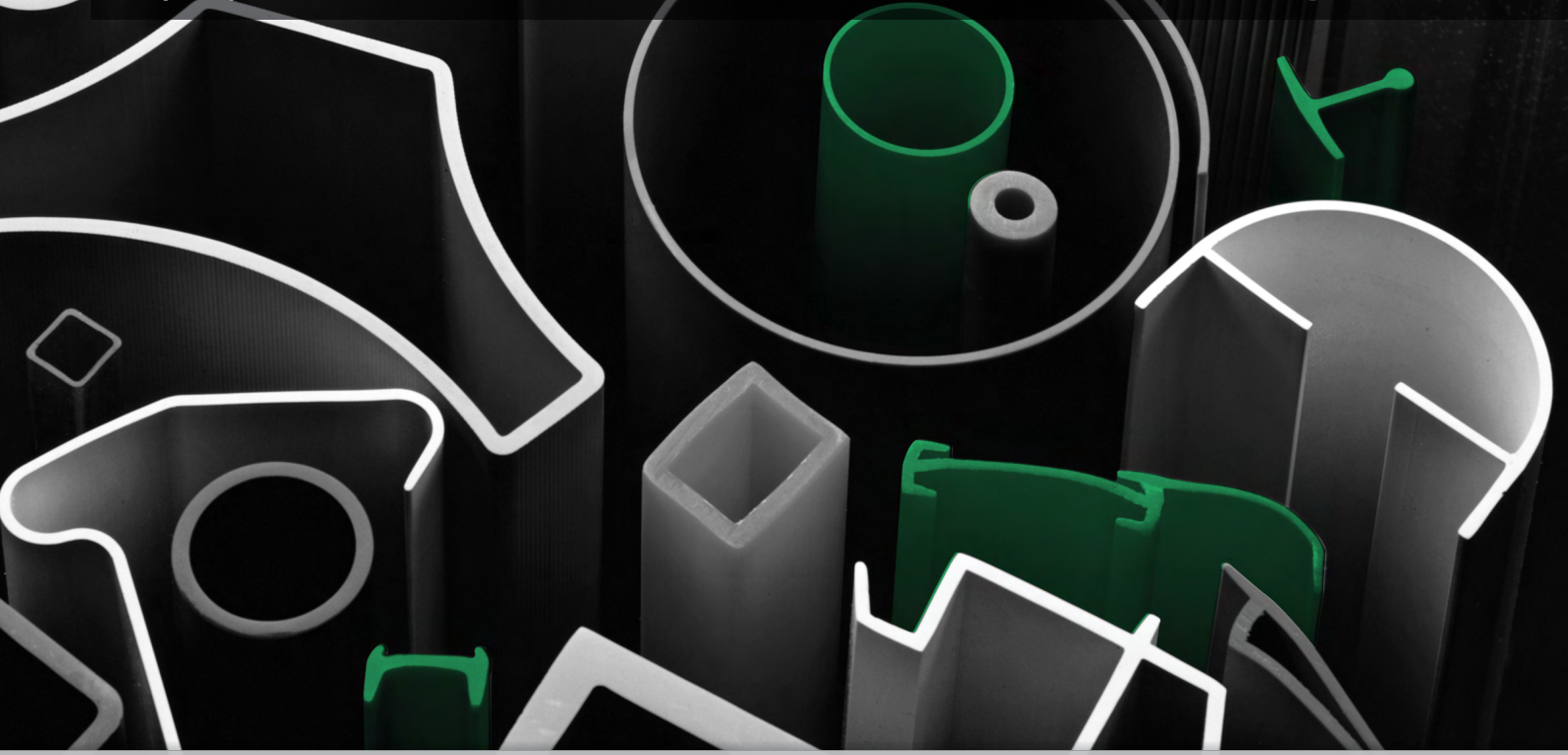




PolyPLUS

Property data for thousands of non-metallic materials



- Polymers
- Ceramics
- Composites
- Fibers
- Cements
- Foams
- Honeycombs
- Wood

PolyPLUS is the non-metallic material properties dataset for thousands of plastics, ceramics, composites, fibers, cements, foams, honeycombs and wood

The Challenge

- Finding precise traceable standard and proprietary material property data for polymers, composites, ceramics, fibers, cements, foams, honeycombs and wood
- Simultaneous comparison of different kinds of metallic and non-metallic materials and finding the best alternatives
- Sourcing rare advanced properties information for FEA/CAE calculations including stress-strain and fatigue data

