



FIRE PROTECTION – Fire Retardant Treatments for Fabrics - Equivalent Testing Standards for Large Commercial Yacht Code.

Notice to all Shipowners, Ship Operators, Masters and Officers of Ships, Ship Designers, Shipbuilders, Notified Bodies and Service Providers of Fire Retardant Treatment Products

This notice replaces MGN 453

Please Note

Where this document provides guidance on the law it should not be regarded as definitive. The way the law applies to any particular case can vary according to circumstances – for example, from vessel to vessel and you should consider seeking independent legal advice if you are unsure of your own legal position.

Summary

This MGN brings the attention of interested parties to the publication of the MCA Approval Procedures for fire retardant treatment of floor coverings, suspended textile materials, upholstery materials and bedding components onboard vessels certificated under the Large Commercial Yacht Code.

Key Points:

- The MCA Approval Procedures provide equivalence to inherently fire retardant materials used onboard new build and existing vessels certificated under the Fire Safety section of the Large Commercial Yacht Code part A (vessel < 500 GT).
- They establish robust quality assurance procedures to allow approval of fire retardant treatments for the protection of materials used onboard large commercial yachts.
- The **MCA Approval Procedures** and a **Declaration of Conformity** for such fire retardant treatments can be found as Appendixes 1 & 2, respectively, to this MGN.
- Service Provider is an organisation authorized by UK Notified Bodies to provide fire retardant treatment as defined in Appendix 1.
- List of Service Providers can be found online at the websites shown in Appendix 3.
- This MGN is applicable to new builds and existing large yachts.
- This MGN is replaces MGN 453 following experience gained since 1 October 2012.



1. Introduction / Background

- 1.1 Under the requirements of the Large Commercial Yacht Code, for vessels of 500GT and over, accommodation spaces should be provided with an automatic sprinkler system and, unless a fully addressable fire detection system is fitted, upholstery, bedding components and suspended textiles are required to be inherently fire retardant by complying with the relevant parts of the IMO Fire Test Procedures Code (FTP Code) or an equivalent standard acceptable to the Administration. Primary deck coverings within accommodation spaces, service spaces and control stations are to be of a type which will not readily ignite, or give rise to toxic or explosive hazards at elevated temperatures.
- 1.2 Under the requirements of the Large Commercial Yacht Code, for vessels of less than 500GT, unless the space is fitted with sprinklers or equivalent approved fixed fire extinguishing systems, upholstery and suspended textiles are required to be inherently fire retardant by complying with the relevant parts of the IMO Fire Test Procedures Code (FTP Code) or an equivalent standard acceptable to the Administration.
- 1.3 The MCA has been approached by companies wishing to provide fire retardant treatment on floor coverings, suspended textile materials, upholstery materials and bedding components, as an equivalence to inherently fire retardant materials, onboard vessels certificated under the Large Commercial Yacht Code.
- 1.4 In order to approve this type of fire protection equivalence, the MCA has to be assured that the fire retardant treatment process, including quality controls, is equivalent to appropriate standards of the IMO Fire Test Procedures Code (FTP Code).
- 1.5 To control the approval of these fire retardant treatments as an equivalent, the MCA has produced **MCA Approval Procedures** and a **Declaration of Conformity** for such treatments, which can be found as Appendixes 1 & 2, respectively, to this MGN.

2. Application Date

- 2.1 An Application Date of **01 January 2020** for Service Providers to comply with these Procedures will apply, after which date, the Service Provider of any fire retardant treatment used to protect floor coverings, suspended textile materials, upholstery materials and bedding components onboard United Kingdom or Red Ensign Group flag Large Commercial Yacht Code certificated vessels, must be approved, and certificated in accordance with these Procedures. The early application of the MGN is acceptable on a voluntary basis.
- 2.2 Meanwhile, until **01 January 2020**, fire retardant treatment Service Providers may continue to apply their treatment onboard United Kingdom or Red Ensign Group flag Large Commercial Yacht Code certificated vessels, in accordance with MGN 453.
- 2.3 Notwithstanding the above, any prior approval in accordance with MGN 453 will be valid until the expiry date of the approval certificate.
- 2.4 The MCA will continue to monitor the continued successful use of this MGN and the equivalence it provides in order to determine future policy on the use of chemical sprays as an equivalence to IMO approved products. This may include the review of Declaration of Conformity during vessel surveys and inspections, as well as visits to Notified Bodies.



