

BORN² BOND™



Anaerobic Adhesives



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OUR VISION
Collaborate and innovate to create smart adhesives that are safer, more flexible, efficient and responsive to the dynamic challenges of our environment.

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Introduction to **Bostik**

'A global leader in smart adhesives'

For over a century, we have developed smart adhesive solutions that touch and improve people's daily lives. Customers worldwide use our bonding systems in countless applications and across diverse sectors, including industrial manufacturing, construction, electronics, automotive, medical and packaging.

Our products are often invisible to the end-user, but every day they make a significant contribution to the creation of a safer, more efficient and sustainable world.

We are committed to innovation and continually invest in technological advances in our drive to develop ever more capable and adaptable 'smart' adhesives. This commitment is supported by our parent company, Arkema, a globally renowned manufacturer of specialty chemicals and advanced materials.

Through Arkema, we have access to a worldwide infrastructure and full supply chain, including innovative raw materials, more sustainable sourcing and energy-efficient production capabilities.

GLOBAL FOOTPRINT

Bostik is one of the world's largest adhesive and sealant companies.

 | **€2.1bn**
worldwide sales

6,000
employees | 

 | **49**
countries

4
R&D centers | 

Adhesive solutions by
ARKEMA
INNOVATIVE CHEMISTRY

NEW ENGINEERING ADHESIVES

As engineering adhesive applications develop, they raise new challenges. These include questions of how to apply adhesives to ever-smaller and more complex items, how to accelerate curing processes and how to reduce waste, all while complying with environmental and health and safety regulations.

In response, we have developed a portfolio of ground-breaking engineering adhesives that focus on 'by-the-dot' bonding applications. These products sit under the **Born2Bond™** brand – this name reflects our purpose and the collaborative bond we have with our customers.

OUR VALUES



INNOVATION



COLLABORATION



SAFETY &
SUSTAINABILITY

DESIGNED FOR USE IN MULTIPLE INDUSTRIES



AUTOMOTIVE



ELECTRONICS



GENERAL
ASSEMBLY



LUXURY
GOODS



MEDICAL
DEVICES



MRO



Anaerobic Adhesives

Anaerobic Adhesives

The **Born2Bond™** high-performance range of anaerobic adhesives has been formulated with sustainability and safety in the workplace in mind. Ideal for fastening and sealing processes including threadlocking, pipe sealing, retaining and gasketing, they offer a more reliable, convenient and cost-effective alternative to traditional mechanical fixings. Excellent resistance to impact, vibration, leakage and corrosion, along with high torque strength make them appropriate in both precision and heavy engineering scenarios. By replacing extensive inventory (such as washers, gaskets, pins, hemp, tapes), they can also help improve efficiency and reduce potential waste.

Delivering on our commitment to create solutions that are safer for users and better for the environment, the adhesives are not solvent based and selected grades are NSF certified. A 'Not-CLP Classified' range carrying a non hazard label (so called 'White Label') is also in development.



REDUCED
INVENTORY



LONG-TERM
RELIABILITY



HIGH
PERFORMANCE

SUSTAINABILITY WITHOUT
COMPROMISING PERFORMANCE

	Mechanical fasteners	Born2Bond™ Anaerobic Adhesives	COMING SOON Born2Bond™ WL Anaerobic Adhesives*
Stock/inventory	Red	Green	Green
Long-term reliability	Red	Green	Green
Ease of application	Green	Green	Green
Versatility of application	Red	Green	Green
Corrosion protection	Red	Green	Green
Vibration resistance	Yellow	Green	Green
Heat and chemical resistance	Red	Green	Green
Sustainability	N/A	Yellow	Green

