

<b>Product</b>	<b>Protac® 2890 Threadlocker – Penetrating/Wicking Grade</b>	
<b>Description</b>	Protac® 2890 is a fast curing, medium strength, penetrating/wicking grade anaerobic threadlocker, for bonding and sealing threads, and retaining of cylindrical parts. It cures in the absence of air between close-fitting surfaces. It is highly resistant to heat, vibrations, water, gases, oils, hydrocarbons and many chemicals.	
<b>Specification</b>	Meets Military specifications: MIL-S-46163A Type 111 Grade R, MIL-S-22473E Letter Grade AA.	
<b>Applications</b>	Protac® 2890 is formulated to be a very low viscosity anaerobic threadlocker used mainly to wick into pre-assembled parts. Used for post assembly applications. Due to its very low viscosity, it can be used for some interference fit retaining applications. It can be used also as a porosity sealant for cast components. Prevents corrosion and leakage.	
<b>Physical Properties</b>	Chemical type	Methacrylate Ester
	Appearance	Green
	Specific Gravity	1.07
	Viscosity cPs at 25°C	12
	Brookfield RVT Spindle 3 @ 20 rpm	
	Gap fill	0.09mm
	Shelf Life	24 months
<b>Curing Properties</b>	Handling Time	<15 minutes
	Functional Time	1 hours
	Full Cure Time	24 hours
	Breakaway Torque, ISO 10964	
	M10 steel nuts and bolts	7-21 N/m
	Prevail Torque, ISO 10964	
	M10 steel nuts and bolts	25-45 N/m
	Temperature Range	-50°C to 150°C
<b>Cure speed</b>	Cure speed will vary according to the substrates. When used with active surfaces such as mild steel and brass components anaerobic adhesives will reach full cure faster than more inert materials such as stainless steel. Protac® AC3049 activator may be used to accelerate cure speed.	
<b>Chemical / Solvent Resistance</b>	Protac® anaerobics exhibit excellent chemical resistance to most oils and solvents including motor oil, leaded petrol, brake fluid, acetone, ethanol, propanol and water. Anaerobic adhesives are not recommended for use in pure oxygen or chlorine lines.	

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<b>Bond gap</b>	Bond line width will greatly affect the speed of cure of anaerobic adhesives. Bond line width varies with thread type and size of the fastener. The larger the gap between threads, the slower the cure speed.
<b>Temperature</b>	Cure speed is tested at 22°C. Lower temperatures will result in slower cure. Higher temperatures will offer faster cure speeds. AC3049 activator should be used when the temperature is less than 5°C.
<b>General Information</b>	<p>Anaerobic adhesives only cure in the absence of air and with metal part activation. Adhesive outside the joint will remain uncured and may be wiped away with a cloth.</p> <p>Anaerobic adhesives are not recommended for certain plastics as stress cracking can sometimes result. Some anti-corrosion chemicals inhibit the cure system in this type of anaerobic. Trials are recommended to establish whether cleaning of the parts is necessary. Protac® AC3049 activator may be required on plated parts.</p>
<b>Directions for use</b>	Ensure parts are clean, dry and free from oil and grease. Apply adhesive to all engaged threads. Assemble parts and allow to cure. Wipe excess adhesive from outside of joint.
<b>Storage</b>	Store in a cool area out of direct sunlight. Optimal storage conditions are between 8° and 21°C.
<b>Packaging</b>	Bottles: 50ml and 250ml. Available in bulk for use with dispensing systems.
<b>Health &amp; Safety</b>	For safe handling of this product consult the Material Safety Data Sheet.
<b>Data ranges</b>	Data contained in this data sheet may be reported as typical value and/or range. Values are based on actual test data and are verified on a regular basis.
<b>Notes</b>	The information contained herein is produced in good faith and is believed to be reliable but is for guidance only. Novachem Corporation Limited and its agents cannot assume liability or responsibility for results obtained in the use of its product by persons whose methods are outside or beyond our control. It is the user's responsibility to determine the suitability of any of the products and methods of use or preparation prior to use mentioned in our literature, and furthermore the user's responsibility to observe and adapt such precautions as may be advisable for the protection of personnel and property in the handling and use of any of our products.

