Resin Transfer Molding (RTM) is the current state of the art technology in high-volume production of thermoset composite parts. AZL Partner Companies founded a workgroup which meets every six months, in order to accelerate the technology development and enhance the trust in the RTM technology. As a first project, a consistent Model Material Data Sheet (M-MDS) for RTM resins has been developed for speeding up process and part developments. In upcoming meetings, next projects will be defined addressing the need for e.g. near process test methods, hybrid/sandwich constructions, automated preforming or material, machinery and process databases for fast cost evaluations.

**Model Material Data Sheet – First Workgroup Project**

**MATERIAL DATA SHEET**
- Development of a M-MDS as the first selection tool for every process participant (material supplier, designer, machine/tool manufacturer, part manufacturer,…)  
- In workgroup meetings, the detail level and the best appropriate test methods has been discussed and defined  
- 26 properties as general information, information of the cured resin and material process properties are now included in the M-MDS

**MATERIAL BENCHMARK**
Based on the details given in the M-MDS, the user can screen various materials and match them with available equipment

**SUITABLE MATERIAL**
This leads to the selection of a high-speed matrix for specific application and machinery
Workgroup History

3 INITIAL WORKSHOPS
Definition of relevant topics and procedure to set up a Model Material Data Sheet (M-MDS)

2015
WORKGROUP MEETINGS
Summary of workgroup motivation, discussion about the present status of a M-MDS, analysis of current standards and new test methods, definition of approaches for the ascertainment of parameters for reaction kinetics and flow simulations

4 Sep
FIRST DRAFT OF M-MDS

2016
IMPLEMENTATION OF M-MDS
Decisions on criteria for the M-MDS (test methods, parameters, adjustments), discussion about developments of data bases for material systems and RTM machineries

14 Sep
Information on Business Platform, evaluation of a survey about defining test parameters and necessary test methods, proposal to use a generic automotive structure for focused derivation of development topics

17 Sep

2017
NEXT PROJECTS
Presentations of RTM use cases, agreement on concluding steps of the M-MDS, workshop about roadmap of structural thermostet parts and the further activities

21 Sep
Proposal for further material data activities and introduction of the highest voted future topic hybrid/sandwich construction, balancing of the present status with the need of exclusive Tier1 and OEMs

26 Sep

UPCOMING ACTIVITIES
visit www.high-speed-rtm.com/dates

Accompanying introduction and ramp up phase of the M-MDS in specific companies
Use of synergies to quality assurance methods and data supply in general for large series thermoset processes
Definition of the further RTM roadmap, including potential project proposals in close cooperation about topics like data bases, complex preforming, post processing (e.g. painting, joining) and hybrid materials, including sandwich integration

More than 30 involved AZL Partner Companies

Business Platform “High-Speed RTM”
AZL Business Platforms were built in addition to the R&D activities of AZL workgroups and provide you with technology-related information on lightweight: Visit the RTM Business Platform to find established suppliers of High-Speed RTM materials and solutions as well as innovative development partners. Use cases provide you with an insight into realized RTM components.

Visit us at www.high-speed-rtm.com

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& VARIOUS PRESENTATIONS ON STATE OF THE ART BY AZL

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