IX 16220

One component heat cure adhesive

Key properties

- Viscous flow liquid adhesive
- Excellent peel strength
- Good chemical resistance
- Operating Temperature is -40 to 150 °C
- Mainly used for assembly of the Electronic components

Description

16220 is a one-component,heat cure,high strength adhesive,with good toughness.Suitable for bonding Stainless steel, Magnet,Aluminum, Copper, Fiberglass reinforced plastics and Carbon fiber reinforced plastics.Mainly used for assembly of the Electronic components.Moderate temperature curing, can reduce the high temperature damage the product.

Product data

	16220
Colour (visual)	Grey
Specific gravity	1.15
Viscosity at 25°C (Pas)	20-85
Pot Life (100 gm at 20°C)	5 days

Processing

Pretreatment

The strength and durability of a bonded joint are dependant on proper treatment of the surfaces to be bonded.At the very least, joint surfaces should be cleaned with a good degreasing agent such as acetone or other proprietary degreasing agents in order to remove all traces of oil, grease and dirt.Low grade alcohol, gasoline (petrol) or paint thinners should never be used.The strongest and most durable joints are obtained by either mechanically abrading or chemically etching pickling.the degreased surfaces. Abrading should be followed by a second degreasing treatment

Application of adhesive

The resin/hardener mix may be applied manually or robotically to the pretreated and dry joint surfaces.A layer of adhesive 0.05 to 0.10 mm thick will normally impart the greatest lap shear strength to the joint. The joint components should be assembled and secured in a fixed position as soon as the adhesive has been applied.Too thick rubber can not bring greater bonding strength.

Equipment maintenance

All tools should be cleaned with hot water and soap before adhesives residues have had time to cure. The removal of cured residues is a difficult and time-consuming operation.If solvents such as acetone are used for cleaning, operatives should take the appropriate precautions and, in addition,avoid skin and eye contact.Used the packing box can't be used again.

Time to minimum shear strength

Temperature	°C	90	100	100	110	120	130	140	150	150
Cure time to reach	hours	-	-	-	-	-	-	-	-	-
	minutes	50	20	30	30	20	20	10	10	5
Lap shear strength	MPa	15	22	28	29	28	28	27	24	22

Cure schedules are "the time at cure temperature to achieve full product cure". The times does not include the time required to ramp-up to cure temperature.The above cure profiles are guideline recommendations. Cure conditions (time and temperature) may vary based on customers' experience and their application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.1 to 3 hours at the highest expected use temperature, Can get high temperature resistant performance is more stable.

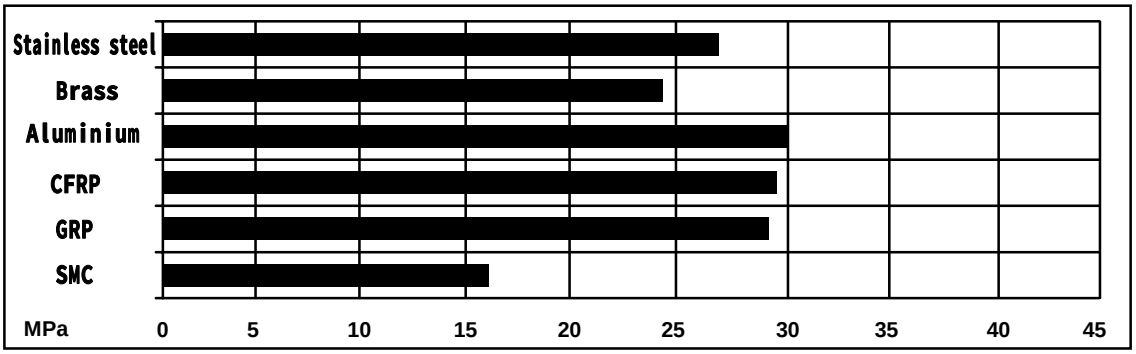
Typical cured properties

Sample standard

Unless otherwise stated, the figures given below were all determined by testing standard specimens made by lap-jointing 114 x 25 x 1.6mm strips of aluminium alloy. The joint area was 12.5 x 25 mm in each case.The figures were determined with typical production batches using standard testing methods. They are provided solely as technical information and do not constitute a product specification.

