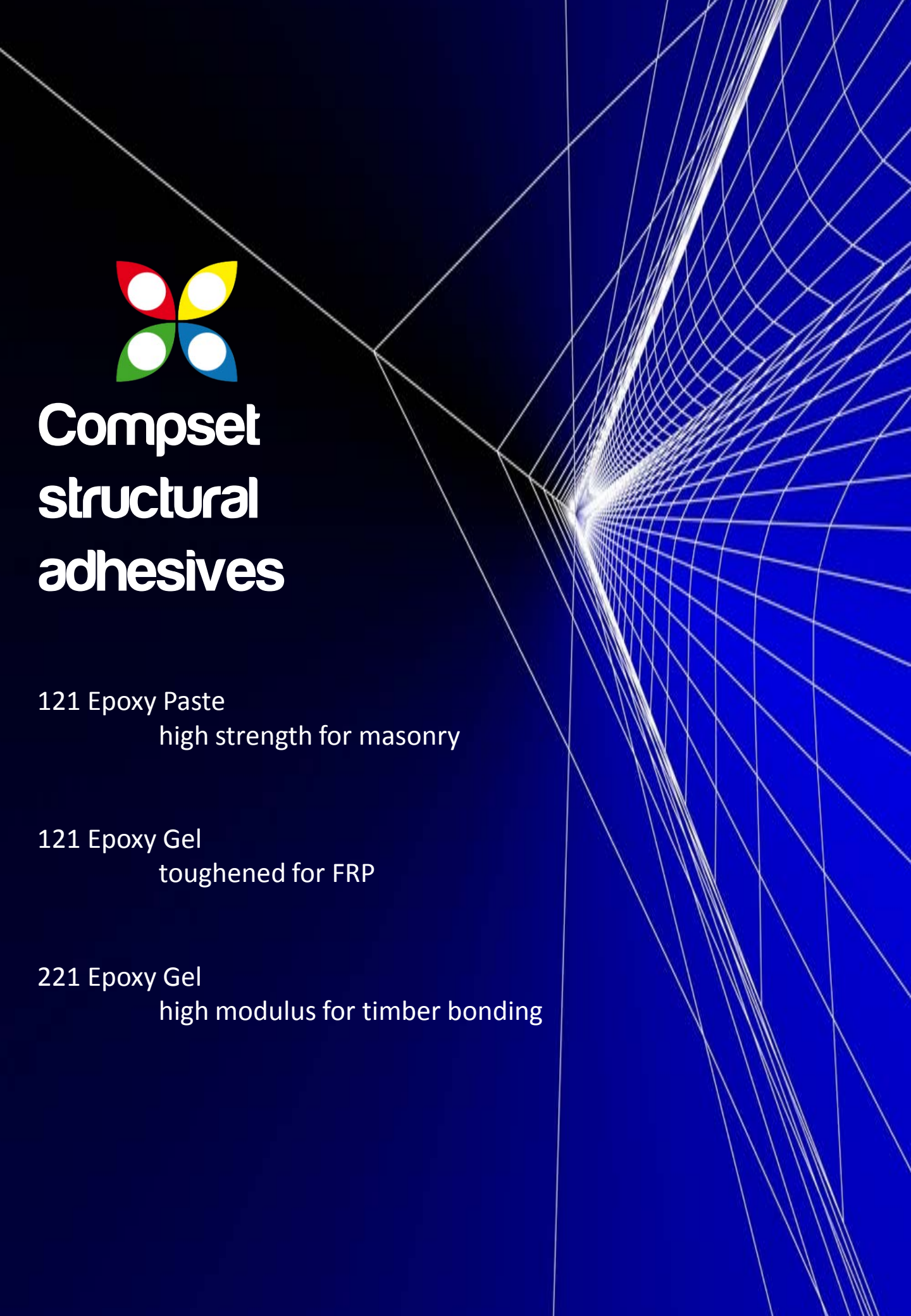
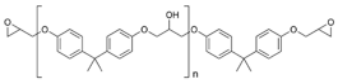


