

# MSC Guidelines for Review of Fire Load Calculations

Procedure Number: H2-14

Revision Date: 1/24/2018

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## Purpose

The purpose of this Plan Review Guideline is to provide the submitter with general guidance and information for the development and submittal of Fire Load Calculations.

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## References

- a. Navigation and Vessel Inspection Circular (NVIC) 9-97, Change 1, "Guide to Structural Fire Protection," Chapter 4.3
  - b. Subchapter K definitions found in 46 CFR 114.400 and Fire Load of Accommodation and Service Spaces in 46 CFR 116.427
  - c. NVIC 8-93, "Equivalent Alternatives to 46 CFR Subchapter H Requirements Related To Means of Escape, Safe Refuge Areas, Main Vertical Zone Length"
  - d. NVIC 8-93, Change 1, "Equivalent Alternatives to 46 CFR Subchapter H Requirements Related To Means of Escape, Safe Refuge Areas, Main Vertical Zone Length"
  - e. Marine Technical Note (MTN) 01-13, "Application of the Low Fire Load (5A) Space Policy"
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## Contact Information

If you have any questions or comments concerning this document, please contact the Marine Safety Center (MSC) by email or phone. Please refer to the Procedure Number **H2-14**.

Email: [MSC@uscg.mil](mailto:MSC@uscg.mil)

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## General Note

46 CFR Subchapter K fire load calculations are different from the combustible volume calculations required by 46 CFR Subchapter H or the International Convention for the Safety of Life at Sea (SOLAS). Combustible volume calculations only take into account the walls and ceiling linings. Fire load calculations include all the combustibles within the space which include, but are not limited to, furniture, furnishings, carpets, rugs, combustible deck coverings, draperies, combustible interior finish, veneers, trim, and decorations, electrical cable insulation, plastic piping, light diffusers, mattresses, bedding,

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lifesaving equipment, and similar materials. The Marine Safety Center reviews the fire load calculations and marks them “Examined.” Final approval is granted by the cognizant Officer in Charge, Marine Inspection (OCMI) who verifies the actual arrangement of the spaces.

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## General Guidance

- ❑ Identify the fire load requirement applicable to the vessel in accordance with references (a) through (e).
  - ❑ Submit fire load calculations for all spaces required by references (a) through (e), as applicable, plus any additional spaces specified by the OCMI.
  - ❑ Ensure calculations are only for individual spaces separated by proper fire boundaries. Combustible materials located in concealed spaces behind linings should also be included in the fire load calculations.
  - ❑ The calculated fire loads for all spaces must be within the appropriate limits specified in references (a) through (e), as applicable.
  - ❑ Ensure the accuracy of the area measurement for each space.
  - ❑ Ensure the accuracy of all weights.
  - ❑ Provide documentation that all furniture meets the requirements of “fire resistant furnishings” where required in references (a) through (e)
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## Disclaimer

This guidance is not a substitute for applicable legal requirements, nor is it itself a rule. It is not intended to nor does it impose legally-binding requirements on any party. It represents the Coast Guard’s current thinking on this topic and may assist industry, mariners, the general public, and the Coast Guard, as well as other federal and state regulators, in applying statutory and regulatory requirements. You can use an alternative approach for complying with these requirements if the approach satisfies the requirements of the applicable statutes and regulations. If you want to discuss an alternative, you may contact the Marine Safety Center (MSC), the unit responsible for implementing this guidance.

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