More Information

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MCA APPROVAL PROCEDURES

FIRE RETARDANT TREATMENT FOR FLOOR COVERINGS, SUSPENDED TEXTILE MATERIALS, UPHOLSTERY MATERIALS AND BEDDING COMPONENTS FOR USE ONBOARD VESSELS CERTIFIED UNDER THE LARGE COMMERCIAL YACHT CODE

1. SCOPE

- 1.1. Compliance with these procedures is required to enable certification to be issued by a UK Notified Body, that a fire retardant treatment used to protect floor coverings, suspended textile materials, upholstery materials and bedding components onboard United Kingdom or Red Ensign Group flag Large Commercial Yacht Code certified vessels meets, or provides equivalences to, the appropriate standards of The Large Commercial Yacht Code and the IMO 2010 Fire Test Procedures (FTP) Code to provide a reliable and safe protection.

2. SERVICE PROVIDER

- 2.1. A Service Provider, in this context, is one who satisfies the requirements of these procedures, and they must demonstrate this compliance to the satisfaction of a UK Notified Body.
- 2.2. A list of Service Providers, can be found online at the websites shown in appendix 3.

3. UK NOTIFIED BODY

- 3.1. A UK Notified Body, as appointed under SI 2016 No. 1025, in this context, is a body which may undertake approval of a fire retardant treatment product that complies with the requirements of these procedures.
- 3.2. The UK Notified Body undertaking the approval shall develop and maintain an online public website showing an updated list of Service Providers with the related licensed applicators, contact details and fire retardant treatment limitation including the details of the material for which it has been approved. The Notified Body shall communicate to MCA the link to this website in order to be published in appendix 3 of this guidance.
- 3.3. The list of UK Notified Bodies can be found in MCA document MSN 1874, as amended.

4. UK IMO RECOGNISED TEST LABORATORY

- 4.1. A UK IMO recognised test laboratory is a laboratory recognised by MCA which is able to conduct fire tests in accordance with the provision of the 2010 FTP Code.
- 4.2. The list of UK IMO recognised test laboratories can be found in the Annex to IMO SSE.1/Circ.3 of 09 May 2017, as amended.

5. QUALITY ASSURANCE

- 5.1. The Service Provider must ensure that their products and procedures meet the requirements of this document.
- 5.2. The Service Provider shall maintain a list of vessels to which the fire retardant treatment has been applied. These records shall allow the precise identification of the vessel, date and limitations of the treatment provided.
- 5.3. The Service Provider shall maintain records of the fire retardant treatment chemicals, materials / fabrics tested, documentation and personnel training, for a period of at least 5 years for auditing purposes to include, but not restricted to:
 - product manufacturer details
 - chemical identification
 - chemical dilution or mixing requirements
 - tested materials / fabric details, including accepted variations
 - application rates
 - post-treatment washing and cleaning requirements for fabrics and materials
 - product batch traceability
 - product shelf-life
 - information/documentation issued by product manufacturer to/from Service Provider
 - Declarations of conformity issued by Service Provider
 - information/documentation issued by Service Provider to/from customer
 - information/documentation issued by Service Provider to/from employees applying the treatment product
 - information/documentation issued by Service Provider to/from other approved Service Providers
 - training and evidence of employee competence to carry out the application of the fire retardant to the required standard
 - product Material Safety Data sheets
- 5.4. The Service Provider shall retain sealed samples of the fire retardant treatment chemicals and treated materials used for the approval for a period of at least 3 years.
- 5.5. The Service Provider shall provide a Declaration of Conformity confirming that the specified materials and fabrics on board each individual vessel have been treated according to the approved and tested samples.
- 5.6. The Service Provider shall maintain an effective internal quality system in relation to their products and procedures, based on appropriate parts of internationally recognized quality standards no less effective than the ISO 9001 series.

5.7. The Service Provider's internal quality system shall be audited by the UK Notified Body with intervals not exceeding 12 months. This audit should at least cover the records requested to be maintained in this chapter.

5.8. The Notified Body shall inform MCA on:

- The type, number and outcome of audits
- The type and number of non-compliances detected
- The corrective actions agreed with Service Providers

6. RESPONSIBILITIES

6.1. The issue of an Approval Certificate to a Service Provider by the UK Notified Body under these procedures is not an assurance (whether by way of warranty, guarantee or otherwise) by that Body, or the MCA, that services or material provided by that Service Provider in any particular case meets, or provides equivalences to, the appropriate standards of the Large Commercial Yacht Code and the IMO 2010 Fire Test Procedures (FTP) Code, the responsibility for which in a particular case lies solely with the Service Provider.