The Solution

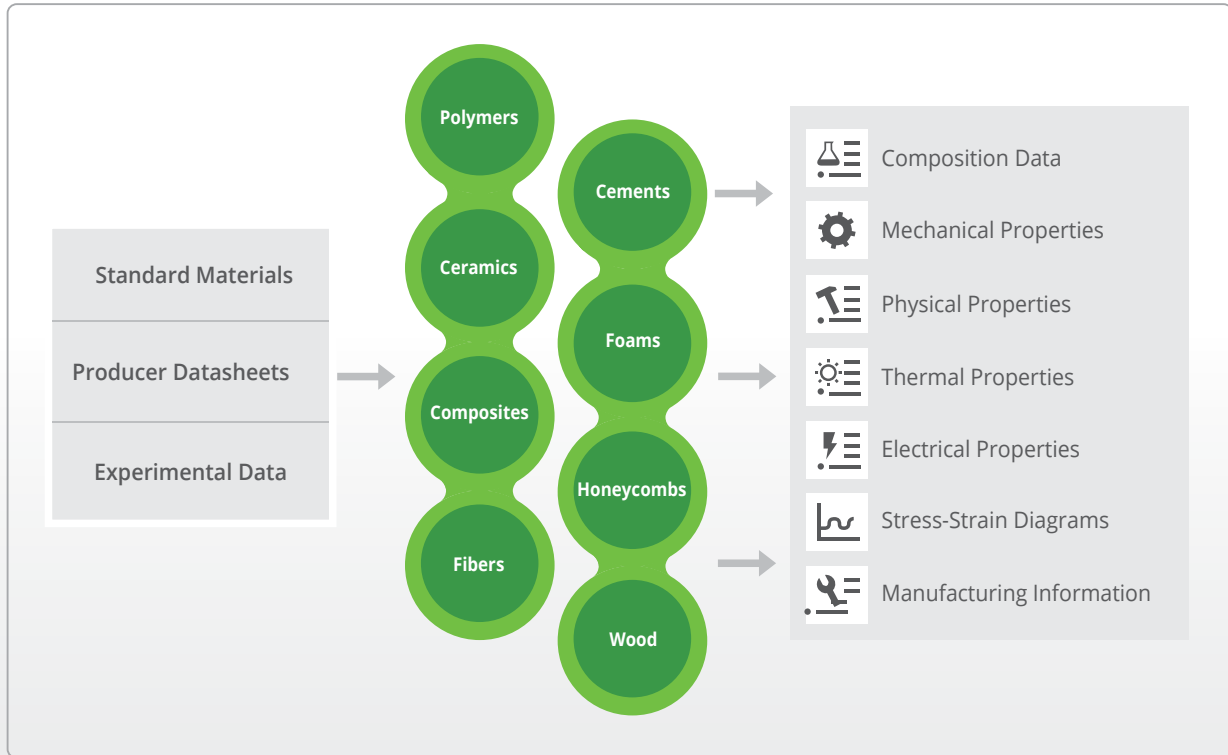
- ✓ Non-metallic material properties data for tens of thousands of plastic, ceramic, composites, fibers, cements, foams, honeycombs and wood
- ✓ Containing thousands of both standard and proprietary materials
- ✓ Effortless searching of advanced property data for non-metallics including stress strain curves and cyclice properties

The Benefits

- One stop resource for all material properties data needs
- New opportunities in design by comparing the performance of completely diversified materials



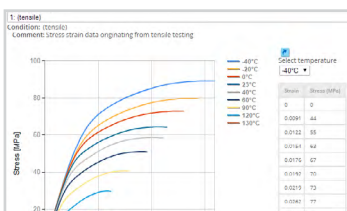
Integrated with the Total Metals database which contains over 350,000 metallic alloys, PolyPLUS allows Total Materia to be used as a truly one stop solution for your material needs.



Mechanical Properties				
Property	Value	Unit	Test Method	Note
Cond., 50% RH				
Ball indentation Hardness	120	MPa	Test Method: ISO 2039-1	
Flexural Strength	105	MPa	2 min/min	
	95	MPa	at 3.50 Strain; 2 min/min Test Method: ISO 178	
Tensile Toughness	45	MPa	at Break; 5 min/min	
	54	MPa	at Yield; 5 min/min Test Method: ISO 527-1/-2	
Tensile Strain	1.2	%	at Break; 5 min/min Test Method: ISO 527-1/-2	

Ultimate one stop resource for all material property needs

In combination with the world's most comprehensive metals properties database, PolyPLUS provides all the benefits of the Total Metals database for non-metals including property information for thousands of plastics, ceramics, composites, fibers, cements, foams, honeycombs and wood materials and all available at the click of a button!



Advanced property data for non-metals

As well as housing a unique collection of advanced property data for metallic materials, Extended Range also offers a comprehensive set of stress strain curves and fatigue data for non-metals.

Properties				
Property	T (°C)	Value	Unit	Note
Modulus of Elasticity	-55	169	GPa	0° Test Method: ASTM D3039
	24	162	GPa	0° Test Method: AS-1M D3059
	177	162	GPa	0° Test Method: ASTM D3039
	-55	8.7	GPa	90° Test Method: ASTM D3039
	24	8.7	GPa	90° Test Method: AS-1M D3059
	177	8.7	GPa	90° Test Method: ASTM D3039
	55	64	GPa	Open Hole; [-45, 0, 45, 90] ₁ Test Method: SACMA SSM-5/8
	74	65	GPa	Open Hole; [-45, 0, 45, 90] ₂

Unparalleled developments and upgrades

Through our dedicated PolyPLUS team, new data and functionality upgrades are added on a monthly basis meaning that our growing library of non-metals is fast becoming an indispensable resource for the engineering community.