

INTEGRATE SOLUTIONS TO MECHANICAL MANUFACTURE AND MAINTENANCE

THE ADHESIVE SOURCEBOOK





As a high-tech enterprise, TONSAN is specialized in engineering adhesives R & D, manufacturing and sales. Twenty years, with high quality products, perfect service, and a wealth of engineering experience in adhesives, TONSAN has been supporting customers in solving machinery manufacturing, assembling, and maintenance problems.

TONSAN's anaerobic sealants, silicone sealants, PU sealants, epoxy adhesive, acrylate adhesive, chlorine glue are widely used in 29 key industries, such as automobile, engineering machinery, trains and rails, new energy, electronics, medical treatment, aerospace, marine, metallurgy, petroleum, coal, electric power etc.

Through constant innovation and accumulation, TONSAN products and technologies are much closer to the customer needs. TONSAN has become the leader and professional solution supplier in engineering adhesive industry and specialized in manufacturing, assembly, maintenance areas. TONSAN is the most reliable partner to provide professional glue solutions to help customers optimize processes, improve product quality and production efficiency, reduce costs and extend equipment life.

The worldwide sales and technical service network, support every customer apply TONSAN products more conveniently.



Contents	

Sealing	& Locking
C:1: C	

2	Silicone Sealants
6	Anaerobic Flange Sealants
8	Anaerobic Thread Lockers
11	Anaerobic Thread Sealants
13	Anaerobic Retaining Compounds
16	Pre-applied Thread Lockers & Sealants
	Structure Adhesion & Sealing
18	Structure Adhesives
21	Polyurethane
24	Modified Silane
26	Cyanoacrylates
29	UV Cure Adhesives
	Function Coating
30	Metal Rebuilding Putty
33	Abrasion Resistance Compounds
36	Low Friction Coating
38	Erosion Resistance Polymers
40	Emergency Repair
42	High Temperature Sealing & Repairing
	Rubber Bonding & Repair
44	Rubber Bonding & Repair Series

masser somating a nepatr series

Accessories & Dispensing Equipments

46 Accessories-Primers, Activators, Accelerators48 Dispensing Equipments





Silicone Sealants

TONSAN silicone sealant highly enhances the sealing reliability by excellent oil resistance, chemical resistance, vibration resistance and aging resistance. TONSAN has developed specialized products according to the requirements of various conditions and applications.

Properties

- Easy operating
- Excellent chemical resistance, aging resistance, high temperature resistance
- Reliable sealing High efficiency

1527W Silicone Flange Sealant

White color, excellent weather resistance, high strength, erosion resistance, sulfur hexafluoride resistance, and good electrical insulation. Apply to sealing of electrical equipments.

Package size: 85ml/ tube Order number: 15270003
Package size: 310ml/cartridge Order number: 152705

1527T Silicone Flange Sealant

Transparent, good weather resistance, short tack free time, mildew resistance, sulfur hexafluoride resistance, and good electrical insulation. Apply to sealing of electrical equipments.

Package size: 85ml/ tube Order number: 15271003
Package size: 310ml/ cartridge Order number: 152715

1587 Silicone Flange Sealant

Blue color, medium viscosity, high strength, high elongation, good oil resistance and bonding performance. Apply to sealing joint surface of mechanical equipments.

Package size: 100g/ tube Order number: 15871003 Package size: 310ml/cartridge Order number: 158715

1596 Silicone Flange Sealant

Grey color, low viscosity, good resistance to lubrication oil. Apply to sealing joint surface of mechanical equipments.

Package size: 100g/ tube Order number: 15960003 Package size: 310ml/cartridge Order number: 159605

1598 Silicone Flange Sealant

Black color, low viscosity, good resistance to lubrication oil and chemicals. Excellent adhesion to oil surface, and good chemical resistance. Apply to sealing joint surface of mechanical equipments.

Package size: 100g/ tube Order number: 15980003 Package size: 310ml/cartridge Order number: 159805

1592 High Temperature Silicone

Red color. Ultra temperature resistant up to 320 $^{\circ}$ C in long term and 370 $^{\circ}$ C in short time. Fast curing. Apply to sealing metal, glass and other materials. Suitable for sealing and bonding under high temperature.

Package size: 310ml/cartridge Order number: 159205

1598E Silicone Flange Sealant

Black color. Good flowability, moisture resistance, chemical resistance, and excellent bonding performance for various materials. Apply to potting of mechanical and electrical equipments.

Package size: 100g/ tube Order number: 15987003
Package size: 310ml/cartridge Order number: 159876

1527B Microwave Oven Sealant

Black color and special designed for microwave ovens, low viscosity, excellent adhesion, the curing sealant is continuous and smooth. Good scrubbing and scaling resistance. Apply to sealing home appliances, and specialized for sealing microwave oven glass and cavity. Suitable for mechanical applying.

Package size: 18kg/pail Order number: 152785

1593W Electronic Equipment Sealant

White color. De-alcohol type. Low odor, non-yellowing. Suitable for sealing and bonding electronic and electrical equipments.

Package size: 310ml/cartridge Order number: 15930302

1536 Electronic Potting sealant

Grey color, de-alcohol type, flame-retardant level —UL-94 V0, self-leveling, non-corrosive to circuit, suitable for sealing of electric components and body case.

Package size: 20kg/pail Order number: 15360205

1593FR Electronic Equipment Sealant

Grey color, de-alcohol type, flame-retardant level —UL-94 V0, thixotropic viscosity, non- corrosive to circuit, suitable for sealing and bonding of electronic components and equipments.

Package size: 18kg/pail Order number: 15930405

2530 Two-Component Electrical Special Sealant

Black color, two components, addition reaction volume ratio (A: B) 1: 1, 100 $^{\circ}$ C, 5min fast curing, FDA food grade test, long-term temperature of 300 $^{\circ}$ C, excellent bonding of metal, glass and other materials, with a special agent on the surface of the powder material .

Package size: A component 16kg / barrel Order number: 25300303A B component 18kg / barrel Order number: 25300303B

Special primer: 500ml / bottle Order number: 25300403

2534 Highly Effective Sealant

Black color, two components, de-alcohol type, volume ratio (A: B) 2:1, fast curing at room temperature, suitable for bonding and sealing plastics, metal and other materials.

Package size: 400ml/cartridge Order number: 25340202

Silicone Sealants

1590 Instant Silicone Sealant

Black color. Instant Sealing, high viscosity, high elongation, excellent heat aging resistance and oil resistance. Apply to auto-dispensing assembling line, such as oil sump tank. Suitable for mechanical applying.

Package size: 400g/cartridge Order number: 159021 Package size: 20kg/pail Order number: 159025

1591 Silicone Flange Sealant

Grey color. Instant sealing, medium viscosity, high strength, high elongation, excellent heat aging resistance and oil resistance. Apply to flange sealing of engine parts. Suitable for both mechanical and manual applying.

Package size: 310ml/cartridge Order number: 159105 Package size: 20kg/pail Order number: 159106

1596Fa Silicone Flange Sealant

Grey color, medium viscosity and extension. Good resistance to gear oil, lubrication oil and anti-freezing solution. Apply to sealing joint surface parts of automobile transmissions, axles and engines with high rigidity. Suitable for both mechanical and manual applying.

Package size: 310ml/cartridge Order number: 159671
Package size: 20kg/pail Order number: 159675

1596F Silicone Flange Sealant

Black color, medium viscosity, high elongation, fast curing, excellent oil resistance. Apply to sealing joint surface parts of deformation and with displacement under shock and vibration conditions. Suitable for both mechanical and manual applying.

Package size: 310ml/cartridge Order number: 159866 Package size: 20kg/pail Order number: 159867

1598F Silicone Flange Sealant

Grey color, medium viscosity, and low elongation, fast curing and excellent gear oil resistance. Apply to rigid joint surface sealing of transmission and timing chain cover.

Package size: 310ml/cartridge Order number: 159626 Package size: 20kg/pail Order number: 159628





High Voltage Switch Flange Sealing



Diesel Engine Side Cover Sealing



Axel Shield Sealing

Physical Properties

Product code	Color	Specific gravity (g/cm³)	Room tem Tensile strength (MPa)	Elongation at break (%)	After aging 16 Tensile strength (MPa)	58h at 175°C Elongation at break (%)	After soaking oil 100h Tensile strength (MPa)	j in 30#engine at 125°C Elongation at break (%)	Tack free time (min)	24h curing depth (mm)	Temperature range (°C)
1587	Blue	1.31	1.8	350	1.8	310	1.6	380	5~15	≥2	-54~210
1596	Grey	1.18	2.0	260	2.0	170	1.8	300	5~20	≥2	-54~260
1598	Black	1.18	2.0	260	2.0	170	1.8	300	5~20	≥2	-54~210
1592	Red	1.07	1.9	330	1.9	330	-	-	3~10	≥2	-54~320
1590	Black	1.38	2.0	450	2.2	410	2.2	500	2~10	≥2	-54~210
1591	Grey	1.36	2.8	480	2.9	350	2.4	500	5~15	≥2	-54~210
1596Fa	Grey	1.42	3.0	220	3.0	180	2.5	180	7~20	≥2	-54~210
1598F	Black	1.30	2.0	400	2.0	350	1.8	420	10~25	≥2	-54~210
1596F	Grey	1.38	2.3	130	2.3	110	2.2	140	5~15	≥2	-54~260
	Volume Resistance (Ω.cm)										
1527B	Black	1.10	1.5	180	1.5	180	2.0x	10 15	5~30	≥2	-54~210
1536	Grey	1.20	2.0	150	1.0	150	1.5x	1015	5~20	≥2	-54~180
1593FR	Grey	1.20	2.0	100	1.2	100	1.5x	10 ¹⁵	5~20	≥2	-54~180
1593W	White	1.25	1.8	350	0.9	200	2.1x	10 15	3~10	≥2	-54~180
1527W	White	1.16	2.0	350	2.0	300	3.3x	:10 ¹⁵	5~20	≥2	-54~210
1527T	Transparent	1.00	1.3	350	1.4	320	5.0x	10 14	3~15	≥2	-54~210
1598E	Black	1.13	1.8	150	1.8	110	2.5x	10 15	10~40	≥2	-54~210
		Specific	Mix ratio h	ov volume			1.0	Temperature			

Product code	Color	Specific gravity (g/cm³)	Mix ratio by volume (A:B)	Working time	Full cured time	Temperature range (°C)	
2530	Black	1.10	1:1	120min	5min(100℃)	-54~300	
2534	Black	1.14	2: 1	20s	7day	-54~150	

Test condition: temperature 23±2 $^{\circ}\text{C}$; Relative humidity 50±5%

Consumption Estimation (Based on 1.25g/cm³ specific gravity)

Package size		100g tube		310ml cartridge			
Diameter (mm)	6.0	3.0	1.5	6.0	3.0	1.5	
Length (m)	2.8	11.3	44.9	11.0	43.9	175.5	



Anaerobic Flange Sealants

TONSAN anaerobic sealants are used for sealing of flanges with small gaps on mechanical parts, such as housing, flanges, end cap and etc. It can improve sealing reliability, overall rigidity and loading capacity by replacing gaskets. It can also be dispensed directly on gasket to enhance sealing performance.

Properties

- Single component, Solvent free, Room temperature curing 100% fill the flange gap
- Suitable for sealing gap less than 0.25mm High strength and excellent adhesion
- excellent oil resistance, chemical resistance, vibration resistance, and aging resistance no corrosion
- Conform to JB/T7311 -2008 Construction machinery- anaerobic adhesive, silicone and pre-applied dry film adhesive- Application technical specifications

1510 Anaerobic Flange Sealant

High temperature resistance, chemical resistance. Rigid adhesive layer after curing. Apply for sealing rigid flanges, end caps or used as gasket coating.