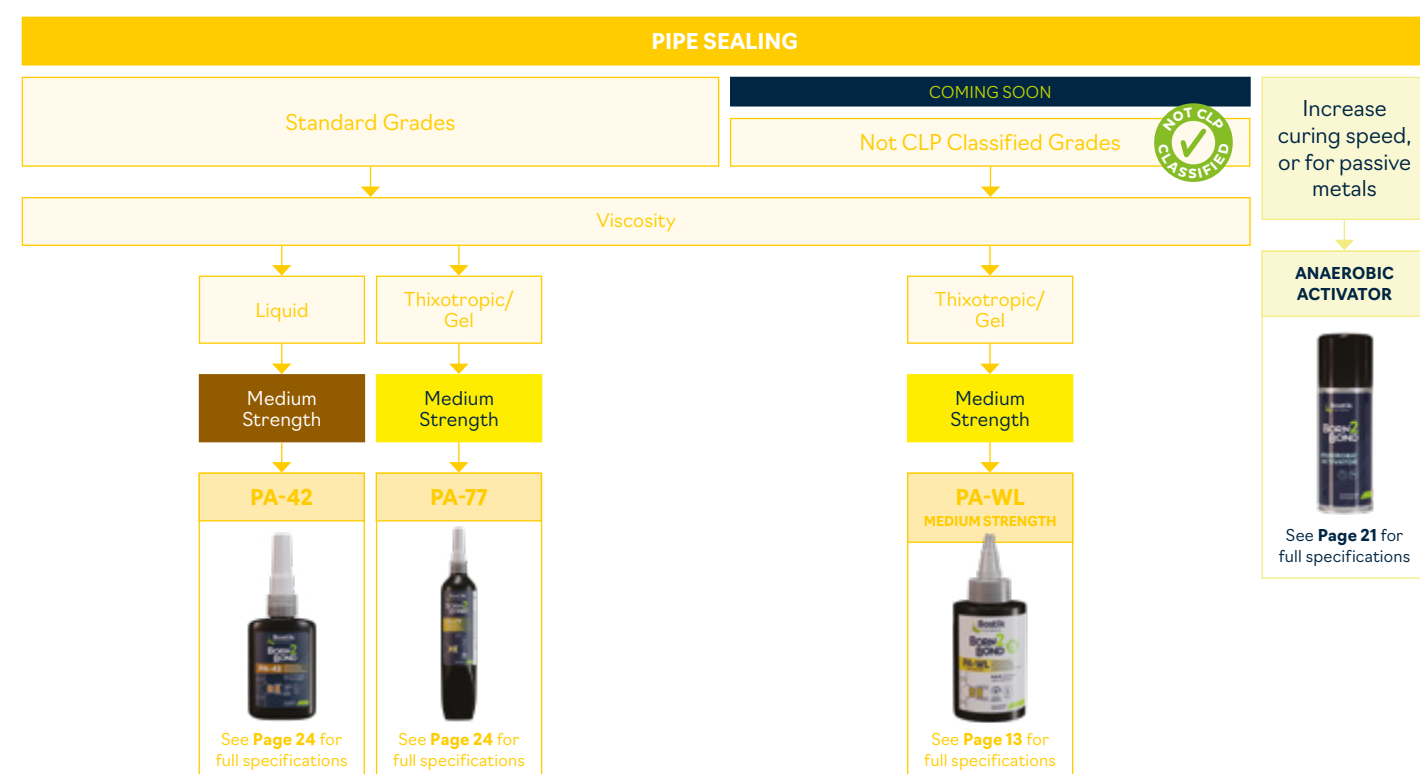
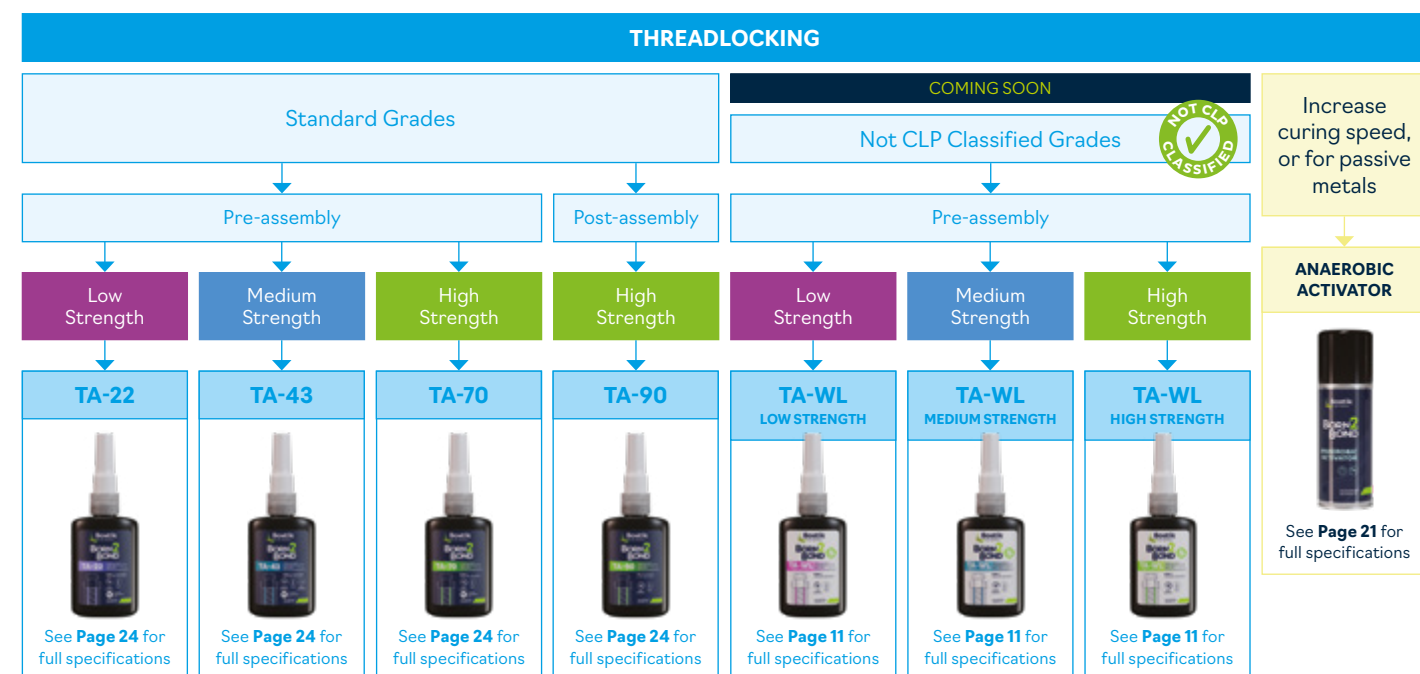
Red Poor Yellow Moderate Green Excellent

* Not classified as a hazardous substance/mixture under the Classification, Labelling and Packaging of substances and mixtures (CLP) Regulation (EC) 1272/2008.

