IRS 2125
High Performance Flexible Epoxy Adhesive

Description

IRS 2125 Flexible Epoxy Adhesive is a high-performance black resin system. Its combination of flexibility and high adhesive strength lends itself to many high technology bonding, sealing and insulating applications.

A two-part system with a simple 1:1 mix ratio, it is supplied in a convenient side-by-side double syringe cartridge, complete with static mixing nozzles. Common applications include sealing electronic connections and elevated temperature bonding.

Key Properties

- Excellent flexibility giving high shear and peel strength
- Tough bonds withstand vibration and flex
- Outstanding chemical and fluid resistance, including moisture, diesel and fuel oils, hydraulic fluid
- Will bond metal, glass, wood, rubber and many plastics, including cable insulations and connector backshells, heat-shrink material
- Will operate at temperatures of up to 150°C
- Can seal to IP68, continuous immersion
- Supplied in 50ml cartridge for easy application
- Long shelf life – 18 months from date of manufacture

Typical Properties

Property	
Mix ratio	1:1 resin to hardener
Mixed viscosity	~ 100,000 cps
Colour	Black
Specific gravity	1.3
Pot life	90 minutes @ 23°C
Cured properties (Measurements taken @ 23°C)	
Hardness, Shore D	50-65
Temperature range	-75 to 150°C 200°C possible depending on substrate

Contact us for more information about our adhesives
t 01865 842842
e info@intertronics.co.uk
www.intertronics.co.uk

Station Field Industrial Estate
Banbury Road, Kidlington
Oxfordshire, England OX5 1JD

Property	
Elastic modulus	@25°C – 350MPa @50°C – 90MPa @75°C – 30MPa @100°C – 30MPa @125°C – 30MPa
Lap shear strength (Al/Al)	20MPa
Peel strength (XPLE/XPLE)	370N/25mm
Peel strength after thermal shock (4hrs @ 215°C)	370N/25mm
Dynamic shear (boot/cable shell size 22)	520N
Solvent resistance (de-icing fluid, petrol, oil, hydraulic fluid)	Excellent
Dielectric strength	408 volts/mil
Surface resistivity	5.5×10^{16} ohm/sq @ 500 volts DC
Volume resistivity	1.9×10^{12} ohm.cm @ 500 volts DC
Thermal conductivity	0.4 W/mK

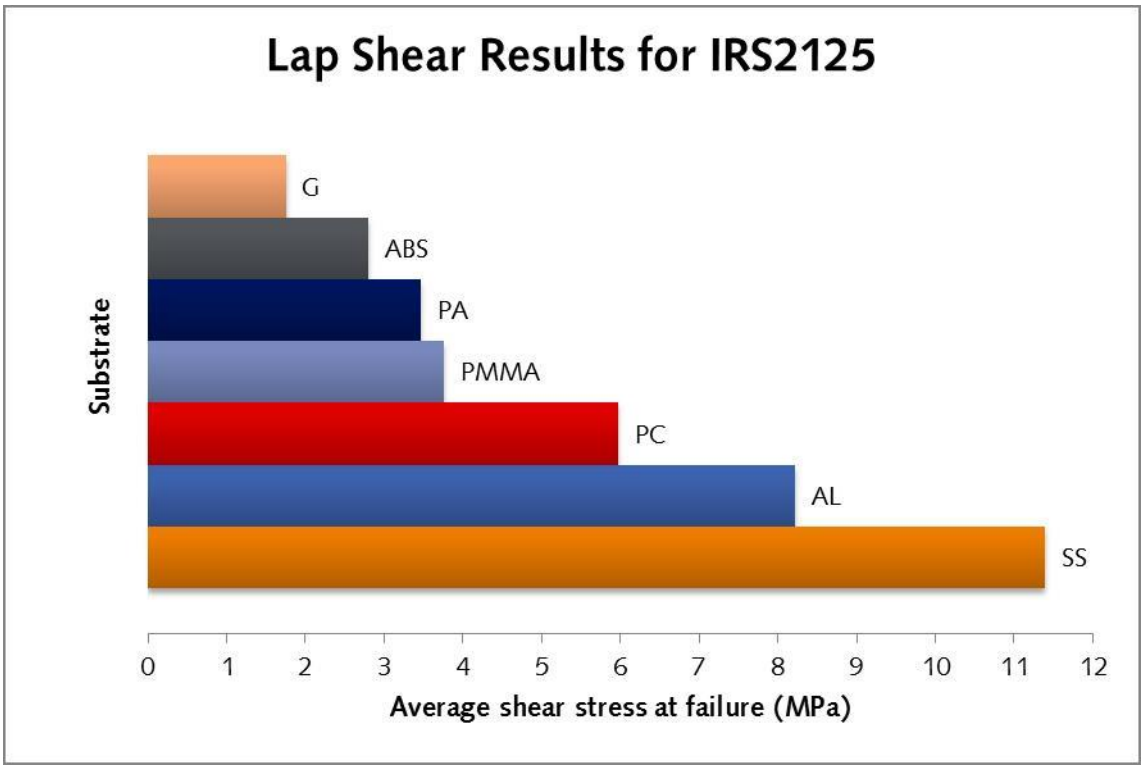
Cure Schedule

Bondline Temperature	Working Life	Light Handling	Full Cure
RT (20-25°C)	90 minutes	24 hours	7 days
85°C			2 hours

Cure time will depend on cross sectional area, ambient conditions, and mixing method. The above data is given as a guide only. Hotter temperatures may be used for faster cure but will result in higher post cure shrinkage and higher cure exotherm. Experimentation and testing is suggested to avoid side effects.

Lap Shear Adhesion

Substrate	
Stainless steel	11.4
Aluminium 6082 T6	8.2
Polycarbonate	6.0
PMMA	3.8
Nylon 6/6	3.5
ABS	2.8
Glass	1.8



Storage and Shelf Life

12 months at 25 +/- 10 °C

Many epoxy resin systems are prone to crystallization as epoxy resin is a super-cooled fluid. This condition may give the product a gritty or grainy appearance (or hazy in clear products). Products in this state will not usually cure to normal and expected properties. In extreme cases it may appear solid and cured. Fluctuating temperatures (within 5 to 50 °C) aggravate this phenomenon. Heating the individual component to 50 to 60 °C while stirring can usually restore products to original state.

Health and Safety

Epoxy resin systems may cause sensitisation by skin contact or inhalation may be corrosive, harmful or toxic. It is therefore strongly recommended that skin and eye contact is avoided by the using of appropriate personal protective equipment such as gloves, safety glasses or goggles and overalls.

Wash any contamination from the skin immediately and thoroughly and do not eat, smoke or drink in the working vicinity. Under normal working conditions a good source of ventilation is adequate, however if the material is heated, or where vapour levels are likely to exceed the occupational exposure limits appropriate respiratory protection must be worn.

Local exhaust ventilation (LEV) may be required especially for curing ovens or where large volumes of material are curing.

The above is given as a guide only; please refer to IRS2125 safety data sheet individual/specific advice.

Useful Resources

Product webpage

Warranty

Statements, technical information and recommendations contained herein are based on tests we believe to be reliable but they are not to be construed in any manner as warrantees expressed or implied. The

user shall determine the suitability of the product for his intended use and the user assumes all risk and liability whatsoever in connection therewith.