

PYROK®

PYROK 803FR



The Product

Pyrok 803 FR is a two component fire retardant polyurethane-oxirane adhesive for bonding a wide variety of metals, plastics and composite materials used in the aircraft manufacturing industry.

Meeting the requirements of FAR/JAR/CS 25.853 (a) - 60 second vertical burn, FAR CS 25.853 (d) JAR CS25.853 (c) Smoke Density Appendix F part - V ABD0031/D6-51377 Smoke Density, Toxic Gas Emission ABD0031/D6-51377 [Test conducted on Phenolic laminate]

Technical Characteristics

Base	Polyurethane	Full Cure (*)	7 days
Viscosity	20000 - 25000mPaS	Lap Shear Strength (alu/alu 6mm/min)	> 22MPa
Thixotropic	Flow controlled when mixed	Temperature Resistance	-20°C to +70°C / -4°F to + 158°F
Nozzle Life	18 minutes	Water Absorption (% increase in weight)	<0.1
Working time	30 minutes	Mix Ratio - volume	1 : 1

(*) These values may vary depending on environmental factors such as: temperatures, moisture and type of substrates

Packaging

Colour	Cartridge twin packs
>Beige	>50ml / 1.69floz
>Colour match to suit requirements available	>200ml / 6.76floz
	>400ml / 13.53floz
	>Bulk hobbocks

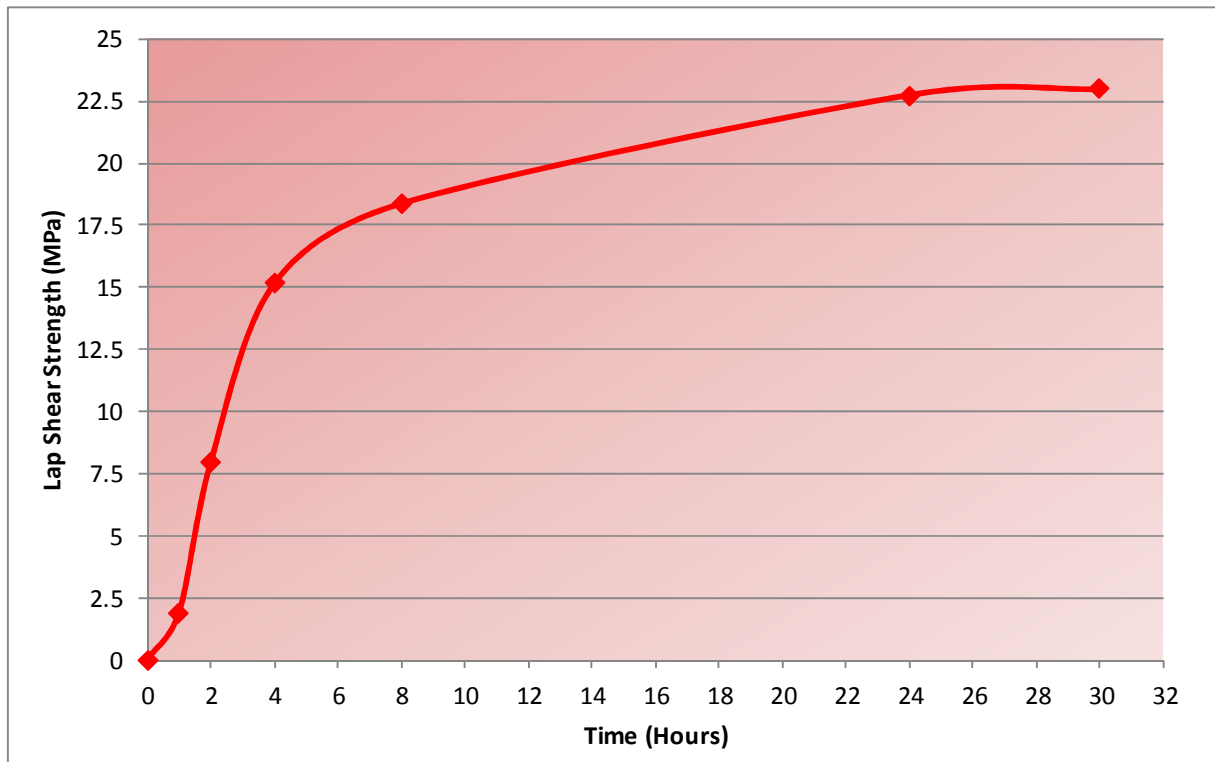
Shelf Life

12 Months in unopened packaging. Store in a cool and dry storage place at temperatures between +15°C and +25°C / +59°F and +77°F