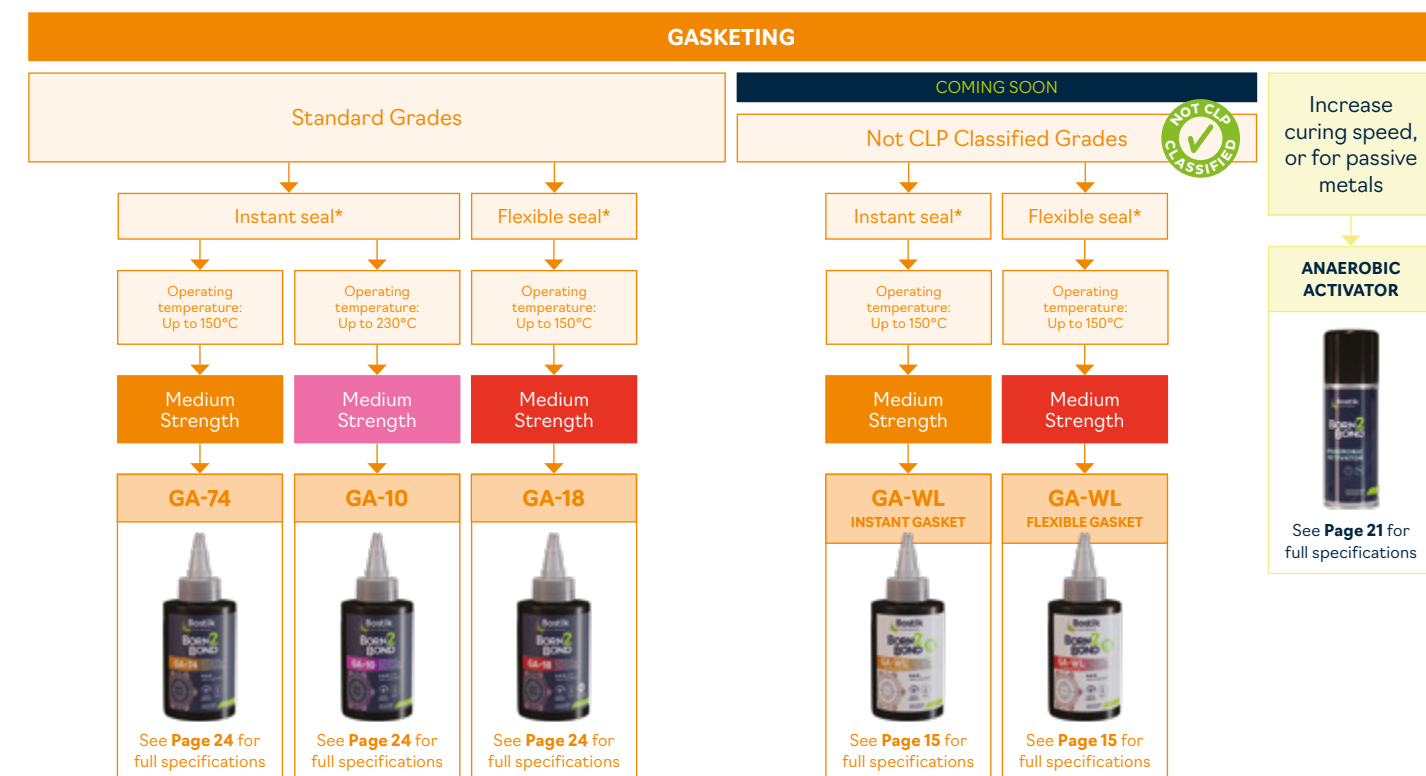


PRODUCT SELECTOR

Please use the **Product Selector** below to identify the right solutions for your bonding requirements.



Product Selector



APPLICATIONS AND INDUSTRIES

Born2Bond™ Anaerobic Adhesives and Service Products are suitable for major applications in target equipment and devices, including:

- Powertrains
- Engines
- Compressors
- Turbines
- Pumps
- Gearboxes
- Centrifuges
- Conveyor belts
- Electric motors
- Pipes and fittings
- HVAC
- And many more...



Born2Bond™ Anaerobic Adhesives and Service Products are used across a variety of MRO industry segments, including:

- Power generation
- Oil and gas
- Transportation
- Water utilities
- Infrastructure
- Refinery
- Petrochemical
- Marine
- Food and beverage
- Aerospace MRO
- Automotive aftermarket
- And many more...



Respect for the world and workplace

We are committed to developing sustainable adhesives and production methods and to protecting the wellbeing of our customers' workforces.