Package size: 50ml/ tube Order number: 151001
Package size: 310ml/ cartridge Order number: 151005

1515 Anaerobic Flange Sealant

General Purpose . Soft adhesive layer after curing. Apply for sealing flexible or vibrate joint surfaces, such as pumps, transmission, end cap, flange and axel.

Package size: 50ml/ tube Order number: 151501
Package size: 310ml/ cartridge Order number: 151505

1518 Anaerobic Flange Sealant (Aluminum Surface)

Soft adhesive layer after curing. Especially suitable for aluminum surface or joint surface with relative displacement caused by vibration, stress or temperature variation. It can also be used as gasket coating for sealing pumps, gearbox and axel.

Package size: 50ml/tube Order number: 151801
Package size: 310ml/cartridge Order number: 151805



Physical Properties

Product code	Color	Specific gravity (g/cm³)	Viscosity (mPa·s)	Max sealing clearance (mm)	Max sealing pressure (MPa)	Fixture time (h)	Fully cured time (h)	Temperature range (°C)
1510	Pink	1.10	5.0x10 ⁵	0.25	36.0	2~3	24	- 60~204
1515	Purplish	1.10	1.2x10 ⁶	0.25	32.0	1~2	18	- 60∼150
1518	Red	1.10	3.2x10 ⁶	0.25	34.0	3~4	24	- 60∼150
1010								

Test condition: temperature 23 \pm 2 $^{\circ}$ C; Relative humidity 50 \pm 5%

Consumption Estimation

Package Size		50ml tube		310ml cartridge			
Diameter (mm)	6.0	3.0	1.5	6.0	3.0	1.5	
Length (m)	1.8	7.1	28.3	11.0	43.9	175.5	







Pivoting Support Sealing



Transmission End Sealing



Anaerobic Thread Lockers

TONSAN Anaerobic Thread lockers are thermosetting plastics of different strength after curing, to protect thread from impact, vibration, infiltration, rusty and corrosion. Replacing spring cushion, cotter pin and other mechanical locking methods.

Properties

- Single component Solvent free Room temperature curing 100% fill the thread gap
- Precise tightening torque Clamp force transformation Divers categories to meet different locking strength
- Conform to US Military Standard MIL/S/46163A
- Conform to JB/T7311 -2008 Construction machinery- anaerobic adhesive, silicone and pre-applied dry film adhesive- Application technical specifications

1222 Thread Locker (Easy Disassembly)

Purple color. Low strength, easy disassembled thread locker. Thixotropic viscosity. Apply for fastener with diameters up to 6mm. Available disassembled by hand tools.

Package size: 50ml/bottle Order number: 122201
Package size: 250ml/bottle Order number: 122205

1242 Thread Locker (General Purpose)

Blue color. General purpose, easy disassembled thread locker. Thixotropic viscosity. Applied for locking of nuts, bolts and screws from 6mm to 20 mm. Available disassembled by hand tools.

Package size: 50ml/bottle Order number: 124201
Package size: 250ml/bottle Order number: 124205

1243 Thread Locker (Oil Tolerance)

Blue color. High strength, thixotropic viscosity, excellent chemical resistance, can be used on light oil surface. Applied for fastener diameters from 6mm to 20mm. Available disassembled by hand tools

Package size: 50ml/bottle Order number: 124301
Package size: 250ml/bottle Order number: 124305

1290 Thread Locker (Penetrative)

Package size: 250ml/bottle

Green color. Medium strength, very low viscosity, good permeability, applied for sealing and locking of pre-assembled threads up to M12. Also apply for sealing weld joint and casting cracks under 0.1mm. Package size: 50ml/bottle Order number: 129001

Order number: 129005

1261 Thread Locker (Low Temperature Curing)

Red color. High strength, medium viscosity, excellent low temperature curing. Apply for slight oil surface. Suitable for fastener diameters up to 27mm. Permanently locked.

Package size: 50ml/bottle Order number: 126101

1262 Thread Locker (Fatigue Resistance)

Red color. High strength, thixotropic viscosity and good fatigue resistance. Suitable for fastener diameters under 20mm. Available disassembled by hand tools

Package size: 50ml/bottle

Order number: 12620202

Package size: 250ml/bottle

Order number: 12620205

1270H Thread Locker (Thermal Aging Resistance)

Green color. High strength with medium viscosity, excellent chemical resistance and good thermal aging resistance. Apply for fastener diameters up to 27mm. Permanently locked.

Package size: 50ml/bottle Order number: 127011

1271 Thread Locker (Low Viscosity)

Red color. High strength, low viscosity, and good chemical resistance. Apply for fastener diameters up to 27mm. Permanently locked.

Package size: 50ml/bottle Order number: 12710202 Package size: 250ml/bottle Order number: 12710205

1272 Thread Locker (High Temperature Resistance)

Red color. High strength with thixotropic viscosity and high temperature resistance. Apply for fastener diameters up to 36mm. Permanently locked.

Package size: 50ml/bottle Order number: 127201

1277 Thread Locker (High Viscosity)

Red color. High strength with high viscosity. Apply for fastener diameters up to 36mm. Permanently locked. Heating is needed for disassembly.

Package size: 50ml/bottle Order number: 127701
Package size: 250ml/bottle Order number: 127705

1279 Thread Locker (Ultra High Strength)

Red color. Ultra high strength with thixotropic viscosity, excellent chemical resistance and good thermal aging resistance. Apply for fastener diameters up to 36mm. Permanently locked. Heating is needed for disassembly.

Package size: 50ml/bottle Order number: 127901

1764 Activator

Used to shorten curing time of anaerobic adhesives, especially at low temperature, in applications with passive metals or inert surfaces, or where large gaps are involved.

Package size: 300ml/aerosol can

Order number: 176421



Differential Mechanism Thread Locking



Coupler Locking



Transmission Thread Locking

Anaerobic Thread Lockers

Physical Properties

Product code	Color	Specific gravity (g/cm³)	Viscosity (mPa·s)	Gap fill (mm)	Break torque (N·m)	Prevail torque (N·m)	Fixture time (min)	Fully cured time (h)	Temperature range (°C)
1222	Purple	1.05	1400/Thixotropic	0.13	6.0	3.2	20	24	-60∼150
1242	Blue	1.10	1400/Thixotropic	0.13	12.0	5.0	20	24	-60∼150
1243	Blue	1.10	2800/Thixotropic	0.13	20.0	7.0	10	24	-60∼150
1261	Red	1.05	550	0.13	32.0	32.0	25	24	-60∼150
1262	Red	1.10	2000/Thixotropic	0.13	22.0	32.0	10	24	-60∼150
1270H	Green	1.08	600	0.13	30.0	30.0	10	24	-60∼150
1271	Red	1.11	550	0.13	27.0	30.0	10	24	-60∼150
1272	Red	1.10	8000/Thixotropic	0.25	23.0	25.0	30	24	-60∼230
1277	Red	1.12	7000	0.25	32.0	32.0	30	24	-60∼150
1279	Red	1.07	6500/Thixotropic	0.25	40.0	32.0	30	24	-60∼150
1290	Green	1.08	20	0.10	10.0	26.0	10	12	-60 ∼150

Test condition: temperature 23±2 $^{\circ}\text{C}$; Relative humidity 50±5%

Consumption Estimation (1,000 bolts and nuts)

Manual Dispensing 28ml 42ml 76ml 130ml 188ml 230ml 350ml Auto Dispensing 16ml 30ml 48ml 92ml 116ml 125ml 220ml	Package size	M6	M8	M10	M12	M14	M16	M20
Auto Dispensing 16ml 30ml 48ml 92ml 116ml 125ml 220ml		28ml	42ml	76ml	130ml	188ml	230ml	350ml
	Auto Dispensing	16ml	30ml	48ml	92ml	116ml	125ml	220ml





Anaerobic Thread Sealants

TONSAN Anaerobic Thread Sealants are used for sealing of pipelines and no leakage and rust. After curing, can resist high pressure which are good replacements of PTPE tapes.

Properties

- Single component Solvent free Room temperature curing 100% fill the thread gap
- no pollution for sealed chemical, non-cloggingAnti-seizing
- Easy to assemble, disassemble and clean Chemical, vibration and aging resistance
- Conform to JB/T7311 -2008 Construction machinery- anaerobic adhesive, silicone and pre-applied dry film adhesive- Application technical specifications

1545 Anaerobic Thread Sealant (Chemical Resistance)

Purple color. Medium viscosity thread sealant with fast curing and no pollution to system, no clogging on pressure elements. Can be use on slight oil surface. Apply for locking and sealing hydraulic systems, pneumatic systems and refrigeration equipment. Package size: 50ml/bottle Order number: 154501

1554 Anaerobic Thread Sealant (Copper Surface)

Red color. Medium viscosity, medium strength, slow curing speed, and good chemical resistance. Recommended for sealing pipe thread, plug, and expended pipe heat radiator of refrigeration systems. Package size: 50ml/bottle Order number: 155401

1567 Anaerobic Thread Sealant (High Temperature Resistance)

White color. A paste-like, high viscosity, generalpurpose sealant, self-lubricating, resistant to high temperature chemicals such as oil, gas, vapor, and water. Suitable for locks and seals tapered pipe threads and fittings. Can be used for drinking water pipe system.

Package size: 50ml/tube Order number: 156701
Package size: 250ml/tube Order number: 156705

1567F Anaerobic Thread Sealant (Fast Curing)

White color. Paste-like with white color, fast curing, and self-lubrication. Suitable for locking and sealing most chemicals such as oil, gas, vapor, and water in tapered pipe threads and fittings. Can be used for drinking water pipe system.

Package size: 50ml/tube Order number: 156712

Anaerobic Thread Sealants

1569 Anaerobic Thread Locking Sealant

Brown color. Medium viscosity, medium strength. Recommended for sealing the fine threads of hydraulic and pneumatic fittings. No fillers and will not foul valves or fluid filtering system. Can be used for drinking water pipe system.

Package size: 50ml/bottle Order number: 156901
Package size: 250ml/bottle Order number: 156905

1570 Oil Piping System Sealant

Red color. A Medium viscosity sealant with medium strength. Recommended for crude oil piping systems. Erosion resistance.

Package size: 250ml/bottle Order number: 157001

1577 Anaerobic Thread Pipe Locking Sealant

Yellow color. A paste-like, medium strength sealant with thixotropic viscosity, fast curing and chemical resistance. Recommended for locking and sealing tapered/straight pipe threads and fittings up to 3". Can be used for drinking water pipe system.

Package size: 50ml/tube Order number: 157701

1764 Activator

Activator exclusive for anaerobic adhesive, used to shorten the curing time of anaerobic adhesives under low temperature, in applications with passive metals or inert surfaces, or large gaps.

Package size: 300ml/aerosol can Order number: 176421

Physical Properties

Product code	Color	Specific gravity (g/cm³)	Viscosity (mPa·s)	Max thread diameter	Sealing pressure (MPa)	Fixture time (min)	Fully cured time (h)	Temperature range (°C)
1545	Purple	1.10	14000/Thixotropic	1 ½″	70.0	15	24	-60∼150
1554	Red	1.10	2500	3″	71.0	180	72	-60∼150
1567	White	1.10	5.54x10 ^s	3″	71.0	120	24	-60~204
1567F	White	1.10	2.3x10 ⁵	2″	70.0	15	24	-60∼150
1569	Brown	1.05	400	1 ½″	70.0	15	24	-60∼150
1570	Red	1.04	5500	3″	56.0	20	24	-60∼150
1577	Yellow	1.05	24000/Thixotropic	3″	70.0	15	24	-60∼150

Test condition: temperature 23 $\pm2\,^{\circ}$ C; Relative humidity 50 $\pm5\%$

Consumption Estimation (1,000 bolts and nuts)

Package size	1/8	1/4	3/8	1/2	3/4	1
Manual Dispensing	41ml	60ml	92ml	120ml	248ml	446ml
Auto Dispensing	25ml	43ml	60ml	88ml	185ml	371ml





Anaerobic Retaining Compounds

TONSAN Anaerobic Retaining Compounds are developed for the assembly of all cylindrical components such as bearing, gears, shafts, keyways and rotors. They increase the load bearing characteristics of cylindrical joints, reducing assembly stress and assembly cost.

