

SMARTree software is ideal for creating and populating trees that conform with a whole host of test standards such as ASTM International and ISO. The advantages with using SMARTree for building standards are:

- The standards can be compiled as a simple tree with a systematic hierarchy without the need for sifting through complex documents.
- The embedded logic features within the SMARTree client ensures compliance and completeness within the tree without missing any critical information.
- Required conditions can be easily identified from optional conditions with embedded logic.
- SMARTree standards can be linked to other standards for reference.
- You can embed test documents directly within a standard tree for completeness.

Below is a SMARTree for ASTM-D3039: Standard Test Method for Tensile Properties of Polymer Matrix Composite Materials. Certain conditions have been applied to this standard such as entry of process specification, initial oven temperature, Operator name etc. The supervisor name, however is missing so this tree is incomplete (marked red) Also note that this missing information tags all higher elements in the hierarchy list so that the user can easily find what information is missing.

Many ASTM standards require the same basic information, whether it pertains to material fabrication, test user, sample preparation etc. These commonly used blocks of data can be accessed from tree templates stored locally, on the intranet or cloud space. This standard can also be populated with actual test file data and data reduction on this data can be carried out within the client.

Personal Information	Header	
Material	Header	
Information	Header	
Phase	Header	
Fabrication	Header	
Initial Temperature	Value	25.00
Process Specification	Text	Simple Oven Heating and Cure
Consolidation Method	Text	Vacuum Pressure
Equipment used in Manufacture	Text	
Start Date	Date	09:59:33 AM 04/25/2013
End Date	Date	11:59:33 AM 04/25/2013
Cure Cycle	Table	20C , 90min
Terminology	Header	
Note	Text	
Nominal Value	Text	
Transition Region	Text	none
Transition Strain	Text	
Symbols	Text	
Interferences	Header	
Material and Specimen Preparation	Text	
Gripping	Select	Hydraulic
System Alignment	Text	
Edge Effects in Angle Ply Laminates	Text	none
Test	Header	
Test Information	Text	
Test Standard	Text	ASTM 3039
Operator	Text	John Smith
Supervisor	Text	
Project	Text	Simple Tension Test Project
Study	Text	
Revision Level	Select	Hydraulic
Test Date	Date	09:59:33 AM 04/25/2013
Analysis Date	Date	09:59:33 AM 04/25/2013
Variations to Testing	Text	
Test Anomalies	Text	none
Equipment Issues	Text	none
Miscellaneous Information	Text	