Compset structural adhesives

121 Epoxy Paste
high strength for masonry

121 Epoxy Gel
toughened for FRP

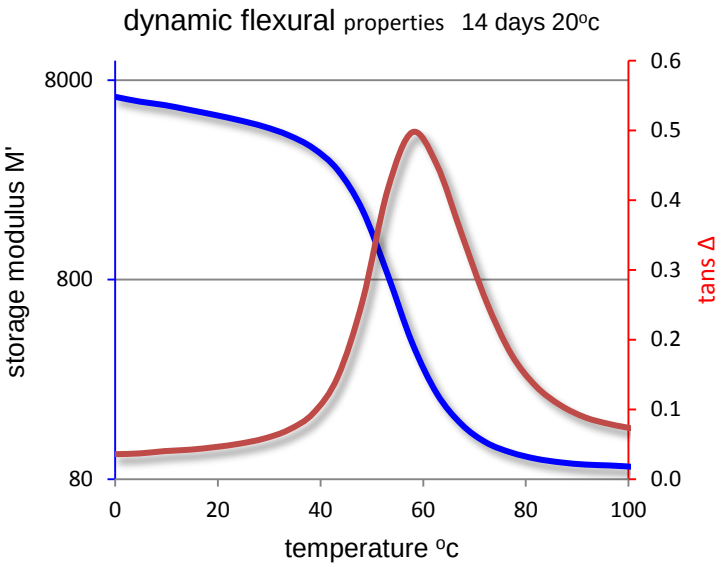
221 Epoxy Gel
high modulus for timber bonding



Compset structural adhesives Compset 121 Paste Adhesive

- **Compset 121 Paste Adhesive** is a high strength, thixotropic, gap filling paste adhesive. For **structural bonding** of concrete, masonry stone, granite bench tops and ceramics. Choices of different fixture setting times with Part A, combining with a common Part B hardener, covers all bonding requirements and eliminates unwanted wasted adhesive.

Compset grade	121 Paste L120	121 Paste L005
Mixing ratio (volume)	1 : 1	1 : 1
Work time 25ºc 100ml	120 mins	5 mins
Fixing Time 1mm	240 mins	10 mins
Clamping Time	24 hrs	8 hours
Cure Time 25ºc	3 day	2 day



Dynamic Mechanical Properties

Flexural properties	20⁰c	70⁰c
E' storage modulus	3475 MPa	4100 MPa
E" loss modulus max	35⁰c	50⁰c
Tan α	53 ⁰c	70 ⁰c
Tans delta δ	48⁰c	61⁰c

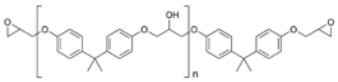
Static mechanical properties

Compset 121 Paste	16hrs 40oc	16hrs 70oc
Flexural Strength	20	33
Modulus MPa	3600	4100
Tensile Strength	8	10
Compressive Strength	50	65
Tg ºc	42	50

bonding strengths

Compset 121	16hrs 40°c
Lap shear GRP – GRP MPa	14
Steel - Steel	15
Aluminium	13
Ply 6mm	4
T-peel Zn Gal N/mm	3.5

VEE-TEK



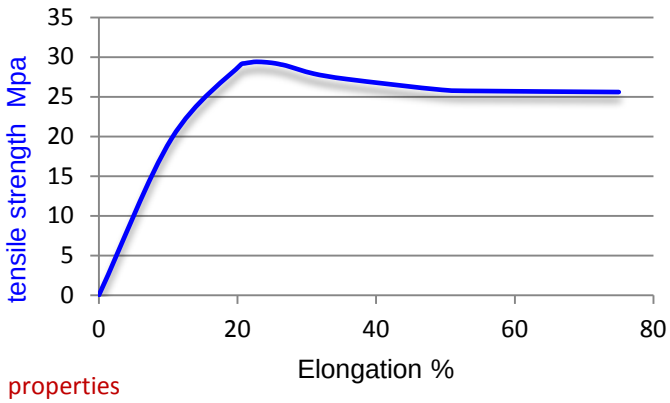
Compset structural adhesives Compset 121 Gel Adhesive

- Convenient 1 to 1 mix ratio. High elongation, high strength. For structural bonding of masonry, FRP composites, timber and metals. Ideal for applications where the adhesive joint design is under stress movement.

combining in one the winning advantages of

epoxy	.....	**adhesion**
urethane	.....	**flexibility**
butyl nitrile rubber	.....	**toughness**

Compset grade	121 Gel A45	121 Gel A05
Mixing ratio (volume)	1 : 1	1 : 1
Work time 25°c 100ml	45 mins	5 mins
Fixing Time 1mm	90 mins	10 mins
Clamping Time	24 hrs	8 hours
Cure Time 25°c	3 day	2 day