Properties

- Single component No dissolvent Room temperature curing 100% fill surface gap
- Diversified categories, meet different locking requirements Impact, vibration, chemical and aging resistance
- Easy assembly Conform to JB/T7311 -2008 Construction machinery- anaerobic adhesive, silicone and pre-applied dry film adhesive- Application technical specifications

Anaerobic Retaining Compounds

1609 Retaining Compounds (Low Viscosity)

Green color. Low viscosity, high strength. Used for cylindrical assemblies less than 0.10mm radical clearance, such as gears and shafts.

Package size: 50ml/bottle Order number: 160901
Package size: 250ml/bottle Order number: 160905

1660 Retaining Compounds (For Large gap)

Grey color. High viscosity, high strength, used for retaining of cylindrical parts with large gap less than 0.50 mm, such as shaft sleeve, bolt and axle.

Package size: 50ml/tube Order number: 166001

1680 Retaining Compounds (High Strength)

Green color. Medium viscosity, high strength and resistant to solvents. For retaining components with radical gap less than 0.25mm, such as drive pipe, gear, and rotor.

Package size: 50ml/bottle Order number: 168001
Package size: 250ml/bottle Order number: 168005

1603 Retaining Compounds (Oil Tolerance)

Green color. A low viscosity retaining compound with improved oil tolerance. High strength. Used for locking and sealing axle hole components, especially for oil surface.

Package size: 50ml/bottle Order number: 160301
Package size: 250ml/bottle Order number: 160305

1620 Retaining Compounds (High Temperature Resistance)

Green color. High viscosity, high strength, temperature resistance. Especially for locking and sealing axle hole components such as valve pipe, plastic injection core retainer coat, valve barrel cylinder liner and keyway up to 230 $^\circ$ C.

Package size: 50ml/bottle Order number: 162001
Package size: 250ml/bottle Order number: 162005

1638 Retaining Compounds (Ultra High Strength)

Green color. Ultra strength retaining compound with medium viscosity, fast curing, used in where high retaining strength is required.

Package size: 50ml/bottle Order number: 163801

1648 Retaining Compounds

Green color. Medium viscosity, high strength, fast curing, mainly used for locking and sealing axle hole components, especially for continuous work condition under temperature up to 175 $^{\circ}$ C.

Package size: 50ml/bottle Order number: 164801 Package size: 250ml/bottle Order number: 164805

1608 Cup Plug Sealant

Red color. Thixotropic viscosity, high strength, non -sagging on vertical surface and resistant to oil and heat. Specially designed for cup plug in engines and etc.

Package size: 50ml/bottle Order number: 160803
Package size: 1kg/bottle Order number: 160805

1662 Cup Plug Sealant

Red color. A thixotropic, high-strength sealant. Designed for sealing and securing cylindrical metal assemblies such as engine block up and cup plugs. Package size: 1kg/bottle Order number: 166205

1764 Activator

Activator exclusive for anaerobic adhesive, used to shorten the curing time of anaerobic adhesives under low temperature, in applications with passive metals or inert surfaces, or where large gaps are involved. Package size: 300ml/aerosol can Order number: 176421

Physical Properties

Product code	Color	Specific gravity (g/cm³)	Viscosity (mPa·s)	Max radical clearance (mm)	Shear strength (MPa)	Fixture time (min)	Fully cure time (h)	Temperature range (°C)
1609	Green	1.10	150	0.10	16.0	10	24	- 60∼150
1620	Green	1.15	8000/Thixotropic	0.25	20.0	15	24	- 60∼230
1660	Grey	1.13	Paste	0.50	18.0	10	24	- 60∼150
1680	Green	1.10	1500	0.25	23.0	10	24	- 60∼150
1638	Green	1.10	2000	0.25	25.0	10	24	- 60∼150
1648	Green	1.13	500	0.15	22.0	10	24	- 60∼175
1603	Green	1.10	125	0.10	22.0	15	24	- 60∼150
1662	Red	1.08	2300/Thixotropic	0.20	15.0	60	24	- 60∼150
1608	Red	1.08	7000/Thixotropic	0.20	20.0	10	24	- 60∼150

Test condition: temperature 23±2 $^{\circ}\text{C}$; Relative humidity 50±5%







Plug Retaining





Pre-applied Thread Sealants

TONSAN pre-applied thread lockers can maintain dry status after applied and can be stored for a long time, which are widely used for mass production and fast pace assembly.

Properties

- Easy to operate, reliable quality very low odor, no dissolvent Excellent dissolvent resistance

1204 Pre-applied Thread Sealant (Locking)

Double components, high strength, pre-applied thread locker that reliably secures and seals thread fasteners up to M20.

Package size: 500g/set Order number: 12040802

1513 Pre-applied Dry Film Thread Sealant (Sealing)

White color, single component, low viscosity, elastic rubber coat will be formed after cured. Suitable for sealing thread components. Apply for sealing fuel, lubrication, and most industrial gas and liquid. Package size: 2kg/pail Order number: 15130205

1516 Pre-applied Dry Film Thread Sealant (Sealing)

Iron red. Single component, high viscosity. Suitable for sealing bolt, thread pipe and thread joint surface. Reliable sealing fuel, lubrication, and most industrial gas and liquid

Package size: 500g/bottle Order number: 151601 Package size: 2kg/pail Order number: 151605

Physical Properties

Product code	Color	Viscosity (mPa·s)	Destabilizin phosphated bolt (GB/T 18747.1)	g moment(N m) color zinc plated bolt (GB/T 18747.1)	Lubricity	Fixture time (s)	Fully cure time (h)	Temperature range (°C)
1204	Pink	65000	40	18	Medium	30	72	- 54∼150

Product code	Color	Viscosity (mPa·s)	Skinning time	Max air pressure (MPa)	Max oi l pressur (MPa)	Temperature range (°C)
1513	White	20000	20min(80°C)	0.8	35	- 54∼150
1516	Iron red	60000	20min(80°C)	0.8	35	- 54∼150

Test condition: temperature 23±2 $^{\circ}\text{C}$; Relative humidity 50±5%





Brushing Apply



Rolling Apply



Structure Adhesives

TONSAN Structure Adhesives are developed for structural bonding applications that require tensile, shear and peel strength combined with maximum impact resistance. Easy to operate, high strength, no need special equipment, anti stripping, impact resistance. They form to a tough, durable bond to a wide variety of substrates, including metals, plastics and composites. Enable the bonding of different materials, replacing spot welding and rivets.

Properties

- High viscosity Evenly stress distribution on the joint surface, no heat impact and no deformation to components
- Fast curing speed to improve operation efficiency
 Widely used for bonding different materials

Acrylic Structure Adhesives

TS802 High Strength Adhesive

(General Purpose)

White color. Double components, high strength adhesive, fast fixture in 5 minutes. Suitable for bonding and self-bonding of metal, plastic, leather and wood (not suitable for copper).

Package size: 85g/set Order number: 080201

TS805 High Strength Structure Adhesives (Easy to Operate)

White color. Double components, high viscosity, fast fixture in 30 minutes. Suitable for bonding and self-bonding of metal, plastic, leather and wood (not suitable for copper).

Package size: 400ml/set Order number: 280501

TS806 Rail Steel Band Adhesive (Specialized Bonding)

White color. Double components, oil resistance, high viscosity, 50 minutes operating time, easy to precisely fixture. Especially for bonding steel band of guide rail.

Package size: 2kg /set Order number: 280605

TS807 General Type Structural Adhesive

Taupe.1:1 two components acrylate structural adhesive for general use. Low viscosity, flowable. Cured layer has high resistance to impact. Especially suitable for bonding plastic and metal with a minimum of surface preparation. Package size: 2kg/set Order number: 28070505
Package size: 2.5kg/barrel×2 Order number: 28070510A/B

Package size: 2.5kg/barrel×2 Order number: 28070510A/B Package size: 5Gal/barrel×2 Order number: 28070515A/B

TS820 Low Odor Structural Adhesive

Blue purple. Double components, volume ratio 1:1. Fixture time is 5-8 minutes at room temperature and fast curing at high temperature. Cured layer has high toughness and resistance to impact. Especially suitable for bonding metal.

Package size: 400ml/set Order number: 08200305

TS828 High Performance Acrylic Structure Adhesive

Dark Green. Double components, could be able to cure in 5 minutes with volume ratio 10:1, and reach to 80% ultra strength in 20 minutes, high strength of thermal aging. Good toughness and easy to peel of adhesive

layer. With wide range of bonding, suitable for bonding and self-bonding of variety materials such as metal, plastic and fiberglass, etc.

Package size: 490ml /set Order number: 08280205

TS828S High Performance Acrylic Structure Adhesive

Dark green. Double components, volume ratio 10:1. Fixture time is 12-15 minutes at room temperature. Cured layer has high toughness, good resistance to peeling off, and high strength after thermal aged. Provide strong bonding for a variety of materials, especially suitable for large area bonding.

Package size: 50ml/set Order number: 08280302 Package size: 400ml/set Order number: 08280305

TS830 High Performance Structurel Adhesive

Dark green. Double components, volume ratio 10:1. Cured layer has high toughness and good resistance to medium and aging. Especially suitable for bonding structures working under high temprature conditions.

Package size: 50ml/set Order number: 08300202
Package size: 490ml/set Order number: 08300205

Epoxy Structure Adhesives

TS811 High Strength Structure Adhesives (High Strength)

Light yellow. Double components, impact absorbing epoxy. Excellent tensile and shear strength. Unique structure adhesive with wide applications for bonding and self-bonding metals, ceramics and plastics.

Package size: 250g/set Order number: 281101

TS813 5 Minutes Epoxy

Transparent. Double components, flowable, good toughness, easy to operate. Quick fixture in 5 minutes with good toughness. Suitable for fast bonding various substrates, such as metal, glass, wood, part of plastics and ceramics.

Package size: 50ml/set Order number: 081301

TS814 30-Minute Clear Epoxy (Easy to Operate)

Transparent. Double components, flowable, good toughness, easy to operate, and curing in 30 minutes. Provide strong bonding to glass, metals, part of plastics, ceramics and wood combinations.

Package size: 50ml/set Order number: 081401

TS816 High Toughness Epoxy Structure Adhesive

Transparent. Double components, yellow color, flowable, industrial adhesive, first curing in 30 minutes, good toughness, good strength. Provide strong bond to metals, jewelry, stones, wood, ceramics and most of plastics.

Package size: 50ml/set Order number: 08160202
Package size: 400ml/set Order number: 08160205

TS818 Abrasion Resistance Ceramics Epoxy

Grey color. Double components, putty, suitable for bonding to metals, stone, wood, ceramic and most of plastic, especially for the wear resistance ceramic bonding.

Package size: 10kg/set Order number: 08180202

TS832 High Strength And High Temperature Resistant Epoxy Adhesive

Yellow color. Double components, volume ratio in 2:1, high strength and good toughness, heat resistance up to 150 °C in long term and 180 °C in short time. Low viscosity, suitable for potting bonding and have a good bonding performance to metal, stone, wood, ceramic and most of plastics.