- Low-energy application processes
- Increased user comfort
- 'Not CLP Classified' range coming soon (White Label)
- Ideal for preventative maintenance



THREADLOCKING



THREADLOCKING

'Not CLP
Classified' range
coming soon
(White Label)

MULTIPLE STRENGTHS

UP TO 180°C

OIL TOLERANT*

MULTIPLE VISCOSITIES

Born2Bond™ Threadlocking anaerobic adhesives provide single-component, one-stop solutions for all threadlocking requirements, including preventative maintenance. Eliminating the cost and inconvenience of holding extensive inventory, these liquid adhesives fill and seal all voids to achieve a cohesive connection of metal parts that remains fixed even when subjected to extreme vibrations, temperatures or chemical substances.

FEATURES

- 100% connection – no loosening
- Evenly distribute force
- Vibration resistant
- Corrosion prevention
- Single component
- Variety of viscosities and strengths
- Suitable for active and passive metals

TYPICAL APPLICATIONS

- Mechanical parts assembly
- Machine engineering
- Gear manufacturing
- Engines and powertrains

BENEFITS

- Increased reliability
- Longer component life
- Ease of application
- One bottle meets diverse threadlocking requirements
- Reduced costs
- Reduced storage

Choose the right solution using our
Product Selector on Pages 6/7

TDS and SDS available on request



	TA-22	TA-43	TA-70	TA-90
BASE	Dimethacrylate	Mod. Methacrylate	Dimethacrylate ester	
VISCOSITY (mPa.s)	900-1.500	2.500-3.000	400-600	20-55
FIXTURE TIME	20 min	<15 min	10 min	7 min
BREAKAWAY STRENGTH ON STEEL [ISO 10964]	6 Nm	25 Nm	33 Nm	12 Nm
COLOR	Purple	Blue	Green	Green
TEMPERATURE RANGE	-55 to 150°C		-55 to 180°C	
NSF CERTIFIED	S6			No

*See page 24 for full range


PIPE SEALING




*




PIPE SEALING



MULTIPLE STRENGTHS



UPTO 180°C



MULTIPLE VISCOSITIES

'Not CLP
Classified' range
coming soon
(White Label)

Born2Bond™ Pipe Sealing anaerobic adhesives are a reliable, adaptable solution, suitable for all types of threaded metal pipes and fittings, and both new installations and preventative maintenance. Filling and sealing all voids, these single component adhesives provide 100% surface-to-surface contact, achieving a cohesive, durable connection that will not fail even when subjected to vibration, extreme temperatures or chemical substances. A convenient, cost-effective alternative to conventional sealing alternatives like hemp or PTFE tapes, these adhesives eliminate the need for additional inventory.

FEATURES

- 100% connection – no loosening
- Vibration resistant
- Corrosion prevention
- Single component
- Variety of viscosities and strengths
- Suitable for active and passive metals

TYPICAL APPLICATIONS

- Engines and powertrains
- Pumps and compressors
- Liquid and gas storage
- Hydraulic systems
- Metal pipes and fittings

BENEFITS

- Increased reliability
- Ease of application
- Reduced costs
- Reduced storage requirements