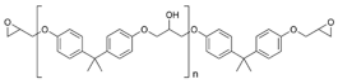
Static mechanical properties

Compset 121 Gel	16hrs 40°c
Tensile strength (10mm separation) MPa	30
Tensile elongation (max strength) %	20
elongation (yield point) %	75
Compressive Strength Mpa	45
Compressive modulus 2.5-5% strain	730
yield at max stress %	9
Tg °c	52

bonding strengths

Compset 121 Gel	16hrs 40°c
Lap shear GRP – GRP MPa	15
Steel - Steel	21
Aluminium	17
Ply 6mm	7

VEE-TEK

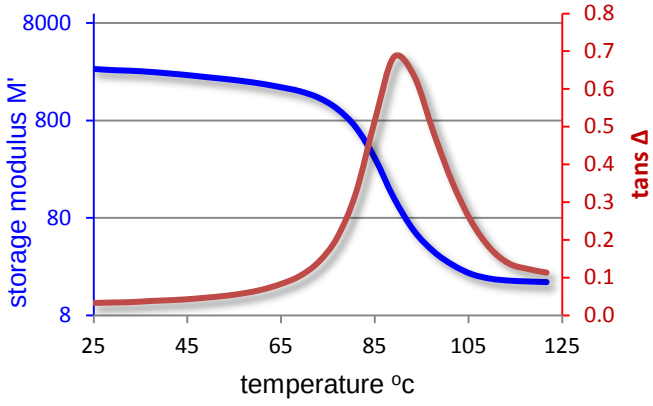


Compset structural adhesives Compset 221 Gel Adhesive

- **Compset 221 Gel Adhesive** is a two part epoxy glue designed for bonding of FRP parts, timber work and complicated composite structures. **High, consistent modulus** enable physical property retention over a large temperature range. Favourite choice of boat-builders and FRP designers for over 30 years.

Compset grade	221 Gel Standard	221 Gel Fast
Mixing ratio (volume)	2 : 1	2 : 1
Work time 25°c 100ml	90 mins	15 mins
Fixing Time 1mm	120 mins	60 mins
Clamping Time	24 hrs	12 hours
Cure Time 25°c	3 day	2 day

Compset 221 16hrs 70°c



Dynamic Mechanical Properties Compset 221

Flexural properties	**40°c**	**70°c**
E' storage modulus	2675 MPa	2650 MPa
E" loss modulus max	61°c	80°c
Tan α	69 °c	91 °c
Tans delta δ	71°c	90°c

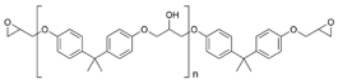
bonding strengths

Compset 221	16hrs 40°c
Lap shear GRP – GRP MPa	14
Steel - Steel	12
Aluminium	13
Ply 6mm	3

Static mechanical properties

Compset 221	16hrs 40°c	16hrs 70°c
Flexural Strength	100	105
Modulus MPa	2700	2800
Tensile Strength	60	65
Compressive Strength	74	82
Tg °c	50	70

VEE-TEK



Compset structural adhesives Preparation data

Surfaces to be bonded free of any contaminates such as dust or oil.
Timber , epoxy or painted surfaces should be sanded thoroughly to provide a good mechanical key. Polyester, vinyl ester laminates should be waxed resins, fully cured then sanded to remove any residual waxes or surface inhibitions.
Concrete should be at least 28 days old and free of additives, curing agents and oils. Prepare concrete by acid etching/neutralising/washing, professional grinding or captive blast cleaning as applicable to expose firmly held aggregate.
Prepare steel surfaces in according to AS 1627-2002 or appropriate international standard. If in any doubt consult qualified engineer.
Apply adhesive to both surfaces. Clamping should be firm to hold components in place during cure. Excessive clamping is to be avoided as this can lead to minimal glue line thickness.

Referenced test methods

Viscosity	ISO 2555
Epoxy Equivalent weight	ISO 3001
Determination of amine nitrogen content	ISO 9702
Reactivity dynamic	ISO 11357-5
Tg	ISO 111357-3
Tg Enthalpy	ISO 111357-5
Flexural Properties	ISO 178
Tensile Properties	ISO 527
Heat Deflection Temperature	ISO 75
Compressive Properties	ASTM D695
Dynamic Mechanical Properties	ASTM D5418
DMA flexural vibration	ISO 6721
DMA shear	ISO 6721
Tensile Lap Shear CRS	ASTM D1002
Tensile Lap Shear FRP	ASTM D 5868
T-Peel	ISO 11339