Package size: 400ml /set Order number: 08320205

TS843 High Temperature Resistant Epoxy Adhesive

Grey black. Double components, volume ratio in 2:1, high strength and good toughness, heat resistance can up to 150 $^{\circ}$ C in long term and 180 $^{\circ}$ C in short time. High viscosity, suitable for potting bonding, thixotropic, not flow on vertical surface. Suitable for mental and other parts bonding in high temperature and harsh conditions.

Package size: 400ml /set Order number: 08430202

Polyurethane Structure Adhesives

TS850 Double Components Polyurethane Adhesive

Black color. Double components, initial curing in 30 minutes, and could work in vertical surface. Excellent bonding performance, impact resistance and water proof, with both good corrosion resistance and electrical insulation. Special suitable for bonding of insulation and metal materials, such as SMC, BMC, RTM FRP etc.

Package size: 600ml /set Order number: 08500205

TS956 Polyurethane Adhesive

Light yellow.Double components, weight ratio of 4:1, high strength and high toughness. Excellent bonding performance, impact resistance and water proof, with both good corrosion resistance and electrical insulation. Suitable for bonding of

all kinds of composite materials, special for metal materials and fibre reinforced composites.

Package size: 10kg/set Order number: 09560205

Other Structure Adhesives

TS812 High Temperature Bonder

Black color. Double components, High muff coupling strength. Thermal durability up to 780 °C. Suitable for bonding of muff coupling components.

Package size: 250g/set Order number: 081201

1326 Anaerobic Structure Adhesive (Ferrite Bonding)

Light yellow. High strength, high viscosity, fast curing, excellent impact resistance. Suitable for ferrite bonding with activator 1764.

Package size: 50ml/bottle Order number: 132631

1764 Activator

Specially designed for anaerobic adhesives. Apply to shorten the curing time of anaerobic adhesives under low temperature, in applications with passive metals or inert surfaces, or where large gaps are involved. Package size: 300ml/aerosol can Order number: 176421

Structure Adhesives

Physical Properties

Product code	Color	Specific gravity (g/cm³)	Mix ratio by weight (A:B)	Mix ratio by volume (A:B)	Working time (min)	Tensile strength Sho (MPa)	ear strength (MPa)	Peel strength (N/cm)	Shrinkage rate (cm/cm)	Fixture time (h)	Fully cured time (h)	Temperature range (°c)
					Ac	rylic Struct	ure Adh	esives				
TS802	White	1.00	1:1	1 : 1	3∼5	35.0	28.0	38.0	0.01	2	6	- 60∼120
TS805	White	0.99	-	1 : 1	20~30	38.0	29.0	40.0	0.01	8	12	- 60~120
TS806	White	0.99	1 : 1	1 : 1	50	38.0	29.0	40.0	0.01	8	12	- 60~120
TS807	Taupe	0.99	1 : 1	1 : 1	5~9	25.9	31.6	43.0	0.01	8	12	- 60∼120
TS820	Blue purple	1.00	-	1 : 1	5~8	30	28.0	40.0	0.01	0.3	24	- 60∼120
TS828	Dark green	1.00	-	10 : 1	4~6	36.0	32.0	82.0	0.01	0.3	24	-60~150
TS828S	Dark green	1.00	-	10 : 1	12~15	32	28.0	82.0	0.01	2	24	-60~150
TS830	Dark green	1.00	-	10 : 1	4~6	32	30.0	82.0	0.01	0.3	24	-60∼180
					Ер	oxy Structu	ıre Adhı	esives				
TS811	Light ye ll ow	1.49	4 : 1	3 : 1	70	49.0	22.0	-	-	24	48	- 60~160
TS813	transparent	1.19	-	1 : 1	5	43.0	24.0	-	-	10	18	- 60∼80
TS814	transparent	1.16	-	1:1	30	47.0	23.0	-	-	18	20	- 60∼80
TS816	Yellow	1.54	1 : 1	-	30~50	38.0	25.0	45.0	-	20	24	-60∼120
TS818	Grey	1.65	2 : 1	1.8 : 1	30~50	36.0	22.0	-	-	24	48	-60∼120
TS832	Yellow	1.30	-	2 : 1	30~70	30.0	25.0	24.0	-	20	24	-60∼180
TS843	Grey black	1.40	-	2 : 1	40~70	30.0	22.0	20.0	-	20	24	-60∼180
					Polyur	ethane Str	ucture /	Adhesives				
TS850	Black	1.30	-	1 : 1	20	20.0	16.0	-	-	10min(80°C) 120min(23°C)	24	-40∼80
TS956	light yellow	1.4	4 : 1	- (2	30~60 23℃,200g混台	à) 8.5	≥12.0	≥20.0	-	4h(23℃)	72	-40∼80

Other Structure Adhesives

Product code	Color	Sp	Specific gravity (g/cm³)		Viscosity (mPa·s)		Shear strer (MPa)	ngth	Fixture time (min)	Fu ll y cu time (h)	re 1	emperature range (°c)
1326	Light ye ll ow		1.10	1500	0	0.50	20.0		1	24		-5 4∼120
Product code	Color	Specific gravity (g/cm³)	Mix ratio by weight (A:B)	Mix ratio by volume (A:B)	Working time (min)	Tensi l e strength (MPa)	Shear strength (MPa)	Peel strength (N/cm)	Shrinkage rate (cm/cm)	Fixture time (h)	Fully cured time (h)	Temperature range (°c)
TS812	Black	1.89	3 : 1	-	30~40	-	50.0 (Sleeve joint)	-	Expand 0.01	Thermal insu	ure2h→70∼80°C lation2h→150°C sulation 2∼3h	- 60∼780

Test condition: temperature 23±2 °C; Relative humidity 50±5%

When the temperature is below 15 °C, some heating measures should be adopted; or the relevant curing time should be extended

When mix volume is more than 200g, the working time will be shorter

*** Above data is typical



Polyurethane Sealants & Adhesives

TONSAN Polyurethane Sealants & Adhesives can be used for bonding and sealing of windshield, side and rear glass, body panel, front & rear surrounding and trim. It also can be used for sealing of container, steel structure and refrigeration storage.

Properties

- Aging resistance, fatigue resistance Single component, easy to operate Excellent temperature resistance
- Good sealing and bonding performance for various substances Solvent free, no pollution

Polyurethane Sealants & Adhesives

1924 Polyurethane Sealants

Single component, white color/black color/grey color available, good flexibility, excellent water proof ability, high viscosity, oil resistance, water resistance, aging resistance and salt mist resistance. Good long time vibration fatigue resistance. Suitable for vehicle, container, steel structure, and refrigerator sealing. White color:

Package size: 310ml/cartridge Order number: 192401 Package size: 400ml/sausage Order number: 192404 Package size: 600ml/sausage Order number: 192406 Black color:

Package size: 310ml/cartridge Order number: 192201 Package size: 400ml/sausage Order number: 192204 Package size: 600ml/sausage Order number: 192206

Grey color

Package size: 310ml/cartridge Order number: 192301 Package size: 400ml/sausage Order number: 192304 Package size: 600ml/sausage Order number: 192306

using.)

Polyurethane Cleaner

Package size: 500ml/bottle

Metal Bonding Primer

1756

1761

Low viscosity, light yellow color, transparent liquid. Suitable for pre-treatment of metal, plastic and painted surface to improve bonding strength.

Alcoholic solution, improve the bonding strength

between TONSAN Polyurethane Adhesives and the

substances. Remove the oil of the bonding surface

before using. Suitable for cleaning metal, synthetic material, glass and painted surface. (Note: This product

will darken the paint surface, please pre-test before

Order number: 175601

Package size: 250ml/bottle Order number: 176101

1925UV Polyurethane Sealants

Black color, single component, moisture curing, good flexibility, excellent UV resistance, water proof and anti -aging resistance. Suitable for sealing of vehicle glass and window frame, and the exposure parts.

Package size: 600ml / sausage Order number: 19250206 black Order number: 19250306 grey Order number: 19250406 white

1762 **Glass Bonding Primer**

A black thick-liquid. It is used to improve bonding strength between TONSAN PU sealants, glass and ceramic. Suitable for pre-treatment of vehicle assembly, such as windshield, side glass bonding. (Note: Please shake evenly before using)

Package size: 250ml/bottle Order number: 17621202

Polyurethane Sealants 1956 (General Purpose)

black color, Single component, good flexibility, excellent water proof ability, high strength. Suitable for windshield, side and rear glass, body panel, front & rear surrounding and trim to vehicle, train and vessel assemblies.

Package size: 310ml/cartridge Order number: 19561201 Package size: 400ml/sausage Order number: 19561204 Package size: 600ml/sausage Order number: 19561206

Physical Properties

Product code	Color	Specific gravity (g/cm³)	Tack free time (min) (@25°C RH50%)	Cure speed (mm) (@25°C RH50%)	Elongation at break	Tensile strength (MPa)	Shear strength (MPa) (EN1465)	Hardness (Shore A)	Temperature range (°C)
1924	White Black Grey	1.20	30~60	4mm/24h	600	2.6	2.21	50	-40∼90 Short-term120
1925UV	Black	1.28	30~60	3mm/24h	400	2	1	42	-40∼90 Short-term120
1956	Black	1.24	30~60	4mm/24h	500	8.0	4.0	55	-40~90 Short-term140

Test condition: temperature 23±2 $^{\circ}\text{C}$; Relative humidity 50±5%







Side Glass Bonding

Rear Glass Seaming

Coach Glass Seaming





Modified Silane Sealants & Adhesives

TONSAN Modified Sealants and Adhesives demonstrate good adhesion without primer to various substances. They are widely used for elastic bonding and sealing applications where high strength and weather resistance are required.

Properties

■ Low odor ■ No primer needed ■ Excellent aging and UV resistance ■ No mildew ■ Paintable

STP1921 Modified Silane Sealants and Adhesives

White, grey and black color, single component, suitablefor elastic sealing of vehicle, vessel and engineering machinery assembly.

White color package size:

Package size: 310ml/cartridge Order number: 192141
Package size: 400ml/sausage Order number: 192144
Package size: 600ml/sausage Order number: 192146

Grey color package size:

Package size: 310ml/cartridge Order number: 192161 Package size: 400ml/sausage Order number: 192164 Package size: 600ml/sausage Order number: 192166

Black color package size:

Package size: 310ml/cartridge Order number: 192151
Package size: 400ml/sausage Order number: 192154
Package size: 600ml/sausage Order number: 192156

STP1920 Modified Silane Sealants

White and black color, single component, moisture curing, low viscosity, flowable. Suitable for elastic sealing of fiberglass, plywood, teakwood, metal, metal primer and paint, etc.

White color package size:

Package size: 600ml/sausage Order number: 19200406

Black color package size:

Package size: 600ml/sausage Order number: 19200506

MS1937 Modified Silane Sealants And Adhesives

White, grey and black color, single component, fast curing, high module. Suitable for bonding and sealing in bus, train, truck, vessel, container and ventilation system assembly.

White color package size:

Package size: 430g/cartridge Order number: 193701
Package size: 400ml/sausage Order number: 193704
Package size: 600ml/sausage Order number: 193706

Black color package size:

Package size: 430g/cartridge Package size: 400ml/sausage Order number: 193711
Package size: 600ml/sausage Order number: 193716
Package size: 600ml/sausage Order number: 193756
(high viscosity)

Grey color package size:

Package size: 430g/cartridge Order number: 193721
Package size: 400ml/sausage Order number: 193724
Package size: 600ml/sausage Order number: 193726

MS1937S Modified Silane Sealants And Adhesives

White and black color, single component, moisture curing, high module. With outstanding adhesion to many kinds of substrates. Long tack free time, meet the demand of long operation time working condition and high temperature in summer season.