Choose the right solution using our
Product Selector on **Pages 6/7**

TDS and SDS available on request



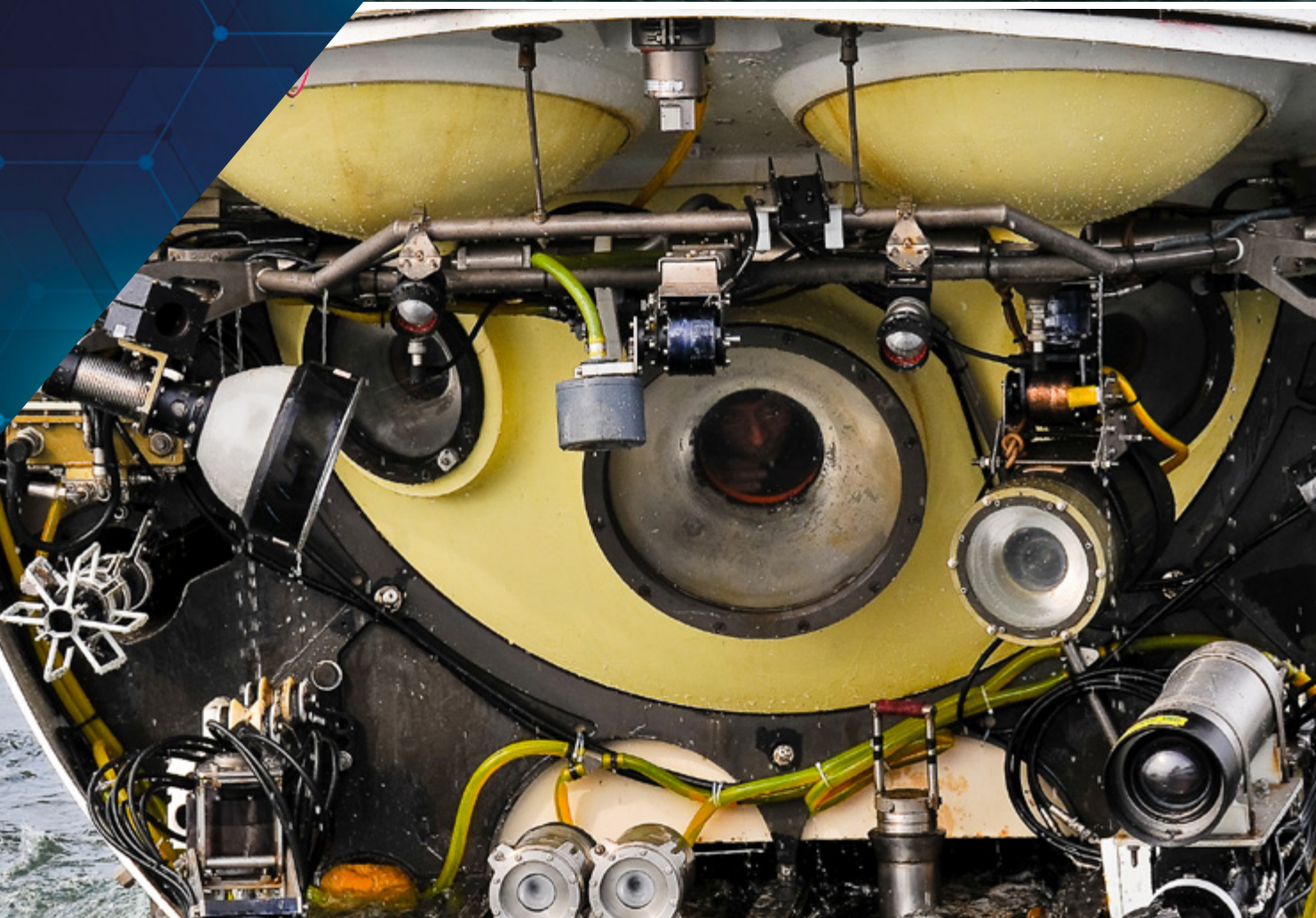
	PA-77	PA-42
BASE	Dimethacrylate ester	
VISCOSITY (mPa.s)	80.000-90.000	400-800
FIXTURE TIME	60 min	10-20 min
BREAKAWAY STRENGTH ON STEEL [ISO 10964]	11 Nm	15 Nm
COLOR	Yellow	Brown
TEMPERATURE RANGE	-55 to 180°C	-55 to 150°C
NSF CERTIFIED	S2	No

See **page 24** for full range

GASKETING



*



GASKETING



'Not CLP
Classified' range
coming soon
(White Label)

Born2Bond™ Gasketing anaerobic adhesives are a single-component, cost-effective alternative to conventional pre-formed gaskets on metal flanges. Flexible, durable and resistant to wear and tear, they can be used during installation or for preventative maintenance. Achieving 100% surface-to-surface contact, the adhesives create a cohesive, durable connection that can withstand vibration, extreme temperatures and exposure to oils, solvents and water. They also offer better stress distribution and, unlike traditional gaskets, do not require any 'bedding-in'.

FEATURES

- Outstanding fatigue strength
- Vibration resistant
- Corrosion prevention
- Prevents sagging and micro-movement
- Higher power transmission
- Single component
- Variety of viscosities and strengths
- Instant and flexible seal options
- Suitable for active and passive metals

BENEFITS

- Increased reliability
- Less machining
- Easy-to-automate assembly
- Reduced costs
- Reduced storage requirements

TYPICAL APPLICATIONS

- Engines and powertrains
- Pumps and compressors
- Storage of liquids and gas
- Gearboxes and transmissions



	GA-74	GA-18	GA-10
BASE	Dimethacrylate ester		Mod. Acrylate
VISCOSITY (mPa.s)	30.000-50.000	200.000-800.000	40.000-140.000
FIXTURE TIME	15-30 min	<12 hr	<12 hr
TENSILE STRENGTH ON STEEL [ISO 4587]	5-8.5N/mm²	>5N/mm²	<5N/mm²
COLOR	Orange	Red	Pink
TEMPERATURE RANGE	-55 to 150°C		-55 to 230°C
NSF CERTIFIED	No	S2	No

Choose the right solution using our
Product Selector on Pages 6/7

TDS and SDS available on request

See page 24 for full range


RETAINING




*




RETAINING




MULTIPLE STRENGTHS



UP TO 230°C



OIL TOLERANT*



MULTIPLE VISCOSITIES

'Not CLP
Classified' range
coming soon
(White Label)

Born2Bond™ Retaining anaerobic adhesives are a cost effective, adaptable alternative or addition to mechanical retaining processes. Capable of bonding all types of cylindrical assemblies, these single-component solutions also seal all metal joints to eliminate the risk of fretting corrosion. They achieve 100% surface-to-surface contact, producing a cohesive, durable connection capable of withstanding vibration, extreme temperatures and chemical substances.

