

English version

Space engineering - Structural materials handbook - Part
7: Thermal and environmental integrity, manufacturing
aspects, in-orbit and health monitoring, soft materials,
hybrid materials and nanotechnologies

Ingénierie spatiale - Manuel des matériaux structuraux
- Partie 7 : Intégrité thermique et en environnement,
aspects fabrication, surveillance des matériaux,
matériaux souples, matériaux hybrides et
nanotechnologies

Raumfahrttechnik - Handbuch der Strukturwerkstoffe -
Teil 7: Thermische und umweltbedingte Integrität,
Herstellungsaspekte, In-Orbit- und
Gesundheitsüberwachung, weiche Werkstoffe,
Hybridwerkstoffe und Nanotechnologien

This Technical Report was approved by CEN on 29 November 2021. It has been drawn up by the Technical Committee CEN/CLC/JTC 5.

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European Foreword

This document (CEN/TR 17603-32-07:2022) has been prepared by Technical Committee CEN/CLC/JTC 5 "Space", the secretariat of which is held by DIN.

It is highlighted that this technical report does not contain any requirement but only collection of data or descriptions and guidelines about how to organize and perform the work in support of EN 16603-32.

This Technical report (CEN/TR 17603-32-07:2022) originates from ECSS-E-HB-32-20 Part 7A.

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This document has been developed to cover specifically space systems and has therefore precedence over any TR covering the same scope but with a wider domain of applicability (e.g.: aerospace).

Introduction

The Structural materials handbook is published in 8 Parts.

A glossary of terms, definitions and abbreviated terms for these handbooks is contained in Part 8.

The parts are as follows:

TR 17603-32-01	Part 1	Overview and material properties and applications	Clauses 1 - 9
TR 17603-32-02	Part 2	Design calculation methods and general design aspects	Clauses 10 - 22
TR 17603-32-03	Part 3	Load transfer and design of joints and design of structures	Clauses 23 - 32
TR 17603-32-04	Part 4	Integrity control, verification guidelines and manufacturing	Clauses 33 - 45
TR 17603-32-05	Part 5	New advanced materials, advanced metallic materials, general design aspects and load transfer and design of joints	Clauses 46 - 63
TR 17603-32-06	Part 6	Fracture and material modelling, case studies and design and integrity control and inspection	Clauses 64 - 81
TR 17603-32-07	Part 7	Thermal and environmental integrity, manufacturing aspects, in-orbit and health monitoring, soft materials, hybrid materials and nanotechnologies	Clauses 82 - 107
TR 17603-32-08	Part 8	Glossary	