White color package size:

Package size: 600ml/sausage Order number: 19379006

Black color package size:

Package size: 600ml/sausage Order number: 19379106

MS1939FR Modified Silane Sealants And Adhesives

Black color, single component, high elasticity, flame retardant type. Suitable for sealing and bonding where flame retardant is required, such as rail vehicle and elevator etc.

Package size: 400ml/sausage Order number: 193914
Package size: 600ml/sausage Order number: 193916

Physical Properties

Product code	Color	Specific gravity (g/cm³)	Tack free time (min) (@25°C RH50%)	Cure speed (mm) (@25°C RH50%)	Elongation at break	Tensile strength (MPa)	Shear strength (MPa) (EN1465)	Hardness (Shore A)	Temperature range (°C)
STP1920	White Black	1.33	60~90	3mm/24h	200	1.2	0.8	35	-50~90
STP1921	White Black Grey	1.45	20~30	3mm/24h	350	1.8	1.2	40	-50∼90
MS1937	White Black Grey	1.45	5~20	4mm/24h	200	3.0	2.3	55	-40~100
MS1937S	White Black	1.45	20~40	4mm/24h	300	2.8	2.0	55	-40~100
MS1939FR	Black	1.45	5~20	4mm/24h	180	3.0	2.0	52	-40~100

Test condition: temperature 23 ±2 °C; Relative humidity 50 $\pm5\%$





Cyanoacrylate Adhesives

TONSAN Cyanoacrylate Adhesives are new generation products of α -Cyanoacrylate. Quick fixture and suitable for bonding various substances such as metal, rubber, plastic, glass, feather, and ceramic.

Properties

- Fast curing in seconds Single component, easy to operate High strength
- Suitable for bonding various substances Low odor, low blooming Good temperature resistance

1420

1401 Instant Adhesive (Fast Curing)

Transparent. Medium viscosity, high strength, fast curing. Suitable for bonding various substances surfaces, especially for the inert and acid surfaces such as rubber, leather, wood, plywood and card board and cork wood.

Package size: 20g/bottle Order number: 14010202

1406 Instant Adhesive (Toughened)

Transparent. Low viscosity, high strength, fast curing. Suitable for bonding various substances surface, especially for the difficult-to-bond rubber and plastic surfaces such as loudspeaker parts, lamp shade, plastic electric fan, plastic motor shell, and rubber O-ring.

Package size: 20g/bottle Order number: 14062202

1414 Instant Adhesive (Humidity Resistance)

Transparent. Medium viscosity, fast curing, humidity resistance and good weather resistance. Suitable for bonding materials such as plastic, rubber, ceramic. Package size: 20g/bottle Order number: 141411

Instant Adhesive (General Purpose)

Transparent. General purpose with low viscosity and fast curing. Used for bonding penetrated plastic and rubber.

Package size: 20g/bottle Order number: 142001

1454 Instant Adhesive (For Large Gap)

Transparent. Paste, not flow, high strength, vertical surface bonding. Suitable for various substances such as inert, porous, acid, and absorbing materials, especially for bonding large gap or roughened surfaces. Package size: 20g/pc Order number: 145401

1495 Instant Adhesive (Peeling Resistance)

Transparent. Medium viscosity, good peeling resistance. Suitable for bonding rubber, metal and plastic.

Package size: 20g/bottle Order number: 14950202

1382 Instant Adhesive (Electronic Bonding)

Transparent. High viscosity, high strength, high temperature resistance. Suitable for bonding and fixture of electronic products, such as jumper wire fixing.

Package size: 20g/bottle Order number: 138201

1480 Instant Adhesive (Impact and Vibration Resistance)

Black color, medium viscosity, excellent impact resistance, vibration resistance, peeling resistance, and heat resistance.

Package size: 20g/bottle Order number: 148001

1460 Instant Adhesive (Low odor)

Transparent. Medium viscosity for bonding instrument, electronics, art craft rubber and plastic components. The bonded components are clean and artistic. Suitable for applying in conditioner or closed room. Package size: 20g/bottle Order number: 146001

1415 Instant Adhesive (Metal Bonding)

Transparent. High viscosity, high strength, medium curing speed, adjustable after bonding. Suitable for bonding and filling gaps of metals. Persistence high strength, good medium resistance.

Package size: 20g/bottle Order number: 141501

1496 Instant Adhesive (Metal Bonding)

Transparent. Medium viscosity, especially for fast bonding between metals, or metal with other materials.

Package size: 20g/bottle Order number: 149601

1745 Instant Adhesive Activator

Applied for shorten curing time of TONSAN cyanoacrylate adhesives. It can be either pre or post -applied. Post-applied is preferred.

Package size: 250ml/bottle Order number: 174501 Package size: 50ml/bottle Order number: 174502 (Brush painting/spray painting)

1768 Cyanoacrylate Remover

A solvent suitable for clearing and resolving redundant cured cyanoacrylate adhesives.

Package size: 250g/bottle Order number: 176801

1770 Cyanoacrylate Primer

Used for the treatment of difficult-to- bond materials, such as polypropylene, polyethylene, PTFE.

Package size: 20ml/bottle Order number: 177001
Package size: 50ml/bottle Order number: 177004
(Brush painting/spray painting)

Cyanoacrylate Adhesives

Physical Properties

Product code	Color	Viscosity (mPa·s)	Gap fill (mm)	Shear strength steel-steel (MPa)	Fixture time (s)	Fully cure time (h)	Temperature range (°C)
1382	Transparent	5000	0.20	22.0	40	24	-50∼120
1401	Transparent	110	0.10	21.0	15	24	-50∼120
1406	Transparent	20	0.10	20.0	10	24	-50∼120
1414	Transparent	110	0.15	20.0	25	24	-50∼80
1415	Transparent	1200	0.20	23.0	60	24	-50∼80
1420	Transparent	5	0.05	20.0	30	24	-50∼80
1454	Transparent	Paste	0.25	22.0	20	24	-50∼80
1460	Transparent	80	0.10	18.0	60	24	-50∼70
1480	Black	300	0.15	20.0	120	24	-50∼100
1495	Transparent	45	0.10	20.0	30	24	-50∼120
1496	Transparent	125	0.15	21.0	40	24	-50∼80

Test condition: temperature 23±2 $^{\circ}\text{C}$; Relative humidity 50±5%





TONSAN UV Cure Adhesives are single component, which can cure in seconds when exposed to UV light (300nm-400nm). Widely used for bonding, coating and sealing of electronic, medical instruments, arts craft, optical instruments and glass furniture.

Properties

- Single component Easy to operate Fast curing when exposed to UV light
- Low odor, solvent free Colorless and transparent layerr

1866 UV Cure Adhesive

(Medium Viscosity, High Strength)

Transparent. Medium viscosity, fast curing. Specialized for small scale bonding of glass arts and crafts. Can be used for other kinds of materials as well.

Package size: 250g/bottle Order number: 186605

1868 UV Cure Adhesive

(Low Viscosity, High Strength)

Transparent. Low viscosity, fast curing. Specialized for large scale bonding of glass arts and crafts. Can be used for other materials as well.

Package size: 250g/bottle Order number: 186805



Physical Properties

Product code	Color	Viscosity (mPa·s)	Cure speed (s)	Compressive shear strength (MPa)	Hardness (Shore D)	Temperature range (°C)
1866	Transparent	800	3	20	75	-30∼150
1868	Transparent	80	3	20	80	-30~150



Metal Rebuilding Putty

TONSAN metal rebuilding putty are epoxy material reinforced by metal and alloy. Suitable for repairing and sealing the slag blowholes, shrinkage cavity, sand hole and cracks in casting of iron, steel, cooper and aluminum.

Properties

- Erosion resistance High combination strength with metals No curing shrinkage
- Good construction performance, basically the same color with rebuilt substrate
- Conform to JB/T10283-2008 Construction machinery—Engineering repair putty—Application technical specifications

TS101 Casting Defect Rebuilding Putty (Big Size Defect)

Grey color. Double components, putty, general purpose. Used for repairing and restoring blowholes, shrinkage cavity, sand holes and cracks in castings with defect size over 2mm. Able to apply under low temperature and humidity.

Package size: 500g/set Order number: 210101

TS102 Casting Defect Rebuilding Putty (Small Size Defect)

Grey color. Double components, flowable . Used for repairing and restoring blowholes, shrinkage cavity, sand hole and cracks in castings with defect size smaller than 2mm.

Package size: 250g/set Order number: 210201

TS2111 Super Metal Rebuilding Putty

Grey color. Double components, putty, high strength, good comprehensive mechanical performance. Available to use in winter. Apply to repair the blowholes, shrinkage cavity, sand hole and cracks in castings, and repair the worn, corroded, cracked components.

Package size: 500g/set Order number: 211101

TS111 Iron Putty

Double components, putty. Suitable for repairing and restoring of blowholes, shrinkage cavity, sand holes and cracks in cast iron parts.

Package size: 500g/set Order number: 011101

TS112 Steel Putty

Double components, putty. Steel-reinforced epoxy with excellent mechanical performances. Suitable for repairing the abrasion, scratch, corrosion and cracks of steel parts.

Package size: 500g/set Order number: 011201

TS113 Aluminum Putty

Double components, putty. Aluminum-filled epoxy putty. Suitable for repairing the defects of cast aluminum parts.

Package size: 250g/set Order number: 011301

TS114 Copper Putty

Double components, putty, copper-filled epoxy. Suitable for rebuilding copper bushings, shafts, castings and defected parts.

Package size: 250g/set Order number: 011401

TS121 Penetrator - High Penetration

Green color. Single component, flowable, low viscosity with high strength and excellent sealing performance. Suitable for sealing shrinkage porosity and micro-shrinkage in alloy castings. No requirement for heating and pressure.

Package size: 50ml/bottle Order number: 012101
Package size: 250ml/bottle Order number: 012105





Flange Repairing



Pulley Repairing



Pressure Vessel Repairing

Metal Rebuilding Putty

Physical Properties

Product code	Color	Specific graviry (g/cm³)	Mix ratio by weight (A:B)	Mix ratio by volume (A:B)	Working time (min)	Compressive strength (MPa)	Tensile strength (MPa)	Shear strength (MPa)	Flexural strength (MPa)	Hardness (Shore D)	Cured time for machining (h)	Temperature range (°C)
TS101	Grey	1.65	2 : 1	2 : 1	60	98.0	38.0	20.0	65.0	80	18	-60∼120
TS102	Grey	1.43	2 : 1	2:1	60	95.0	35.0	20.0	67.0	80	18	-60∼120
TS111	Cast iron	1.62	7 : 1	4 : 1	60	110.0	42.0	20.0	70.0	82	24	-60∼160
TS112	Steel	1.68	7 : 1	4 : 1	60	106.5	35.0	19.0	58.0	80	24	-60∼160
TS113	Aluminum	1.41	6 : 1	4.5 : 1	60	99.6	41.0	20.0	55.0	80	36	-60∼160
TS114	Brass	1.53	6 : 1	4 : 1	80	100.0	40.0	21.0	56.0	81	24	-60∼160
TS121	Green	1.08	Single co	mponent	-	109.0	-	12.0 (Static shear)	-	-	-	-60∼150
TS2111	Grey	1.97	7 : 1	5 : 1	70	170.0	54.0	21.0	77.0	85	24	-60~160

Adhesive Volume

Product code	TS101	TS102	TS111	TS112	TS113	TS114	TS121	TS2111
Standard package	500g/set	250g/set	500g/set	500g/set	250g/set	250g/set	50ml/bottle	500g/set
Volume(g/cm³)	303	175	309	298	177	163	50	254

Test condition: temperature 23±2 °C; Relative humidity 50±5%

* When the temperature is below 15 °C, some heating measures should be adopted; or the relevant curing time should be extended

** When mix volume is more than 200g, the working time will be shorter

*** Above data is typical



Abrasion Resistance Compounds

Polymerized ceramic polymer technical is adopted by TONSAN Abrasion Resistance Compounds to supply engineering solutions for anti-abrasion under different conditions.