FEATURES

- High power transmission
- Resistance to dynamic loads
- Vibration resistant
- Corrosion prevention
- Single component
- Variety of viscosities and strengths
- Suitable for active and passive metals

TYPICAL APPLICATIONS

- Gear manufacturing
- Machine engineering
- Bearing assembly
- Drive shafts
- Conveyor belts
- Centrifuges
- Turbines

BENEFITS

- Increased reliability
- Extends component life
- Enables more precise, compact design
- Reinforces or replaces machined elements
- Reduces costs

Choose the right solution using our
Product Selector on Pages 6/7

TDS and SDS available on request



	RA-38	RA-03	RA-20	RA-41	RA-48	RA-60
BASE	Urethane Acrylate	Meth-acrylate	Dimethacrylate ester		Urethane Meth-acrylate	Dimeth-acrylate
VISCOSITY (mPa.s)	2.000-3.000	100-150	5.000-12.000	400-800	400-600	Paste
STATIC STRENGTH ON STEEL [ISO 4587]	>25N/mm²	>26N/mm²	>26N/mm²	>6N/mm²	>26N/mm²	>18N/mm²
COLOR	Green	Green	Green	Yellow	Green	Grey
TEMPERATURE RANGE	-55 to 180°C	-55 to 150°C	-55 to 230°C	-55 to 150°C	-55 to 180°C	-55 to 150°C
NSF CERTIFIED	S5		No			

*See page 24 for full range

ANAEROBIC ADHESIVES RANGE

THREADLOCKING

THREADLOCKING PRODUCT RANGE

Born2Bond™ Threadlocking adhesives are formulated in low, medium or high strength and available in 50ml and 250ml bottles, suitable for both manual and automated dispensing.



50ml bottles for
TA-22, TA-43, TA-70 and TA-90

250ml bottles for
TA-22, TA-43, TA-70 and TA-90

PIPE SEALING

PIPE SEALING PRODUCT RANGE

Born2Bond™ Pipe Sealing adhesives are supplied in 50ml and 250ml bottles, suitable for manual and automated dispensing. Manual dispensing-only options are provided by a 50ml accordion or 250ml tube.



50ml bottles for
PA-42

250ml bottles for
PA-42

50ml accordion bottles for
PA-77

250ml tubes for
PA-77

Anaerobic Adhesives Range

GASKETING

GASKETING PRODUCT RANGE

Born2Bond™ Gasketing adhesives are supplied in 50ml (accordion) and 250ml (tube) for manual dispensing processes. A 300ml cartridge option enables both manual and automated dispensing.



50ml accordion bottles for
GA-10, GA-18 and GA-74

250ml tubes for
GA-10 and GA-74

300ml cartridges for
GA-18

RETAINING

RETAINING PRODUCT RANGE

Born2Bond™ Retaining adhesives are offered in 50ml and 250ml bottles, suitable for both manual and automated dispensing. A 50ml accordion is available, suitable for manual dispensing only.

