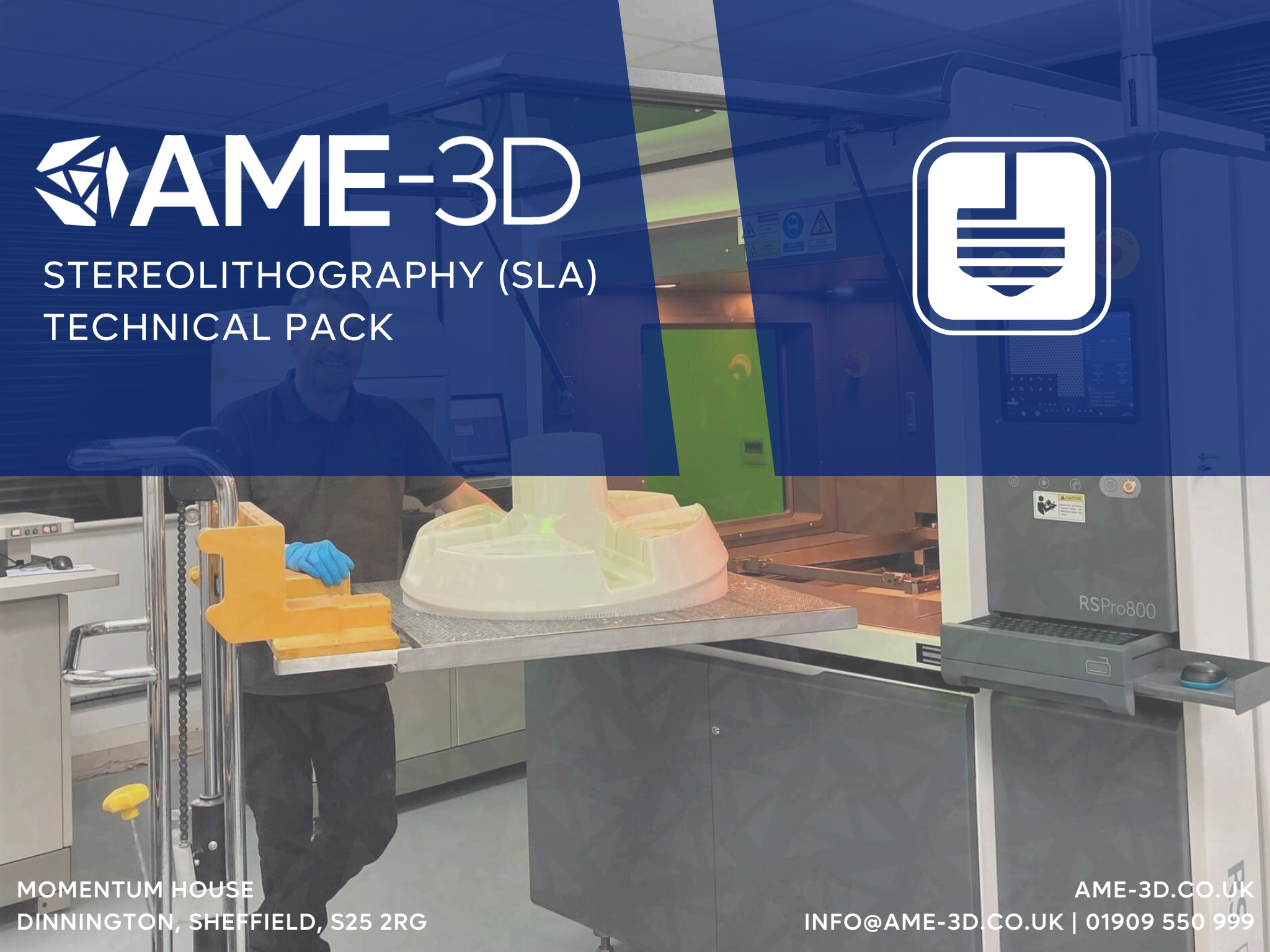


# AME-3D

## STEREOLITHOGRAPHY (SLA) TECHNICAL PACK



MOMENTUM HOUSE  
DINNINGTON, SHEFFIELD, S25 2RG

AME-3D.CO.UK  
INFO@AME-3D.CO.UK | 01909 550 999



# STEREOLITHOGRAPHY



## TECHNICAL SPECIFICATION

MACHINES	RS PRO 800	PILOT 450	3500	VIPER
Layer Thickness (mm)	0.07-0.1	0.05-0.1	0.1	0.05-0.1
XYZ (mm)	800 x 800 x 550	450 x 450 x 400	350 x 350 x 350	250 x 250 x 250
Materials	Somos® EvoLVe 128 Accura PIV	Accura Xtreme Accura HPC	Accura Xtreme Accura HPC	Accura Xtreme Accura ClearVue Somos® PerFORM
Tolerances	+ / - 0.2% with a lower limit of +/-0.2mm			
Supported / Unsupported Walls	Min. 0.4mm thick			
Overhangs	Length < 1mm: Min. 19° level			
Connections	0.2mm assembly connections, 0.2mm snug fits			
Engraving	Min. 0.4mm wide & 0.4mm thick			
Embossed Details	Min. 0.1mm height			
Holes	Min. 0.5mm diameter			