Properties

- Suitable for powder, fine particles, and big particles conditions Great combination between coating and substrate
- High anti-abrasion property Extending maintenance period, reduce shrinkage
- Easy operation, reduce shut-down time

Abrasion Resistance Compounds

TS215 Abrasion Resistance Rebuilding Putty (Super Abrasion Resistance)

Black color. Double components, titanium alloy reinforced epoxy putty with high hardness metallic carbide materials. The relative abrasion resistance is 2-3 times stronger than medium carbon steel. Excellent pressure and impact tolerance. Apply to repair of axels, axel holes, multiple keys and keyways. Package size: 500g/set Order number: 221501

TS216 Abrasion Resistance Rebuilding Putty (Powder Wear and Gas Erosion Resistance)

Grey color. Double components, putty. Metallic carbide and ultra hard ceramic-reinforced epoxy compound protect against fine particle sliding abrasion. Apply to repair pumps, wind turbines, turbine shields, gas tubes and powder tubes.

Package size: 500g/set Order number: 221601 Package size: 10kg/set Order number: 221603

TS218 Anti-abrasion Putty (Medium Particle Compound)

Grey color. Double components. Reinforce epoxy filled with ceramic beads and silicon carbide. For rebuilding and protecting equipment worn by big articles, such as pipe, pump housing, impeller and so on.

Package size: 500g/set Order number: 221801

TS226 Abrasion Resistant Coating (Fine Particle Compound)

Grey color. Double components. Micro-alumina ceramic bead filled epoxy. Renews worn surfaces fast, reducing downtime to put equipments back in service. For rebuilding and protecting equipments worn by fine particles, such as scrubbers, ash handling systems, pipe elbows and chutes.

Package size: 2kg/set Order number: 222606
Package size: 10kg/set Order number: 22260302

TS228 Abrasion Resistant Coating (Hard Sliding)

Grey color. Double components. Reinforce epoxy filled with large ceramic beads and fine alumina carbide filled epoxy for maximum protection against hard sliding abrasion, such as screen, slurry pump, sorting machine and screw conveyors.

Package size: 2kg/set Order number: 222806
Package size: 10kg/set Order number: 222802

TS236 Fast-curing Wear Resistant Coating (Low Temperature Fast-curing)

Grey color. Double components. Super hard ceramic and wear resistance flour filler epoxy. Low temperature curable abrasion resistant compound. Excellent adhesion to metal, ceramic and concrete surfaces. Protects against fine particle abrasion.

Package size: 500g/set Order number: 023601 Package size: 10kg/set Order number: 023602

TS238 Fast-curing Wear Resistant Coating (Low Temperature Fast-curing)

Grey color. Double components. Super hard ceramic and wear resistance coarse filler epoxy. Low temperature curable abrasion resistant compound. Excellent adhesion to metal, ceramic and concrete surfaces. Protect against large particle abrasion.

Package size: 10kg/set Order number: 023802 Package size: 500g/set Order number: 023801

TS246 High temperature Wear Resistance Coating

Double components. Super hard ceramic and wear resistance fine filler epoxy. Designed for abrasion resistance at high temperature up to 250 °C.

Package size: 500g/set Order number: 024601 Package size: 10kg/set Order number: 024605



Chute Repairing



Coal Feeder Side Panel Repairing



Anti-abrasion Coating

TS256 Brushable Wear And Corrosive **Resistance Coating**

White color. Low odor, double components, the moderate epoxy viscosity can be applied by brush which provides a high gloss, low friction coating to protect against turbulence, abrasion and cavitation.

Package size: 1kg/set Order number: 22560202 white Package size: 1kg/set Order number: 22560302 gray Package size: 1kg/set Order number: 22560402 blue Package size: 1kg/set Order number: 22560602 yellow



Physical Properties

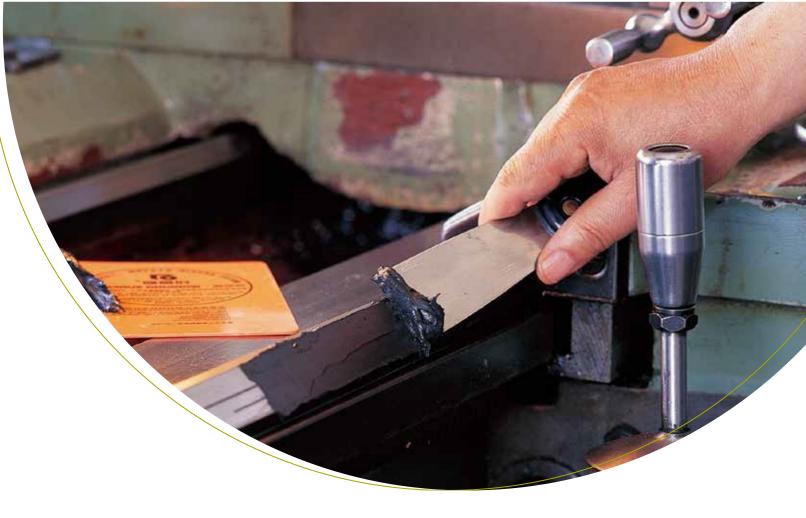
Product code	Color	Specific graviry (g/cm³)	Mix ratio by weight (A:B)	Mix ratio by volume (A:B)	Working time (min)	Compressive strength (MPa)	Tensile strength (MPa)	Shear strength (MPa)	Flexural strength (MPa)	Fully cured time (h)	Temperature range (°C)
TS215	Black	1.85	6 : 1	4 : 1	65	125.0	36.0	19.0	75.0	24	-60∼150
TS216	Grey	2.43	8 : 1	4 : 1	65	112.0	32.0	14.0	45.0	24	-60~160
TS218	Grey	2.43	8 : 1	4 : 1	65	115.0	30.0	6.0	73.0	24	-60~160
TS226	Grey	2.05	4 : 1	3.5 : 1	80	95.0	30.0	10.0	62.0	24	-60~160
TS228	Grey	2.37	3 : 1	2.8 : 1	80	97.0	25.0	5.0	60.0	24	-60~160
TS236	Grey	1.84	2.5 : 1	2.2 : 1	30	87.0	36.0	18.0	42.0	18	-60~120
TS238	Grey	2.15	2.3 : 1	2 : 1	30	86.0	-	-	53.4	18	-60∼120
TS246	Black	2.29	2.2 : 1	2.2 : 1	180	120.0	38.0	12.0	60.6	Room temprature 24h+100 °C Thermal insulation 3h	-25~250
TS256	White	1.59	4.5 : 1	3 : 1	30	100.0	36.0	28.0	-	24	-60∼100

Test condition: temperature 23±2 °C; Relative humidity 50±5%

* When the temperature is below 15 °C, some heating measures should be adopted; or the relevant curing time should be extended

** When mix volume is more than 200g, the working time will be shorter

*** Above data is typical



Low Friction Coating & Fixture Potting

TONSAN Low Friction Coatings and Fixture potting materials are based on specially formulated epoxy resins with the finest filler combinations. Suitable for coating and fixture of slide fitting surfaces.

Properties

- Magnify the joint area between rail surface and substrate Self-lubricated Good creeping resistance
- High strength combination with metals, excellent impact resistance
 Low shrinkage rate
- Conform to JB/T3578-2007 General technical rules for epoxy coating material on sliding lead-rail
- Conform to JB/T3579-2007 General specification rules for epoxy coating sliding lead-rail

TS311 Low Friction Rebuilding Putty

Black color. Double components, putty, unique low friction epoxy, encapsulated with blend of lubricating and abrasion resistant fillers. With excellent self-lubrication and abrasion resistance after curing. Recommended for rebuilding scored slid rail, gouged hydraulic rams and loose bearing housings.

Package size: 500g/set Order number: 231101

TS312 Low Friction Coating

Dark grey. Double components, low viscosity, good fluid ability, self-lubrication. Can be machined after curing. Suitable for making scored slid ways, gouged hydraulic rams and loose bearing housings with the method of rubber injecting.

Package size: 400g/set Order number: 231221
Package size: 1kg/set Order number: 231222

TS316 Low Friction Coating

Dark grey. Double components, medium viscosity, non-flagging epoxy compound modified with lubrication and abrasion resistant fillers. Good adhesion to metals, wear resistant and high dimensional stability. Recommended for duplicate-in-place slide rail coating for large and heavy machineries.

Package size: 6kg/set Order number: 231601

Package size: 1kg/set Order number: 231602

TS353 High Strength Fixture Coating

Grey color. Double components, flowable, high pressure resistance. A pourable epoxy compound that cures at room temperature form an extremely tough and durable solid. Reach high precision without machining. Apply to highly precision assembly of bearing elements, bushings, ping guides and machine parts. Package size: 500g/set Order number: 035301

TS355 High Precision Fixture Coating

Grey color. Double components, good flowability, high pressure resistance. Suitable for precisely connecting and fixture of structure components with small gaps. Apply to adjusted gluing and aligning machine tool column, bed connection and coaxial fixture.

Package size: 500g/set Order number: 035501

TS365 Marine Apoxy Gaske

Double components, perfusion type epoxy compounds containing inert filler. Excellent heat resistance, impact resistance and compression resistance after curing, self-extinguishing. Suitable for all kinds of equipment installation location of the vessel.

Package size: 8kg/set Order number: 23650202

TS99 Filler Adhesive

Blue color. Double components, good fluidability, low shrinkage rate, excellent pressure resistance. Suitable for filling great clearances of equipment, such as crusher, ball milling machine.

Package size: 20kg/set Order number: 09921200



Physical Properties

Product code	Color	Specific graviry (g/cm³)	Mix ratio by weight (A:B)	Working time (min)	Compressive strength (MPa)	Shear strength (MPa)	Hardness (Shore D)	Friction coefficient	Friction width (mm)	Friction rate (mm³/N·m)	Cured time for machining (h)	Temperature range (°C)
TS311	Black	1.56	5 : 1	40~70	100.0	21.0	82	0.030	1.68	2.4x10 ⁻⁸	16	-60∼120
TS312	Dark grey	1.34	9 : 1	50~70	100.0	21.0	80	0.019	1.60	4.79x10 ⁻⁸	24	-60~120
TS316	Dark grey	1.53	7 : 1	50~70	98.0	20.0	81	0.032	1.80	1.42x10 ⁻⁸	24	-60∼120
TS353	Grey	2.00	12 : 1	60~90	150.0	18.0	82	-	-	-	24	-60~120
TS355	Grey	1.90	12 : 1	60~90	120.0	18.0	80	-	-	-	24	-60~160
TS99	Blue	1.75	15 : 1	10~20	115.0	20.0	80	-	-	-	12	-60∼120

Test condition: temperature 23 \pm 2 $^{\circ}$ C; Relative humidity 50 \pm 5%

* When the temperature is below 15 °C, some heating measures should be adopted; or the relevant curing time should be extended ** When mix volume is more than 200g, the working time will be shorter

*** Above data is typical

Product code	Specific graviry (g/cm³)	Compressive strength(MPa)	Modulus of elasticity in compression (MPa) ISO 604	Barcol hardness ASTM D2583	Distortion temperature (°C)ISO 75-2	Tensile strength (MPa)ISO 527-2	Modulus of elasticity in tensile(MPa) ISO 527-2	Burning rate (mm/min) ASTM D635	Impact strength (kJ/m²) ISO 180	Water absorption (ISO 175,23°C)	Oil absorption ISO 175,CD40 engine oil,23°C)	Oil absorption ISO 175,CD40 engine oil,23°C)
TS365	1.78	156	6300	45~50	98	54	8470	0	2.8	0.267%	0.039%	0.033%

Adhesive Volume

Product code	TS311	TS312	TS316	TS353	TS355	TS365	TS99
Standard package	500g/set	400g/set	6kg/set	500g/set	500g/set	8Kg/set	20kg/set
Volume(g/cm³)	312	299	3922	250	263	4500	11429



Erosion Resistant Polymers

By combining an unique blend of inorganic chemical resistant reinforcing agents with a radically new, densely crosslinked polymer, TONSAN Erosion Resistant Polymers show excellent resistance to various acids, solvents and alkalis. Provide outstanding protection for metal surfaces subjected to erosions.

