

Araldite® FST 40002 platform

FST composite systems for aerospace interior

Araldite® FST 40002 platform
is based on a radically
novel thermoset, aiming at
providing innovative solutions
for efficiently manufacturing
interior composite parts with
maximized weight savings

**Araldite® FST 40002 / 40003 and
Araldite® FST 40002 / 40006 are designed
for direct liquid processes with a unique
combination of mechanical performance
and fire resistance properties.**

Key features

- > Suitable for most of interior designs, from highly structural monolithic to sandwich parts
- > Meets flame, smoke and toxicity (FST) and heat release requirements according to FAR 25.853 / ABD 0031 for visible and non-visible parts
- > Low viscosity filler-free systems :
< 50 mPas at 60°C
- > Compatible to high quality, user-friendly processes: RTM (5-10 min cure at 150°C), infusion and pultrusion (injection box, 10 meters / hour)

Benefits

- > Enable production of highly complex shapes
- > Support function integration
- > Increase productivity with low mold occupation time
- > Improve process safety through very low exotherm

Araldite® FST 40002 platform

FST composite systems for aerospace interior

Processing

	Large part	Small / medium part
In-mold cure		
Cure conditions	1h at 100°C 1h at 120°C	5-10 min at 150°C or 20-30 min at 120°C
Free-stand post-cure ⁽¹⁾		
Cure conditions	2h at 180°C	2h at 180°C

⁽¹⁾ Optional, depending on in-mold cure conditions

Mechanical performance

		FST 40002 / 40003	FST 40002 / 40006
DMA T _g	ISO 6721	260°C dry	210°C dry
K _{1C}	ISO 13586	0.9 MPa.√m	0.6 MPa.√m
G _{1C}		270 J/m ²	100 J/m ²
Flexural modulus	ISO 178	3 100 MPa	3 400 MPa
Flexural strength		135 MPa	135 MPa
Flexural elongation		5 %	4 %
ILSS GFRP ⁽¹⁾	ASTM D2344	45 MPa	42 MPa
ILSS GFRP ⁽²⁾		58 MPa	56 MPa

⁽¹⁾ 8h Satin, 300 gsm, FVF 55% | ⁽²⁾ 2x2 Tweek, 6K, 285 gsm, FVF 55%

Typical FST performance

		GFRP monolithic ⁽¹⁾ 1 mm		GFRP sandwich ⁽²⁾	Standard FAR 25.853 / ABD 0031 requirements
		FST 40002 / 40003	FST 40002 / 40006	FST 40002 / 40006	
Vertical burn 12 s	AITM 2.0002B				
Burn length		33 mm	21 mm	pass	< 203 mm
After flame time		15 s	2 s		< 15 s
Drip flame time		0 s	0 s		< 5 s
Vertical burn 60 s	AITM 2.0002A				
Burn length		49 mm	50 mm	pass	< 152 mm
After flame time		1 s	2 s		< 15 s
Drip flame time		0 s	0 s		< 3 s
Heat release	AITM 2.0006				
HRR max		44 kW/m ²	38 kW/m ²	48 kW/m ²	< 65 kW/m ²
HR		45 kW.min/m ²	40 kW.min/m ²	43 kW.min/m ²	< 65 kW.min/m ²
Toxicity (flaming mode)	AITM 3.0005				
Components toxicity level		pass	pass	pass	
Smoke after 4 min	AITM 2.0007A	71	75	pass	< 200

⁽¹⁾ 8h Satin, 300 gsm, FVF 55% | ⁽²⁾ Foam core, skin: 8h Satin, 300 gsm FVF 50%

Learn more at www.huntsman.com/advanced_materials
For any other information, please send an e-mail to aralditeadhesives.com

Europe +41 61 299 20 41 India, Middle East, Africa & Turkey + 91 22 4095 1556 Asia / Pacific + 86 21 2208 7588 Americas +1 888 564 9318



Registered for
REACH

Legal information All trademarks mentioned are either property of or licensed to Huntsman Corporation or an affiliate thereof in one or more, but not all, countries. Sales of the product described herein ("Product") are subject to the general terms and conditions of sale of either Huntsman Advanced Materials LLC, or its appropriate affiliate including without limitation Huntsman Advanced Materials (Europe) BVBA, Huntsman Advanced Materials Americas Inc., or Huntsman Advanced Materials (Hong Kong) Ltd. or Huntsman Advanced Materials (Guangdong) Ltd. ("Huntsman"). The following supersedes Buyer's documents. While the information and recommendations included in this publication are, to the best of Huntsman's knowledge, accurate as of the date of publication, NOTHING CONTAINED HEREIN IS TO BE CONSTRUED AS A REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT OF ANY INTELLECTUAL PROPERTY RIGHTS, OR WARRANTIES AS TO QUALITY OR CORRESPONDENCE WITH PRIOR DESCRIPTION OR SAMPLE, AND THE BUYER ASSUMES ALL RISK AND LIABILITY WHATSOEVER RESULTING FROM THE USE OF SUCH PRODUCT, WHETHER USED SINGLY OR IN COMBINATION WITH OTHER SUBSTANCES. No statements or recommendations made herein are to be construed as a representation about the suitability of any Product for the particular application of Buyer or user or as an inducement to infringe any patent or other intellectual property right. Data and results are based on controlled conditions and/or lab work. Buyer is responsible to determine the applicability of such information and recommendations and the suitability of any Product for its own particular purpose, and to ensure that its intended use of the Product does not infringe any intellectual property rights. The Product may be or become hazardous. Buyer should (i) obtain Material Safety Data Sheets and Technical Data Sheets from Huntsman containing detailed information on Product hazards and toxicity, together with proper shipping, handling and storage procedures for the Product, (ii) take all steps necessary to adequately inform, warn and familiarize its employees, agents, direct and indirect customers and contractors who may handle or be exposed to the Product of all hazards pertaining to and proper procedures for safe handling, use, storage, transportation and disposal of and exposure to the Product and (iii) comply with and ensure that its employees, agents, direct and indirect customers and contractors who may handle or be exposed to the Product comply with all safety information contained in the applicable Material Safety Data Sheets, Technical Data Sheets or other instructions provided by Huntsman and all applicable laws, regulations and standards relating to the handling, use, storage, distribution and disposal of and exposure to the Product. Please note that products may differ from country to country. If you have any queries, kindly contact your local Huntsman representative.

© 2019 Huntsman Corporation. All rights reserved. Ref. No. AdMat Araldite® FST 40002 / 40003_03.19_EN_EU