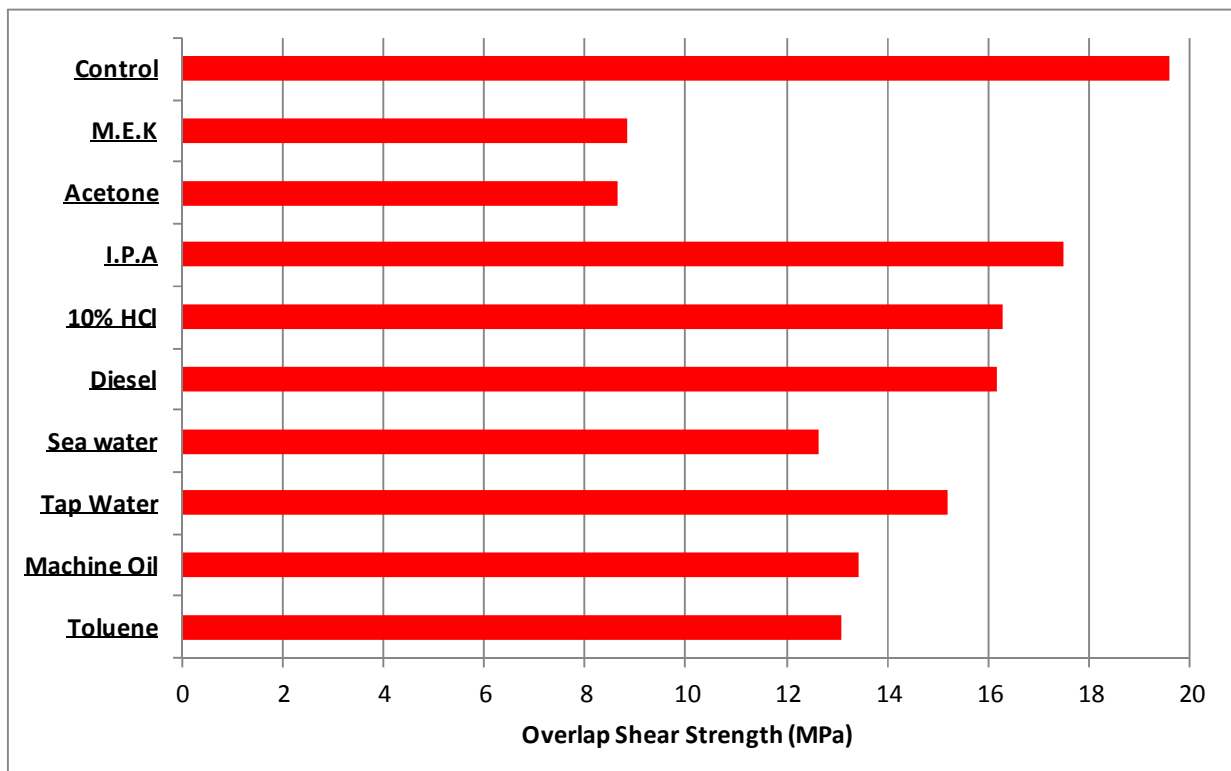
Typical Performance Characteristics

Rate of Strength Build Up¹



Resistance to Chemical Agents²

Good resistance to water, aliphatic solvents, mineral oils, grease, diluted inorganic acids and alkalis, aromatic solvents, concentrated acids and chlorinated hydrogens.



Typical Performance Characteristics continued..