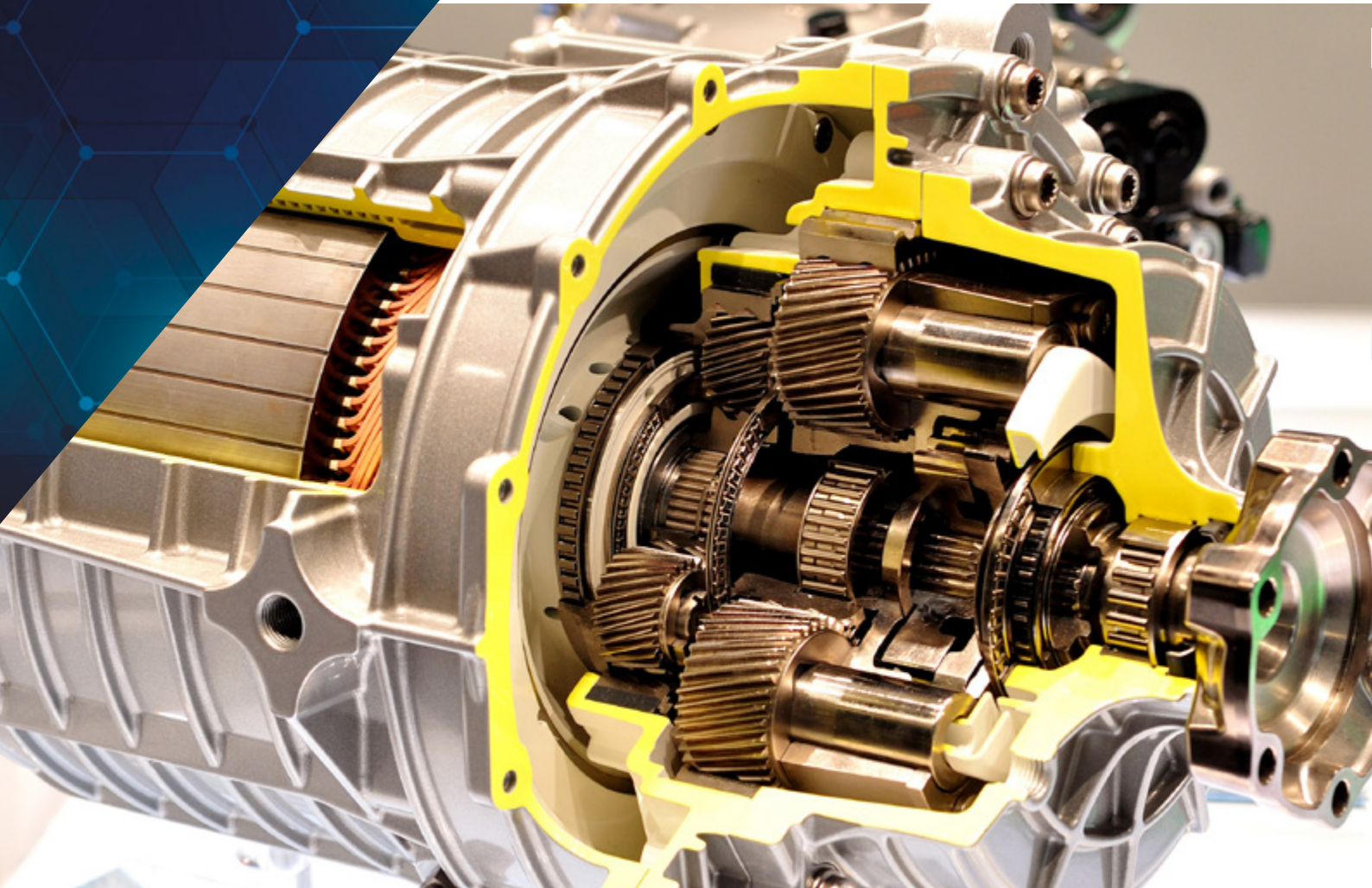


50ml bottles for
RA-03, RA-20, RA-38, RA-41, RA-48

250ml bottles for
RA-03, RA-20, RA-38, RA-41, RA-48

50ml accordion
bottles for RA-60

SERVICE PRODUCTS



SERVICE PRODUCTS

- CLEANING & DEGREASING
- FAST EVAPORATION
- MULTI-SUBSTRATE APPLICATION

To ensure optimal performance of **Born2Bond™** adhesives, we provide a selection of easy-to-use ancillary products for effective surface preparation, faster curing and removal of cured product.

Born2Bond™ Anaerobic Activator is a solvent-based product that accelerates and supports anaerobic adhesive curing on passive metals like stainless steel, chromated metals and zinc. It can also accelerate cure speed in larger gaps and increase bonding strength.

Born2Bond™ Pre-Bonding Cleaner is suitable for cleaning of all kinds of substrates prior to bonding. Solvent-based and supplied in aerosol form, it will easily remove grease, oil, lubricants and other contaminants without leaving any residue.

Born2Bond™ Adhesive & Gasket Remover is easy to apply and creates a foam-like layer, softening old gaskets and cured adhesives for removal within 15 minutes.

- | FEATURES | FEATURES | FEATURES |
|--|--|---|
| <ul style="list-style-type: none">Fast-evaporating with no residueCan be used at low temperatures (<5°C)On-part lifetime of 30 days | <ul style="list-style-type: none">Fast evaporationNo residuesSuitable for multiple substrates including sensitive plastics | <ul style="list-style-type: none">Removes cured gaskets and adhesives within 15 minutesMinimal damage to flanges and surfacesSuitable for multiple substrates |

- | TYPICAL APPLICATIONS | TYPICAL APPLICATIONS | TYPICAL APPLICATIONS |
|--|---|--|
| Stainless steel bolts and shafts, threadlocking, pipe sealing, gasketing, retaining. | Metal and plastic parts, composite materials, flanges, bolts, shafts. | Cleaning of surfaces, flanges, gearboxes, metal housings, pumps. |



BEST-PRACTICE BONDING

Substrate and surface preparation

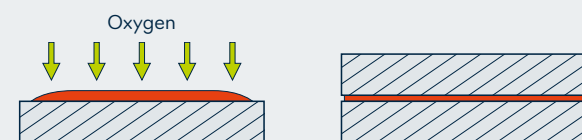
The nature of the substrate and its surface impacts the bondline performance.

- The surface should be cleaned with the appropriate cleaner to eliminate surface contaminants and increase wettability before applying the adhesives and to achieve the best performance.
- For slightly oily surfaces, an oil tolerant product such as **Born2Bond™ TA-43** and **Born2Bond™ RA-03** can be used.
- For cleaning, we recommend **Born2Bond™ Pre-Bonding Cleaner**.
- To remove cured product, we recommend **Born2Bond™ Adhesive & Gasket Remover**.
- Mechanical pretreatment (sanding, grinding, laser etching, etc.) will improve the performance, especially for retaining and gasketing applications.
- The curing speed is dependent on material, temperature and gap size.
- To improve the curing speed, or shorten the fixture time, we recommend using **Born2Bond™ Anaerobic Activator**.



How do anaerobic adhesives cure?

- Anaerobic adhesives cure when excluded from oxygen and with metal contact.
- When applied, the adhesive stays liquid because of the oxygen in the air.
- When assembled (threadlocking, pipe sealing, retaining, gasketing) the cure will start.
- After full cure, the adhesive is a highly-crosslinked polymer with strong durability.