MATERIAL	ACCURA XTREME	ACCURA CLEARVUE	SOMOS <sup>®</sup> EVOLVE 128	SOMOS <sup>®</sup> PERFORM	ACCURA HPC	ACCURA PIV
Description	Good for form, fit & function prototypes as well as durable assemblies.	Great for headlamps, bottles & transparent assemblies. Great moisture resistance. Capable of meeting UPS Class VI.	Suitable for aerospace, automotive, medical, consumer products & more.	Ideal for tooling, automotive housings & electrical casings.	Suitable for automotive & aerospace wind tunnel models as well as jigs & fixtures.	Great for PIV/wind tunnel testing as well as electrical enclosures.
Available Colours	Grey	Transparent	Off-White	Off-White	White	Purple
Rigid	x	x	x	x	x	x
High Temp.				x	x	
Flame Retardant						
Shore Hardness	86D	84D	82D	94D	80D	91D
Tensile Strength	38 - 44 MPa	41 - 46 MPa	56.8 MPa	68 - 80 MPa	66 - 89 MPa	72 MPa
Tensile Modulus	1,790 - 1,980 MPa	2,030 - 2,220 MPa	2,964 MPa	9,800 - 10,500 MPa	9,000 - 9,700 MPa	9,300 MPa
Flexural Strength	52 - 71 MPa	53 - 67 MPa	67 MPa	120 - 146 MPa	137 - 157 MPa	142 MPa
Flexural Modulus	1,520 - 2,070 MPa	1,560 - 2,040 MPa	2,654 MPa	9,030 - 10,000 MPa	8,700 - 10,200 MPa	9,900 MPa
Heat Deflection Temp.	54 - 62° C	41 - 46° C	50 - 52° C	82 - 119° C 132 - 268° C	62 - 250° C	59 - 72° C
Elongation Break	14 - 22%	4 - 7%	11%	1.1 - 2.1%	0.8 - 1.9%	1.2%



# Accura Xtreme



Stereolithography (SLA)  
Material Datasheet



A durable, ABS-like plastic that is well suited for form, fit and function testing, on-demand parts and rapid prototyping master parts.

Measurement	Value
Shore Hardness	86D
Tensile Strength	38 - 44 MPa
Tensile Modulus	1,790 - 1,980 MPa
Flexural Strength	52 - 71 MPa
Flexural Modulus	1,520 - 2,070 MPa
Heat Deflection Temp.	60° C
Elongation Break	14 - 22%

Actual values may vary depending on build conditions.  
Our technical team can advise.