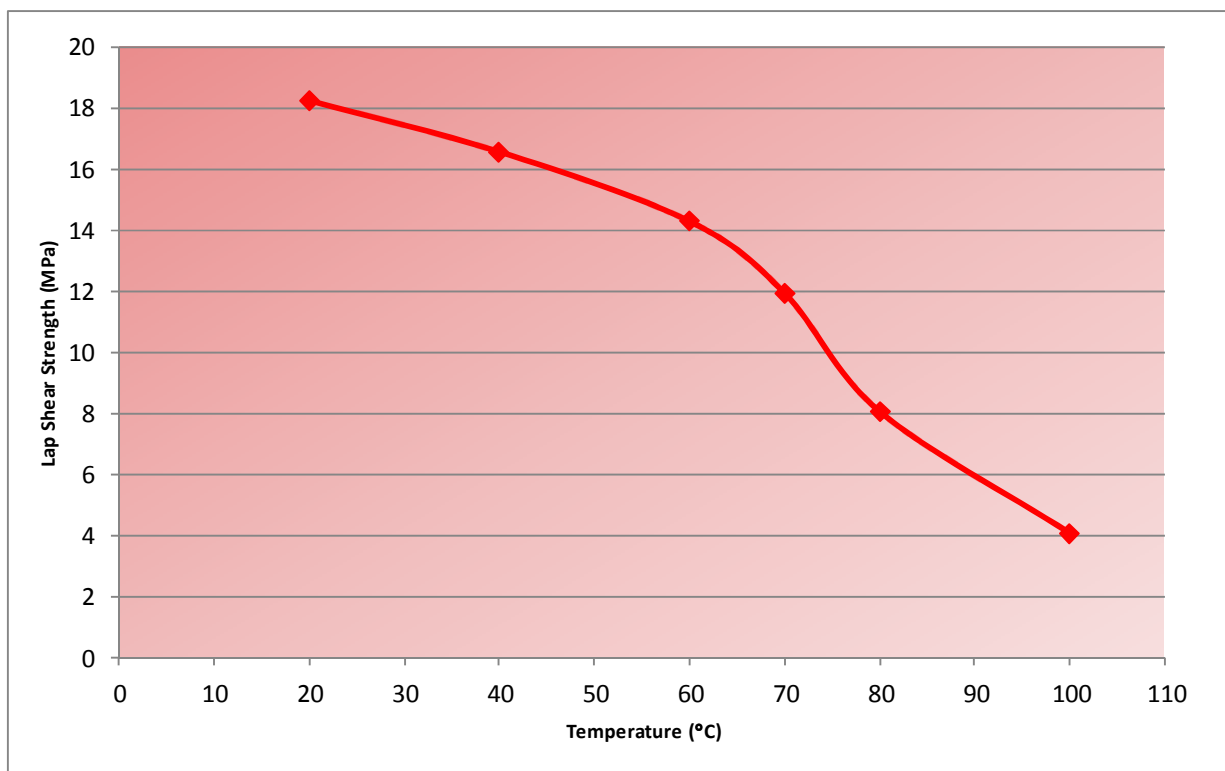
Overlap Shear Strength on Various Substrates¹

Excellent adhesion on many surfaces, particularly plastics that are renowned for being tough to bond to. Lap shear test pieces; made up with various plastics in accordance with ASTM D-1002, exhibit a substrate failure of the plastic and not the adhesive when a shear force is applied to the bond.

Substrate	Mode of Failure
Aluminium / Polycarbonate	Substrate Failure—Polycarbonate
Polycarbonate / Polycarbonate	Substrate failure
Aluminium / ABS	Substrate failure—ABS
ABS/ABS	Substrate failure
Aluminium / FRP (glass/polyester)	Substrate failure—FRP
FRP (glass/polyester)/FRP (glass/Polyester)	Substrate failure
ALU / FRP (glass/epoxy)	Substrate failure—FRP
FRP (glass/epoxy) / FRP (glass/epoxy)	Substrate failure
ALU / XHR Sabic	Substrate failure—Sabic XHR
XHR Sabic / Xhr Sabic	Substrate failure
ALU / Kydex	Substrate failure—Kydex

Temperature Resistance³

Overlap shear test conducted across a range of temperatures to determine temperature resistance.

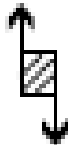


Health & Safety Recommendations

- › As with all chemical produce avoid contact with skin and eyes
- › Apply the usual industrial hygiene
- › Wear protective gloves
- › Consult the label for more information

The variability of materials, substrates and conditions of use is such that no warranty of their functionality for a specific application can be deducted from this information, written recommendation or any other type of suggestion offered. Each user has the responsibility to complete adequate evaluations on the efficacy of the materials offered by Forgeway, of its products, services, recommendations and suggestions for the specific application need, and must accomplish sufficient testing to ascertain that the final product will be safe and sound for the final intent of the end-user.

Test Methods and Footnotes:



¹ Overlap Shear test pieces configured to ASTM D1002 standard allowed to cure for 14 days (unless otherwise noted) and tested at a rate of 6mm/minute. Strength determined at 24⁰C unless otherwise noted.

² Chemical resistance tests were conducted by immersing bonded test pieces (prepared in accordance to the description in footnote 1) into various solutions for 7 days.

³ Temperature tests were conducted by conditioning test pieces (prepared in accordance with footnote 1) for 2 hours at temperatures ranging from -15⁰C to 140⁰C, then testing at the conditioned temperature at a rate of 6mm/minute.

⁴ Durability test were conducted by subjecting test pieces (prepared in accordance with footnote 1) to a timed regime of artificial ageing (70⁰C 98%RH).