7. MATERIAL SELECTION and PRE-TESTING REQUIREMENTS

7.1. Floor coverings, suspended textile materials, upholstery materials and bedding components to be tested are to be selected to give a reasonable representation of the same construction and material composition of the materials to be treated onboard both new build and existing large yachts.

7.2. Where a range of products is intended to be covered, for example variation of weight/m² or weave, tests shall be conducted sufficient to demonstrate compliance of the intended variation. Where a variation in the mix of raw materials is used in the fabric, advice may be sought from the UK Notified Body to agree which most flammable mix is to be tested.

7.3. Before the application of the fire retardant treatment, the UK IMO recognised test laboratory shall ensure that the test sample is subject to the following pre-testing procedure to avoid risk of contamination or tampering with the sample:

7.3.1. The test sample should be soaked in accordance with BS EN 1021-1: Annex D (30 minutes exposure).

7.3.2. At the conclusion of the immersion period, the sample should be removed from the test vessel and dried in a tumble dryer or oven at a temperature of about 70°C.

7.4. The UK IMO recognised test laboratory shall independently witness the application of the fire retardant treatment to the test samples prior to fire testing.

8. FIRE TEST REQUIREMENTS

8.1. Floor coverings to which the fire retardant treatment has been applied shall be tested in accordance with Part 5 of the 2010 FTP Code, with the addition of the spray-extraction cleaning procedure according to ISO 11379 but with the modifications advised in BS EN 14041.

They shall also comply with the smoke and toxicity test requirements of Part 2 of the 2010 FTP Code.

- 8.2. Vertically supported textiles and films to which the fire retardant treatment has been applied shall be tested in accordance with Part 7 of the 2010 FTP Code, including the pre-conditioning procedures specified in ISO 3175 to simulate commercial dry-cleaning.
- 8.3. Upholstered furniture to which the fire retardant treatment has been applied shall be tested in accordance with Part 8 of the 2010 FTP Code, with the addition of the pre-conditioning procedures specified in ISO 3175 to simulate commercial dry-cleaning.
- 8.4. Bedding components to which the fire retardant treatment has been applied shall be tested in accordance with Part 9 of the 2010 FTP Code, including the cleaning treatments specified in paragraph 6 of the Appendix to this Part.

9. FIRE TESTING FACILITIES

- 9.1. The above fire tests must be carried out by a UK IMO recognised test laboratory, which are able to conduct fire tests in accordance with the provisions of the FTP Code. A list of UK recognised test laboratories, published by IMO annually, can be found on the IMO website.

10. PRODUCT APPLICATION

- 10.1. Where the chemicals from the manufacturer are not provided in sealed, mixed and ready to use state, then the person mixing the chemicals must comply with the manufacturer's instructions and retain a sealed sample of the mixed chemical for a period of at least 3 years. The chemicals must be mixed in batches and each batch of chemical mixture must be tested in accordance with this procedure. The scope of the test for new batches of chemical previously tested and approved is to be to the satisfaction of the notified body. This is because each variation in raw chemical, the dilutant and the environmental conditions may give different end results.
- 10.2. The fire retardant spray treatment product must only be applied to floor coverings, suspended textile materials, upholstery materials and bedding components that have the same construction and material composition as those samples that have been subjected to the fire test(s), and this product description upon which the treatment can be applied must be included on the Declaration of Conformity.
- 10.3. For new vessels, and any changes to materials, a record of material specifications shall be retained onboard the vessel.
- 10.4. For existing vessels, best efforts shall be made to identify the material specifications, for example, by contacting the shipyard/material supplier or having a sample of material tested, as far as practical, or by having an expert in textile technology examine the materials. If a similar specification of material has been previously fire tested, then an onboard treatment may be allowed.

- 10.5. The treatment product can only be applied on materials, or accepted variations, that have passed the relevant fire test specified in this Notice.
- 10.6. Any materials that cannot be treated shall be recorded on the Certificate of Conformity, detailing the reason for this decision.
- 10.7. Where the Service Provider has doubt about the effectiveness of the treatment, the materials should be replaced and/or the MCA surveyor advised accordingly.
- 10.8. The initial application of the fire retardant treatment product must be applied to floor coverings, suspended textile materials, upholstery materials and bedding components onboard the vessel in accordance with the Service Providers written instructions, and only applied by the Service Providers, or approved agents, trained and certified competent personnel.
- 10.9. Date of re-treatment shall not exceed 24 months, and is to be specified on the Declaration of Conformity. However, if treated materials are regularly cleaned onboard, then more frequent re-treatment may be required. Re-treatment every 12 months is recommended, or more frequently if advised by the Service Provider.
- 10.10. Re-application of the fire retardant treatment product, following floor coverings, suspended textile materials, upholstery materials and bedding components cleaning or wear, must be carried out in accordance with the Service Provider's written instructions, and only applied by the Service Provider, or their approved agents, trained and certified competent personnel.