## Accura ClearVue



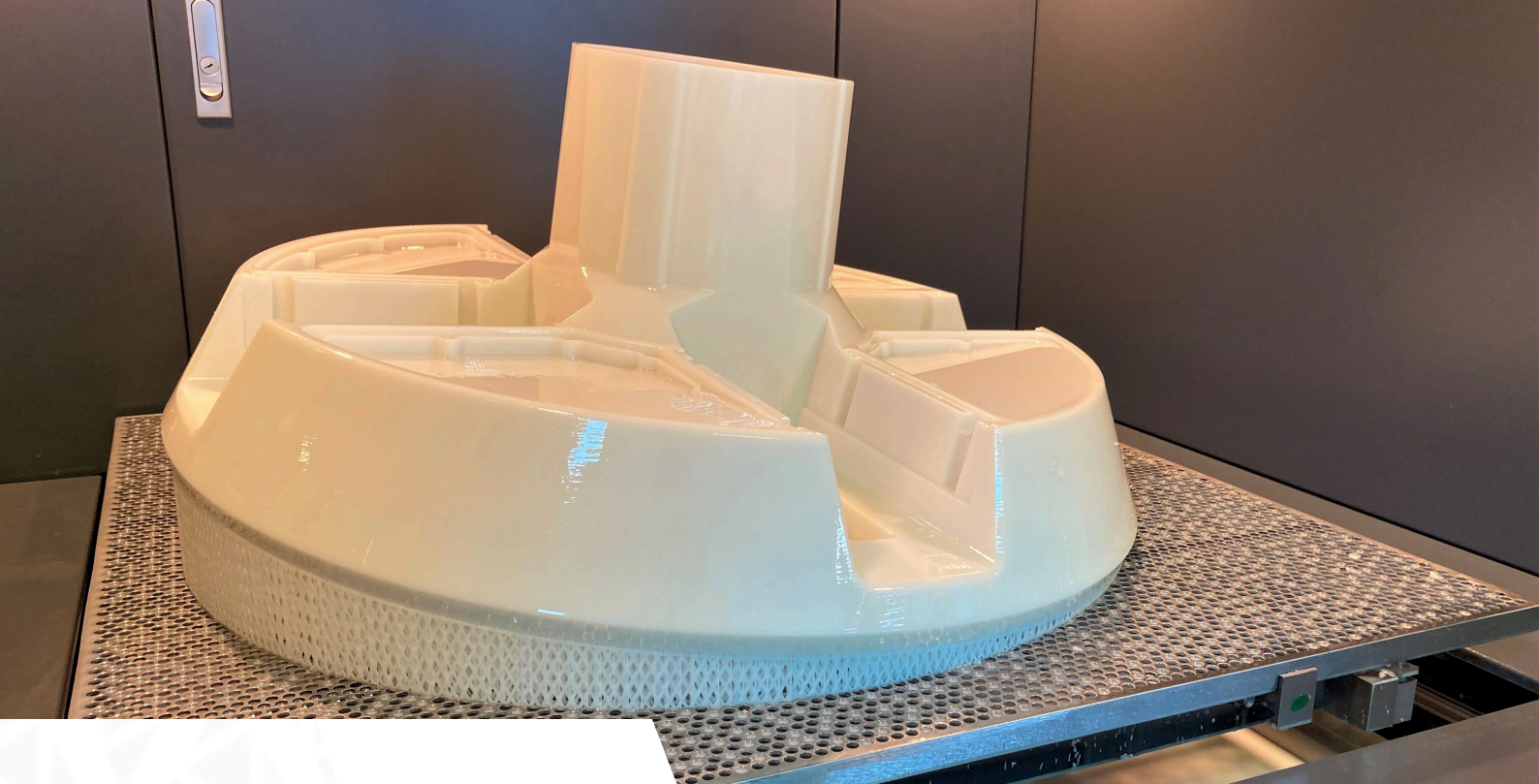
Stereolithography (SLA)  
Material Datasheet



A transparent, polycarbonate-like material. It is well suited for automotive lenses, medical models, and visualisation models.

Measurement	Value
Shore Hardness	84D
Tensile Strength	41 - 46 MPa
Tensile Modulus	2,030 - 2,220 MPa
Flexural Strength	53 - 67 MPa
Flexural Modulus	1,560 - 2,040 MPa
Heat Deflection Temp.	50 - 51° C
Elongation Break	4 - 7%

Actual values may vary depending on build conditions.  
Our technical team can advise.