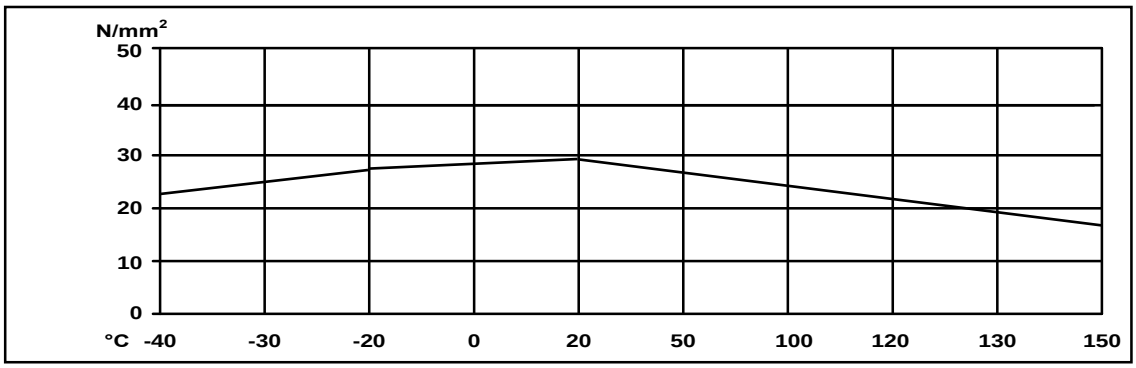
Average lap shear strengths of typical(ISO 4587)

Cure: 1 hour at 100°C,tested at 25°C.Metals:Sand blasting,Non-metallic:Lightly abrade.



Lap shear strength versus temperature (ISO 4587) (typical average values)

Cure: 1 hour at 100°C,tested at 25°C,Sand blasting steel-Sand blasting steel

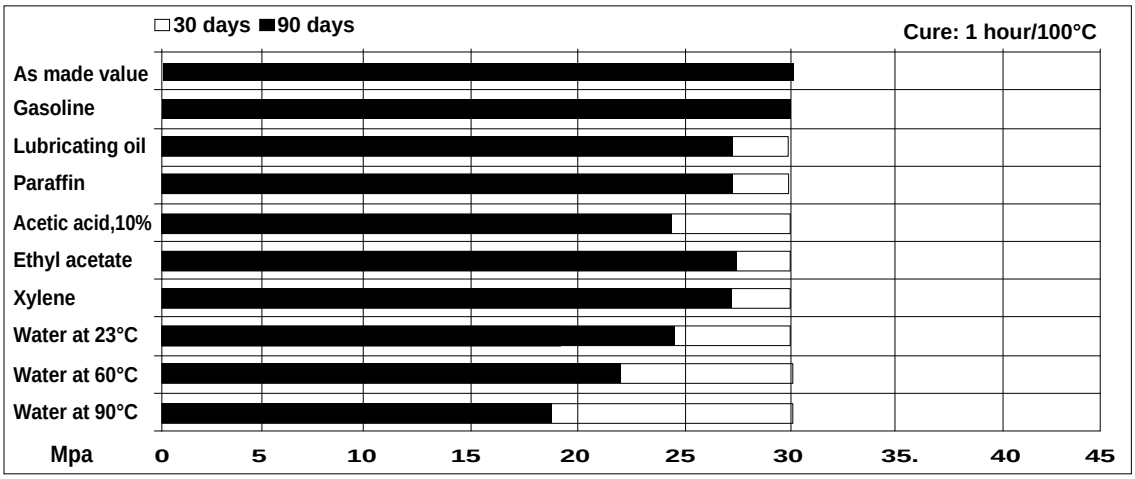


Other typical characteristics

Cure: 1 hour at 100°C,tested at 25°C,Sand blasting steel-Sand blasting steel

Water absorption	ISO62-80	0.27%-0.39%
Thermal decomposition temperature	ISO4587	355 ° C
Glass transition temperature (DSC)	ISO4587	121 ° C
Electrolytic corrosion	DIN50015	A-A/B 1,2
Hardness(ShoreD,25 ° C)	ISO4587	80
Hardness(ShoreD,120 ° C)	ISO4587	66
Hardness(ShoreD,150 ° C)	ISO4587	41
Roller peel test	ISO4587	4.20N/mm
Weight loss(300 ° C,%)	ISO4587	5
Thermal cycle(100Times/6Hours)	-40-100 ° C	29.3N/mm²

Lap shear strength versus immersion in various media at 23 ° C(typical average values)



Storage

IX16220 may be stored for up to 8 months at 3-5°C.Storage greater than or below 3-5°C can adversely affect product properties.

Handling precautions

Caution

Our products are generally quite harmless to handle provided that certain precautions normally taken when handling chemicals are observed. The uncured materials must not, for instance, be allowed to come into contact with foodstuffs or food utensils, and measures should be taken to prevent the uncured materials from coming in contact with the skin, since people with particularly sensitive skin may be affected. The wearing of impervious rubber or plastic gloves will normally be necessary; likewise the use of eye protection. The skin should be thoroughly cleansed at the end of each working period by washing with soap and warm water.The use of solvents is to be avoided.Disposable paper -not cloth towels -should be used to dry the skin.Adequate ventilation of the working area is recommended.These precautions are described in greater detail in the Material Safety Data Sheets for the individual products and should be referred to for fuller information.

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