11. TRAINING OF PERSONNEL

- 11.1. A "competent person" means a person who has sufficient training and experience or knowledge and other qualities, to enable him/her to properly undertake the duty imposed under the relevant provisions in this Notice and, in the case of fire retardant treatment, has knowledge and actual experience of, but not restricted to:
 - variations in textile technology
 - application of treatment of materials to the necessary absorption rates
 - administrative and mathematical skills to calculate quantities of materials and application rates
 - accurate record keeping
- 11.2. Records of training and competence for personnel approved by the Service Provider to apply the fire retardant product will need to be maintained and auditable.
- 11.3. Certificates of competence issued by the Service Provider to the personnel shall be carried for verification during treatment and records of survey.
- 11.4. Any UK based Service Provider, who has approved UK based or overseas agents to carry out the treatment application using the Service Providers products, must ensure that they

carry out the strict quality control and training of its agents, and auditable documentation will be required to prove this.

12. CERTIFICATION

12.1. After satisfactory completion of the above approval processes, the UK Notified Body will issue an Approval Certificate, valid for 5 years, to the Service Provider for the fire retardant treatment product and its application process, containing details of the construction and material composition of the samples tested and to which the product can be applied, with a restriction that it can ONLY be used onboard vessels constructed and certified in accordance with the Large Commercial Yacht Code. After the validity date, the renewal of the approval certificate may require a new test to the satisfaction of the notified body.

12.2. The Approval Certificate shall also include, but not be restricted to:

- Service Provider details
- Trade name of the fire retardant
- Treatment applications and limitations
- required treatment solution, e.g. in grams per litre of water
- minimum rate of application of the treatment product, e.g. in litres per square metre. This may vary depending upon each individual fabric/material, or accepted variations, treated and tested.

12.3. This Approval Certification is for the product and application process (i.e. which has demonstrated that the product, its application and testing is compliant with the Fire Test Requirements of these procedures).

12.4. A Declaration of Conformity is to be provided by the Service Provider confirming that specific materials and fabrics on board each individual vessel have been treated in accordance with the approved and tested samples. At least 4 copies are to be signed:

- one for the customer (ship yard or owner)
- one to be kept onboard the vessel
- one for the Flag Administration survey records
- one for the Service Provider

FIRE RETARDANT TREATMENT FOR MATERIALS AND FABRICS

DECLARATION OF CONFORMITY

Certificate No:	
Vessel Name/Yard Ref:	
IMO Number (where applicable)	
Gross Tonnage (GT)	
Registered Length (m)	
Flag of Registry:	
Owner/Customer Details:	
Fire Retardant Treatment Product Details:	
Details of Material(s) Treated:	See appended Treatment Schedule and Material/Fabric Guide, showing fabric details and photographs of the treated materials and their location onboard the vessel, with cross reference (s) to the prototype fire test certificate(s), treatment solution (g/l), rate of application (l/m ²), and post-treatment washing and cleaning requirements.
Details of Material(s) Not Treated:	
Date of Initial Application:	
Due Date of Re-Treatment: (Date of re-treatment shall not exceed 24 months. However, if treated materials are regularly cleaned onboard, then more frequent re-treatment may be required. Re-treatment every 12 months is recommended, or more frequently if advised by the Service Provider):	
Confirmation of Treatment: We hereby confirm that the materials and fabrics detailed herein have been fire retardant treated in accordance with the approved and tested samples certificate No(s):	
Service Provider Details:	
Name:	
Signature:	
Date:	

- At least 4 copies to be signed:
- One to the customer (ship yard or owner)
 - One to be kept onboard the vessel
 - One for the Flag Administration survey records
 - One for the Service Provider

UK Notified Bodies websites listing the approved Service Providers

(The UK Notified Body undertaking the approval shall develop and maintain an online public website showing an updated list of Service Providers with the related licensed applicators, contact details and fire retardant treatment limitation including the details of the material for which it has been approved)

UK Notified Body

Link

BTTG

<https://www.bttg.co.uk/mgn/>