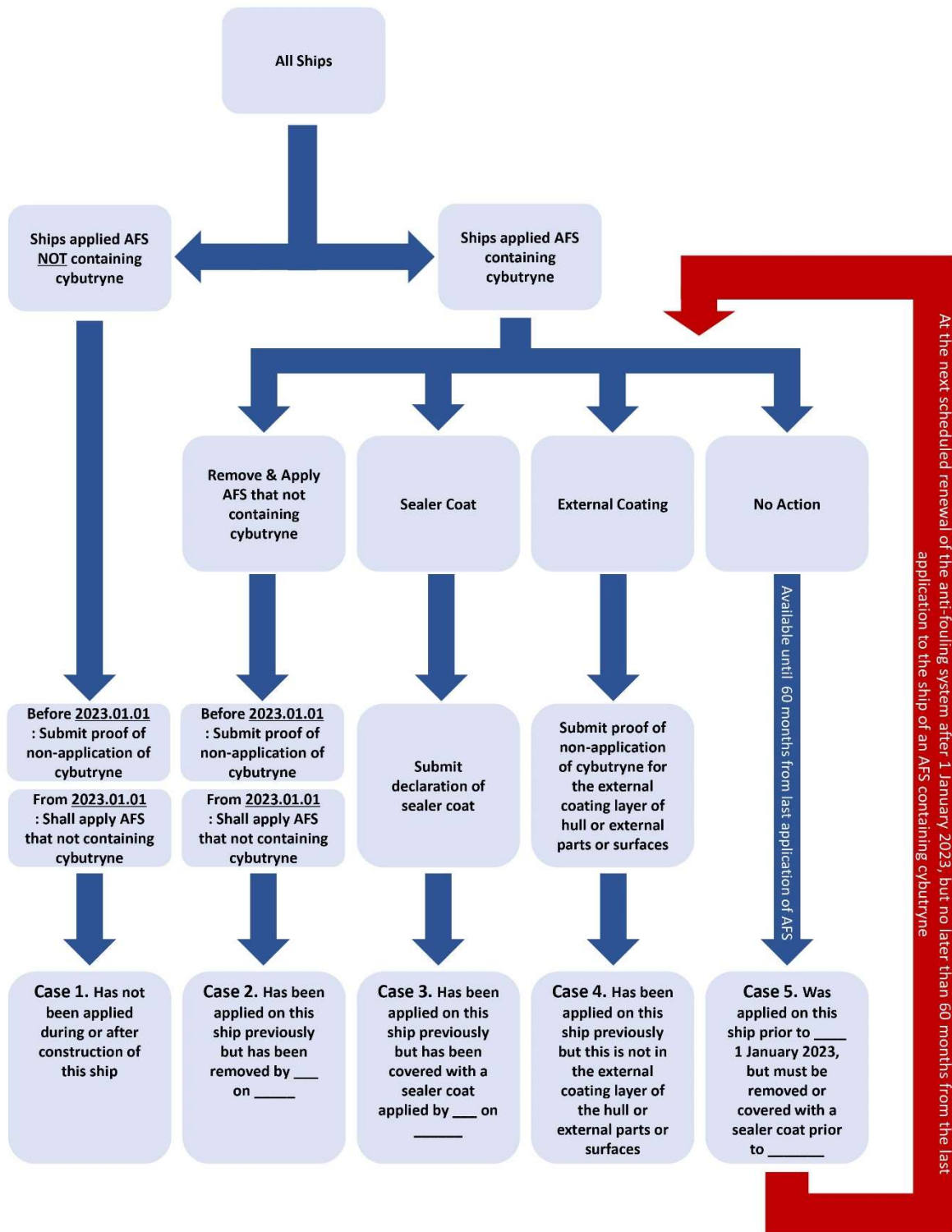
Reference 1 – Model form of certificate before amendment of MEPC.331(76)

	Has not been applied during or after construction of this ship	Has been applied on this ship previously, but has been removed by	Has been applied on this ship previously, but has been covered with a sealer coat applied by	Has been applied on this ship previously, but is not in the external coating layer of the hull or external parts or surfaces on	Was applied on this ship prior to
Case 1 ~ 5 Organotin compounds which act as biocides	<input type="checkbox"/>	..... (insert name of the facility) on ..... (dd/mm/yyyy)	..... (insert name of the facility) on ..... (dd/mm/yyyy)	Not applicable	Not applicable
Amended Section Cybutryne	<input type="checkbox"/>	..... (insert name of the facility) on ..... (dd/mm/yyyy)	..... (insert name of the facility) on ..... (dd/mm/yyyy)	1 January 2023	1 January 2023, but must be removed or covered with a sealer coat prior to ..... (dd/mm/yyyy)

Reference 2 – Model form of certificate after amendment of MEPC.331(76)

(4) Flow chart of IAFS (International Anti-fouling System) Certificate and explanation.

1) In accordance with flow chart below, all ships shall re-issue IAFS certificate and mark the corresponding case on renewed part of IAFS certificate at the nearest periodical or occasional survey.



<Flow chart of IAFS certificate>

2) corrective measure

(a) **Case 1** : Has not been applied during or after construction of this ship

- Shall issue Certificate not later than two years after entry into force of AFS control
- Submit proof of non-appliance of cybutryne to newly applied AFS.
- Submit proof of non-appliance of cybutryne for the AFS that already applied to ship.

(b) **Case 2** : Has been applied on this ship previously, but has been removed by

- Submit record of removal as a proof and submit proof of newly applied compliant antifouling system not containing cybutryne before issuance of IAFS Certificate.

(c) **Case 3** : Has been applied on this ship previously, but has been covered with a sealer coat applied by

- Submit record of appliance of a sealer coat with declaration of compliance of sealer coat as a proof before issuance of IAFS Certificate.

(d) **Case 4** : Has been applied on this ship previously, but this is not in the external coating layer of the hull or external parts or surfaces.

- Submit proof of non-appliance of cybutryne for the external coating layer of hull or external parts or surfaces before issuance of IAFS Certificate.

(e) **Case 5** : Was applied on this ship prior to

- Remove the antifouling system
- As above procedure is accomplished, Renew IAFS Certificate with appropriate case.
- If the ship is marked in case 5, anti-fouling system which satisfy Annex 1 of AFS convention shall be applied at the next scheduled renewal of the anti-fouling system after 1 January 2023, but no later than 60 months from the last application to the ship of an AFS containing cybutryne.

This technical information was published by Convention& legislation team ([Convention@krs.co.kr](mailto:Convention@krs.co.kr)) to give information about the new IAFS guideline for Amendment (control of cybutryne) of IAFS (International Convention on the control of harmful anti-fouling systems on ships)

If you have any questions regarding Korean flagged ships, please contact Statutory Service Team([statutory@krs.co.kr](mailto:statutory@krs.co.kr))

If you have any technical questions regarding Type approval and Declaration of compliance, please contact the Marine & Ocean Equipment Team ([equipment@krs.co.kr](mailto:equipment@krs.co.kr)).

## **Attachment**

1. Res. MEPC.331(76) : Amendments to the International Convention on the control of harmful anti-fouling systems on ships, 2001
2. Res. MEPC.356(78) : 2022 Guidelines for brief sampling of anti-fouling systems on ships.
3. Res. MEPC.357(78) : 2022 Guidelines for inspection of anti-fouling systems on ships.
4. Res. MEPC.358(78) : 2022 Guidelines for survey and certification of anti-fouling systems on ships

Distributions : KR surveyors, Ship owners, Manufacturers, Other relevant parties

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