Influences on curing speed

- **Temperature:** the higher the temperature, the faster the adhesive will cure. Low temperatures will slow down the curing.
- **Material:** Anaerobic adhesives will cure best on "active" substrates like mild steel, aluminum and copper alloys. "Passive" substrates like stainless steel and chrome will slow down the curing.
- **Gap size:** Smaller gaps will have a faster curing than bigger gaps.
- **Activator:** The use of an activator such as **Born2Bond™ Anaerobic Activator** will speed up the curing and is recommended on passive materials or cold environments.

Application process

The method in which adhesive is applied impacts bondline performance.

- Bondline performance depends on the quantity and consistency of adhesive applied to the surface.
- Adhesives can be applied using automatic dispensing equipment and/or manual systems (e.g. syringes, bottles).
- For precise dosing, use dispensing tips made of plastic (PP, PTFE). Do not use metal dispensing tips. Fully automated systems will improve the control and speed of dispensing.



PRODUCT FEATURES

The list of features in this table will help you identify which products best match your needs.

		NSF CERTIFIED	BASE	FLUORE- SCENIC	COLOUR	VISCOSITY (mPa.s)	TEMPERATURE RANGE	FIXTURE TIME (MIN)	STRENGTH	MAX. THREAD SIZE/GAP FILL
THREADLOCKING	TA-WL LOW STRENGTH	COMING SOON								
	TA-22	S6	Dimethacrylate	Yes	Purple	900-1.500	-55 to 150°C	20	6Nm*	M6
	TA-WL MEDIUM STRENGTH	COMING SOON								
	TA-43	S6	Mod. Methacrylate	Yes	Blue	2.500-3.000	-55 to 180°C	<15	25Nm*	M36
	TA-WL HIGH STRENGTH	COMING SOON								
	TA-70	S6	Dimethacrylate ester	Yes	Green	400-600	-55 to 180°C	10	33Nm*	M20
	TA-90	No	Dimethacrylate ester	Yes	Green	20-55	-55 to 150°C	7	12Nm*	M6
PIPESEALING	PA-WL PIPE SEALANT	COMING SOON								
	PA-77	S2	Dimethacrylate ester	Yes	Yellow	80.000-90.000	-55 to 180°C	60	11Nm*	M80
	PA-42	No	Dimethacrylate ester	Yes	Brown	400-800	-55 to 150°C	10-20	15Nm*	M36
GASKETING	GA-WL INSTANT GASKET	COMING SOON								
	GA-74	No	Dimethacrylate ester	Yes	Orange	30.000-50.000	-55 to 150°C	15-30	5-8.5 N/mm²‡	0.3mm
	GA-WL FLEXIBLE GASKET	COMING SOON								
	GA-18	S2	Dimethacrylate ester	No	Red	200.000-800.000	-55 to 150°C	<12 hr	>5N/mm²‡	0.25mm
	GA-10	No	Mod. Acrylate	No	Pink	40.000-140.000	-55 to 230°C	<12 hr	<5N/mm²‡	0.25mm
RETAINING	RA-WL HIGH STRENGTH	COMING SOON								
	RA-38	S5	Urethane Acrylate	No	Green	2.000-3.000	-55 to 180°C	10	>25N/mm²†	0.25mm
	RA-03	S5	Methacrylate	No	Green	100-150	-55 to 150°C	15	>26N/mm²†	0.1mm
	RA-20	No	Dimethacrylate ester	No	Green	5.000-12.000	-55 to 230°C	60	>26N/mm²†	0.2mm
	RA-41	No	Dimethacrylate ester	No	Yellow	400-800	-55 to 150°C	20-30	>6N/mm²†	0.1mm
	RA-48	No	Urethane Methacrylate	No	Green	400-600	-55 to 180°C	10-15	>26N/mm²†	0.15mm
	RA-60	No	Dimethacrylate	No	Grey	Paste	-55 to 150°C	10-15	>18N/mm²†	0.5mm

*Breakaway torque on steel [ISO 10964] †Static shear strength [ISO 4587] ‡Tensile strength on steel [ISO 4587]

BORN2BOND™ ACADEMY TRAINING

Understanding the specifics of **Born2Bond™** products, how they are used, and the properties that make them unique is essential to making the most of their value. Bostik's **Born2Bond™** Academy offers in-depth training of the products and provides access to resources for technical learning, troubleshooting and more, with all participants receiving a certificate of completion.

Our global team of experts have structured the training to give you a deeper understanding of:

- Technologies
- Applications
- Equipment



The **Born2Bond™** Engineering Adhesives team is ready to provide additional tailor-made training, tools and materials, including:

- Case studies
- Application videos
- Product demos
- Demo kits
- Plant surveys
- Seminars and webinars
- Solution guides
- MRO Industry Programs
- And many more...

Born2Bond™ offers innovative solutions for a wide range of applications and industries. These solutions will enable our customers to improve efficiencies, increase design opportunities and enhance sustainability, making it easier for them to manufacture better, safer and more innovative products.

INSTANT ADHESIVES



UV INSTANT ADHESIVES



HIGH PERFORMANCE HMPUR ADHESIVES



UV ACRYLATES



UV-CIPG



UV-FG



XMA



SERVICE PRODUCTS



MORE PRODUCTS COMING SOON



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