Properties

- Wide range chemical resistance Easy to operate, brushable and paintable
- Penetration resistance, no falling off
 Smooth surface, good erosion and gas erosion resistance

TS406 Erosion Resistance Coating

Green color. Double components, low viscosity, brushing, excellent acid and alkaline resistance. Designed for rebuilding corroded pumps, valves, fans, heat exchanger, tanks and vessels.

Package size: 500g/set Order number: 240601

TS416 Erosion Resistance Putty

Black color. Double components, putty, excellent acid and alkaline resistance. Designed for rebuilding corroded pumps, valves, fans, heat exchanger, tanks and vessels.

Package size: 250g/set Order number: 241601

TS426 Erosion Resistance Coating

Blue color. Double components, low viscosity, brushing, excellent medium resistance. Provides a smooth, protective battier against erosion and corrosion.

Package size: 6kg/set Order number: 242601

Package size: 500q/set Order number: 242603

TS436 Anti-acid Coating

Black color. Double components, excellent acid resistance. Suitable for repairing erosion/corrosion of electrolyzer, water treating system, oil tanks.

Package size: 500g/set Order number: 243602

TS476 Impact And Erosion Resistance Coating

Blue color. Double components, low viscosity, brushing. Using the epoxy toughening technology. Suitable for being used under the condition of vibration, temperature -alternating or impact.

Package size: 500g/set Order number: 24760202

TS496 Anti-inorganic Acid Coating

Dark blue. Double components, good inorganic acid resistance ability, with excellent corrosion resistance to dilute and some dense acid, 100% solid content and environment friendly coating.

Package size: 500g/set Order number: 049601

RC-701 RC-702 RC-703 High Temperature Ceramic Resin

Solvent-free, environmental-friendly and safe. Excellent acid resistance. Easily applied. Suitable for conditions under serious acid corrosion in thermal power, metallurgy and petrochemical industry.

RC-701 Prime coating Package size: 8kg/set Order number: 07010208 RC-702 Intermediate coating Package size: 10kg/set Order number: 07020202 RC-703 Surface coating Package size: 10kg/set Order number: 07030202



Physical Properties

Product code	Color	Specific graviry (g/cm³)	Mix ratio by weight (A:B)	Mix ratio by volume (A:B)	Working time (min)	Compressive strength (MPa)	Tensile strength (MPa)	Shear strength (MPa)	Flexural strength (MPa)	Hardness (Shore D)	Cured time for operation (h)	Temperature range (°C)
TS406	Green	1.68	5 : 1	4 : 1	30~45	110.0	47.0	19.0	61.0	76	72	-60∼150
TS416	Black	1.63	5 : 1	4 : 1	30~45	110.0	44.0	19.0	65.0	80	72	-60∼150
TS426	Blue	1.52	5 : 1	3.5 : 1	45~60	85.0	40.0	20.0	50.0	73	72	-60∼120
TS436	Black	1.40	10 : 1	11.5 : 1	15~35	105.0	8.0	15.0	51.0	75	168	-60∼150
TS476	Blue	1.54	5 : 1	3.5 : 1	30~50	70.0	47.0	24.0	24.0	65.0	32.0	-60∼150
TS496	Dark blue	1.38	3 : 1	2.5 : 1	120	100.0	37.0	18.0	50.0	78	120	-60~100
RC701	Black	1.15	3:1	2.5:1	15~25	80.0	70.0	28.0	-	80	96	-50~150
RC702	Blue	1.45	3:1	2.8:1	15~25	100.0	65.0	27.0	-	80	96	-50~150
RC703	Black	1.51	3:1	3.5:1	15~25	100.0	65.0	27.0	-	80	96	-50~150

Chemical Resistance

Product code	Acid solution					А	lkali solutic	on		Others				
GoodAveragePoor	10%(70°C)H25O4	10% H ₂ SO ₄ Room temp.	10% H ₃ PO ₄ Room temp.	10% HNO3 Room temp.	10%(70°C)NaOH	10% NaOH Room temp.	40% NaOH Room temp.	10% NaCI	10% Na2CO3	Alcohol Room temp.	Acetone Room temp.	Kerosene Room temp.	Toluene Room temp.	Trichloro ethane
TS406	0	0	0	0	0	0	0	0	0	0	×	0	0	0
TS416	0	0	0	0	0	0	0	0	0	0	0	0	0	×
TS426	0	0	0	0	0	0	0	0	0	0	×	0	0	0
TS476	0	0	0	0	0	0	0	0	0	0	×	0	0	0
RC-702	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RC-703	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Test condition: temperature 23±2 °C; Relative humidity 50±5%

* When the temperature is below 15 °C, some heating measures should be adopted; or the relevant curing time should be extended

** When mix volume is more than 200g, the working time will be shorter

^{***} Above data is typical



Emergency Repair

TONSAN Emergency Repair Products are fast curing and applied for repairing, plugging of leaking pipes, tanks or damaged equipments. It can cure rapidly even under most severe conditions.

Properties

- Suitable for on-site emergency repair and plugging Fast curing, suitable for various substances
- Suitable for using in different weather conditions, even under low temperature
- Can be used under conditions with oil or water.

TS518 Emergency Repair Putty

Grey color. Double components, putty, high strength and good flexibility, curing in 5 minutes under normal temperature. Suitable for emergency repair of pipes and valves.

Package size: 250g/set Order number: 251801

TS528 Emergency Repair Putty

White color. Double components, suitable for oil surface, fast curing and fixture under low temperature. Applied for emergency repair to electrical transformers, oil tanks, oil pipes and flanges. (Not suitable for copper components repairing)

Package size: 504g/set Order number: 052801

TS626 Wet-surface Repair Putty

Brownish red. Double components, putty with high performance for repairing equipment in wet and low temperature condition (more than 5 °C). Applied for repairing pipes, valves, pump coating and body shield in wet condition.

Package size: 500g/set Order number:262601

1720 Fiberglass Band

Dewaxing and toughening treated. Designed for wrapping and strengthening the cracks of pipe or mechanical parts. Applied adhesion to the 1720 Fiberglass band before wrapping.

Package size: 50mmX40mm/set Order number: 172001 Package size: 25mmX40mm//set Order number: 172002

Pressure Plugging Steel Stick

Curing in 3-5 minutes, knead well by hands and then fill in the gap or cavern. Applied for plugging pipes, valves, tanks and body shield under 0.3 Mpa pressure.

Package size: 114g/set Order number:058201

Emergency Package

Including 6 products in the package such as pressure plugging rubber stick, oil surface emergency repair putty, fiberglass band, applying tools etc. Suitable for plugging pressure and oil on the spot. It is the necessary supplies in maintenance site.

Package size: set Order number: 058101 Package size: set Order number: 058102

Emergency Repair Box

Delicate aluminum alloy package with code, with muti-functional repair tools and 19 frequently used TONSAN products inside. Suitable for emergency repairing, plugging, sealing on the spot. Its a masterwork for repairing in the industries such as factory, workshop, automobile transport, vessel transport and so on.

Package size: set Order number: 058103

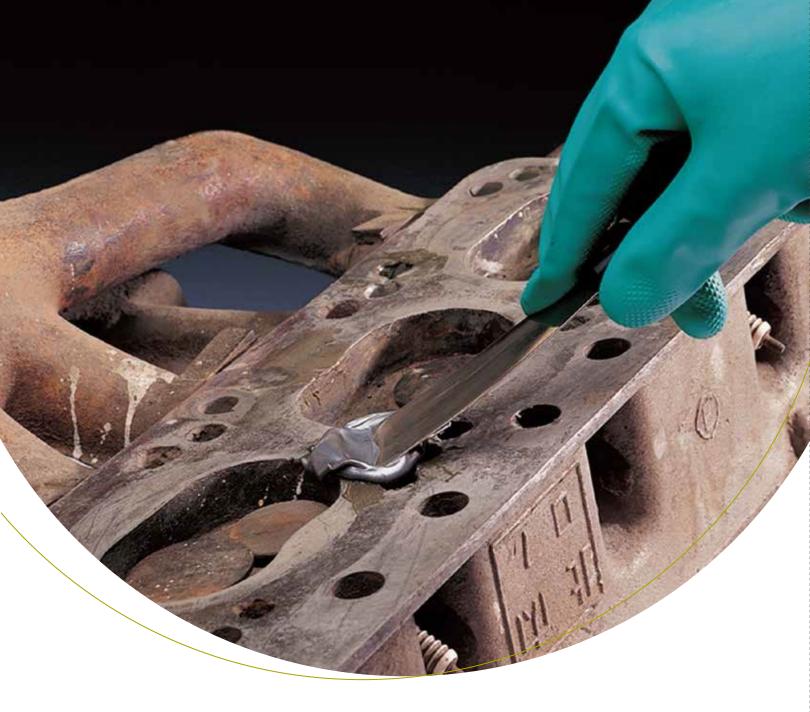


Physical Properties

Product code	Color	Specific graviry (g/cm³)	Mix ratio by weight (A:B)	Mix ratio by volume (A:B)	Working time (min)	Tensile strength (MPa)	Shear strength (MPa)	Flexural strength (MPa)	Temperature range (°C)
TS518	Grey	1.70	1 : 1	1:1	3~5	-	7.3/12.0/13.0/-	68.0	- 60∼120
TS528	White	1.00	1 : 1	1 : 1	3∼5	35.0	15.8/18.1/-/-	-	- 60∼120
TS626	Brownish red	1.83	6 : 1	3.5 : 1	5∼10	-	-/0.1/1.7/4.4	65.0	- 60∼150
Fast steel stick	Grey	2.19	-	-	3~5	-	12.5	33.9	- 60∼149

- Test condition: temperature 23±2 °C; Relative humidity 50±5%

 * When the temperature is below 15 °C, some heating measures should be adopted; or the relevant curing time should be extended
- ** When mix volume is more than 200g, the working time will be shorter
- *** Above data is typical



High Temperature Sealing & Repairing

TONSAN High Temperature Sealing and Repairing Putties are poly materials or inorganic materials filled with ceramics and metals. Applied for sealing, repairing and bonding under high temperature.

Properties

- High temperature resistance High strength combination with substrates
- Stable temperature resistance for a long time, cater to high temperature working condition
- Suitable for sealing, repairing, bonding with different requirements

TS737 High-temp Repair Putty

Grey color. Double components, high temperature resistance up to 200 °C, high strength retension rate under high temperature for a long time. Designed for rebuilding equipment abrasion, scratch, corrosion at high temperature.

Package size: 250g/ set Order number: 073701

TS747 High-temp Sealing Putty

Brownish red. Double components, a high performance silicone sealant, resists high temperature up to 350 °C. Excellent flexibility, high temperature sealing performance and electric insulation. Applied for sealing or repairing equipment at high temperature.