## Somos® EvoLVe 128



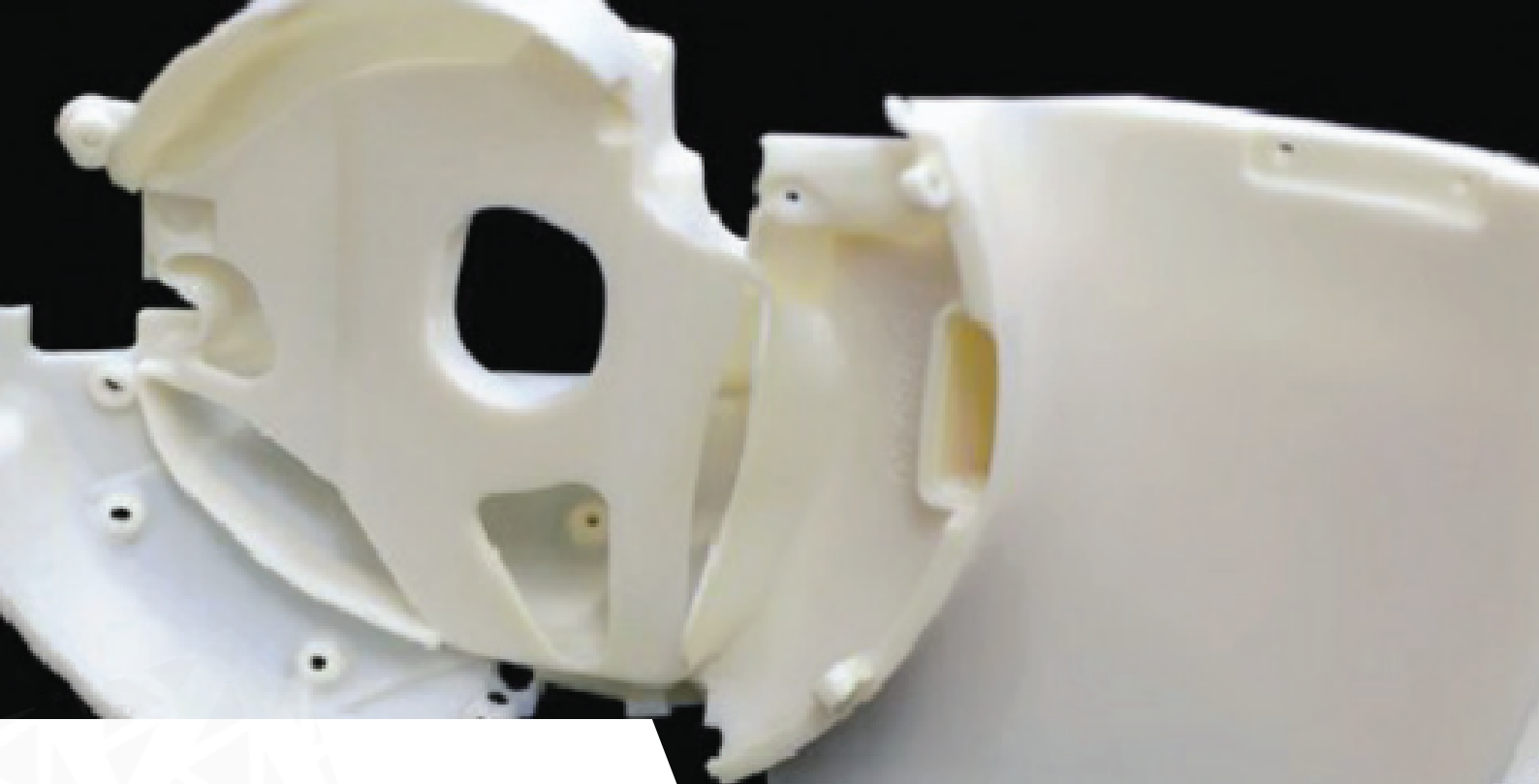
Stereolithography (SLA)  
Material Datasheet



A high-strength, ABS-like plastic. Ideal for low to medium part runs, large automotive rapid prototypes and medical devices.

Measurement	Value
Shore Hardness	82D
Tensile Strength	56.8 MPa
Tensile Modulus	2,964 MPa
Flexural Strength	74 MPa
Flexural Modulus	2,654 MPa
Heat Deflection Temp.	50 - 52° C
Elongation Break	11%

Actual values may vary depending on build conditions.  
Our technical team can advise.



## Somos® PerFORM



Stereolithography (SLA)  
Material Datasheet



A ceramic-like material. With the lowest viscosity of any composite SLA material, it's ideal for creating strong, stiff parts with excellent high heat resistance.

Measurement	Value
Shore Hardness	93 - 94D
Tensile Strength	68 - 80 MPa
Tensile Modulus	9,800 - 10,500 MPa
Flexural Strength	120 - 146 MPa
Flexural Modulus	9,030 - 10,000 MPa
Heat Deflection Temp.	132 - 268° C
Elongation Break	1.1 - 2.1%

Actual values may vary depending on build conditions.  
Our technical team can advise.





## Accura HPC



Stereolithography (SLA)  
Material Datasheet



A high speed, high rigidity nanocomposite. Suitable for automotive & aerospace wind tunnel models as well as jigs, fixtures & tooling applications.

Measurement	Value
Shore Hardness	80D
Tensile Strength	66 - 89 MPa
Tensile Modulus	9,000 - 9,700 MPa
Flexural Strength	137 - 157 MPa
Flexural Modulus	8,700 - 10,200 MPa
Heat Deflection Temp.	62 - 73° C
Elongation Break	0.8 - 1.9%

Actual values may vary depending on build conditions.  
Our technical team can advise.



# Accura PIV



Stereolithography (SLA)  
Material Datasheet



A high rigidity, high contrast material for PIV testing. Suitable for electrical enclosures, jigs, fixtures & tooling. Also ideal for heat resistant applications.

Measurement	Value
Shore Hardness	91D
Tensile Strength	72 MPa
Tensile Modulus	9,300 MPa
Flexural Strength	142 MPa
Flexural Modulus	9,900 MPa
Heat Deflection Temp.	59 - 72° C
Elongation Break	1.2%

Actual values may vary depending on build conditions.  
Our technical team can advise.