Package size: 250g/ set Order number: 074701

TS757 High-temp Sealing Putty

Grey color. Double components, high sealing performance polymer compounds, resists high temperature up to 300 °C. Formulated for sealing or repairing of oil, steam, acid and alkali equipment. Package size: 500g/ set Order number: 075701

TS767 High-temp Putty

Greyish white. Double components, an inorganic ceramic putty resists high temperature up to 1200 °C. Recommended for repairing of metal, ceramic in high temperature, such as high-temp pad, steel mold or others.

Package size: 250g/ set Order number: 076701



Physical Properties

Product code	Color	Specific graviry (g/cm³)	Mix ratio by weight (A:B)	Mix ratio by volume (A:B)	Working time (min)	Compressive strength (MPa)	Shear strength (MPa)	Flexural strength (MPa)	Curing condition	Temperature range (°C)
TS737	Grey	1.51	2 : 1	2 : 1	100~150	150.0	20.0	75.0	Room temp. cure2h→100°C Thermal insulation2~3h	-60∼200
TS747	Brownish red	1.07	20 : 1	-	120~150	-	2.0	-	Room temp. cure 3days	-80∼350
TS757	Grey	1.35	5 : 1	-	60~90	60.0	7.0	15.0	Room temp. cure2h→100°C Thermal insulation2~3h	-60∼300
TS767	Greyish white	1.01	2 : 1	-	15~20	-	23.0 (Sleeve joint)	-	Room temp. cure2h→100°C Thermal insulation2~3h→150°C Thermal insulation2h→Room temp.	-60∼1200

Test condition: temperature 23 $\pm2\,^{\circ}$ C; Relative humidity 50 $\pm5\%$

- ** When mix volume is more than 200g, the working time will be shorter

*** Above data is typical



Rubber Bonding & Repairing

TONSAN Rubber Bonding and Repairing products are designed to bond conveyor belts, with good performance after curing. Curing fast at room temperature with high initial strength.

Properties

- Fast curing, shorten repair time
 High strength bonding
- Peeling strength higher than combination strength between rubber and fabric

TS801 Conveyor Rubber Bonder

Yellow green. Double components, high strength, good flexibility adhesive. Applied for self-adhesion or bonding between conveyor, rubber, leather. Peeling strength at bonding area is higher than combination strength between rubber and fabric.

Package size: 550g/ set Order number: 080101
Package size: 1Kg/ set Order number: 080105

TS808 High Strength Rubber Bonder

Light green. Double components, excellent flexibility, high initial bonding strength, fast curing, can get high strength in wet environment. Used for conveyor fast bonding.

Package size: 550g/ set Order number: 080801
Package size: 1Kg/ set Order number: 08080503

TS808FR High Strength Flaming Retardant Rubber Bonder

Light green. Double components, flaming retardant, high initial bonding strength, excellent flexibility, fast curing. Withstand high temperature heating. Can be used for conveyor bonding under low temperature. Package size: 605g/set Order number: 280801

TS809 High-temp Flaming Retardant Conveyor Rubber Bonder

Yellow green. Double components, flaming retardant, high initial bonding strength, excellent flexibility. Applied for conveyor belt bonding, repairing and all types of rubber bonding assemblies. Peeling strength at bonding area is higher than combination strength between rubber and fabric

Package size: 605g/set Order number: 080901 Package size: 1.1kg/set Order number: 080905

TS853 Rubber Metal Bonder

Black color. Double components, excellent flexibility, high strength, using with product 1753 primer will get better effect. Mainly used for industrial roll plastic bags, and the bonding and self-adhesion of rubber, metal, leather and ceramics.

Package size: 1100g/ set Order number: 08530205

1753 Rubber Metal Bonding Primer

One component, viscous liquid. Significantly increase the adhesive strength between TS853 and metal.

Package size: 750g/set Order number: 17530205

TS859 Rubber Repairing Belt

With EP strengthen layer and A sulfide layer inside, good abrasion resistance and tensile strengthen, anti-static, suitable for longitudinal scratches, edge damage, and tear of repair for the rubber conveyer belt, and sealing of cold vulcanization for rubber conveyor belt.

 Package size:
 88/mm*150mm*4.3mm
 Order number:
 08591507

 Package size:
 10000mm*150mm*4.3mm
 Order number:
 08591508

 Package size:
 10000mm*220mm*4.3mm
 Order number:
 08592208

 Package size:
 10000mm*300mm*4.3mm
 Order number:
 08593008

TS866 Hot Vulcanization Core Glue For Fabric Belt

Suitable for the hot vulcanization bonding of fabric conveyor belt used in metallurgy, mine, port industries. Package size: 10kg/roll Order number: 08660202

TS919 High Strength Rubber Rebuilder

Black color. A double components polyurethane compound. Excellent abrasion resistance, good flexibility. Designed for belt joint bonding and repairing. Package size: 500g/ set Order number: 091901

TS919N High Strength Rubber Rebuilder

Black color. A double components polyurethane compound. Superior fast curing speed, good curing ability under low temperature. Easy to operate with mix ratio 4:1. Designed for belt joint bonding and repairing.

Package size: 500g/ set Order number: 091911

TS921 Fast Rubber Rebuilder

Black color. A double components polyurethane compound. Excellent abrasion resistance, good flexibility. Designed for belt joint bonding and repairing. It can also be used for bonding and sealing of rubber, metal, glass and concrete.

Package size: 420g/ set Order number: 092101

1783 Pully Lagging Board

With CN layer, good adhesive strength, excellent abrasion resistance, suitable for all kinds of roller protection.

Package size: 10000mmx628mmx12mm Order number: 17830612 Package size: 10000mmx628mmx15mm Order number: 17830615

TS867 Hot Vulcanization Core Glue For Steel Wire Belt

Suitable for the hot vulcanization bonding of steel wire conveyor belt used in metallurgy, mine, port industries. Package size: 10kg/roll Order number: 08670202

TS868 Hot Vulcanization Cover Glue

Used for covering the core glue, good wear and abrasion resistance, suitable for the hot vulcanization bonding of conveyor belt used in metallurgy, mine, port industries. Package size: 10kg/roll Order number: 08680302

1781 Tungsten Steel Grinding Disc

Designed for grinding rubber, to improve the surface roughness, greatly improve the effect of bonding. High grinding speed and is unmatched by ordinary steel wire wheel.

Package size: Φ 150x22mm K18 Order number: 178101 Package size: Φ 100x16mm K18 Order number: 178102

1748 Rubber Primer

Primer specialized for double components polyurethane. It can enhance the bonding strength between Polyurethane rubber rebuilder and rubber. Package size: 100ml/bottle Order number: 174801

1749 Activator

Activator for TS919 and TS919N rubber rebuilder, increase the curing speed at low temperature.

Package size: 50g/bottle Order number: 174901



Physical Properties

Product code	Color	Specific gravity (g/cm³)	Mix ratio by weight (A:B)	Working time (min)	Peel strength (N/cm)	Tensile strength (MPa)	Tear strength (KN/m)	Breakdown voltage (KV/mm)	Elongation at break (%)	Cured time for light load (h)	Cured time for fu ll l oad (h)	Max working temperature (°C)
TS801	Yellow green	0.89	10 : 1	40	80.0	-	-	-	-	2	8	80
TS808	Light green	0.88	10 : 1	60	150.0	-	-	-	-	1	4	80
TS808FR	Light green	1.30	10 : 1	60	135.0	-	-	-	-	1	4	80
TS809	Yellow green	1.30	10 : 1	40	120.0	-	-	-	-	2	4	150
TS853	Black	1.37	10 : 1	120	80·0 (metal-rubber)	-	-	-	-	12	24	85
TS919	Black	1.10	20 : 1	10	-	15.0	56.0	17.0	350	12	24	85
TS919N	Black	1.10	4 : 1	9	-	28.0	75.0	17.0	600	6	16	85
TS921	Black	1.11	-	2	-	10.0	-	17.0	280	2	4	85

Test condition: temperature 23±2 °C; Relative humidity 50±5%

- When the temperature is below 15 °C, some heating measures should be adopted; or the relevant curing time should be extended
 When mix volume is more than 200g, the working time will be shorter
- *** Above data is typical

^{****} Slight color difference won't effect bonding strength



Accessories

TONSAN Accessory products can guarantee that TONSAN engineering adhesives demonstrate their best performances, making ideal repairing, bonding, sealing, locking, rust moving and mold releasing.

Properties

■ Easy to operate ■ Reasonable design ■ Convenient storage

1731 Mould Release Agent

Specially used for low friction coating, secure that the cured adhesive layer will separate with substrates. Can be sprayed on the surface that needs no bonding to remove remained adhesive.

Package size: 300ml/aerosol can Order number: 173101

1740 Rust Remover

For removing rust on iron and steel. Effectively dissolve the obstinate oxide, sediment and contamination on metal.

Package size: 250g/bottle Order number: 174001

1750 Bolt Loosener

Looses rusty fastener and other retaining components, prevent metal parts from rusting, lubricate mechanical parts and effectively protect metal mold.

Package size: 400ml/aerosol can Order number: 175001

PR-90 Rust Preventer

Provide long-term comprehensive functions such as prevent rust, dissolve rust, dehumidify and lubricate up to 90 days, contain anticorrosion component, can protect metal surface from corrosion.

Package size: 400ml/aerosol can Order number: 175201

1755EF High Performance Cleaner (Environment Friendly)

Environment friendly, no pollution to the atmospheric environment, flameless, effectively clean oil and dirt on the surface, enhance the bonding strength between metal and substrates.

Package size: 400g/aerosol can Order number: 17531

1755EF High Performance Cleaner (Low Odor)

Low odor, easy to volatilize, environment friendly, flameless, can effectively clean oil and dirt on the surface, enhance the bonding strength between metal and substrates.

Package size400 g/aerosol can Order number: 1756 1

1767 Silver-based Anti-seize

Silver grey, low odor, applied for anti-seizing of metal joint surfaces under high temperature, also prevent galling and corrosion of chains, fasteners, gears and shafts in vessels or oil refineries, especially for stainless steel substance. Operating temperature can reach to 1000°C.

Package size: 230g/bottle (brushable) Order number: 176711

1769N Molybdenum Lubricant

Black. Paste. Molybdenum based lubricant, good extreme pressure performance, great low temperature application performance, can be used for new machine running-in lubricating and bolt lubricating.

Package size: 1kg/set Order number: 17690302

1771 Nickel-based Anti-seize

Grey color, low odor, paste-like primer contents no copper. Applied for anti-seizing, anti-galling and anti-corrosion of chains, fasteners, gears and shafts in vessels or oil refineries, especially for stainless steel substance. Operating temperature can reach to 900°C.

Package size: 230g/bottle Order number: 177101

1772 Bolt Lubricant

Dark grey. Paste. Medium to high friction coefficient. Especially suitable for big bolt lubricating. Package size: 1kg/set Order number: 17720202

1790 Gasket Cleaner

Removes residual sealant, oil, painting and dirt. No corrosion to metal. Not suitable for plastic and thetic fibre

Package size: 400ml/ aerosol can Order number: 179001





Dispensing Equipments

Together with integrate technical solutions, TONSAN also supply matching dispensing tools to increase production efficiencies, assembly reliability.

Properties

Inprove dispensing quality and efficiency

R**■**uce labor intensity

Ey operation H

h precision

Dispensers:



310ml Pneumatic Dispenser For Cartridges

Order number:171102



400ml Handheld Dispenser For Double Components Sealant

Order number:171105



600ml Pneumatic Dispenser For Sausages

Order number:171110



310ml Handheld Dispenser For Cartridges

Order number:171104



50ml Handheld Dispenser For Double Components Sealant

Order number:171106



400ml Pneumatic Dispenser For Sausages

Order number:171123



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Important Notice to Purchaser:The technical parameters provided in the manual will vary with di⊠erent operating conditions (temperature, humidity, material, etc.) ,only for reference, not as a product acceptance criteria