

## THREAD SEALING

TRUDESIGN® has tested and approved the use of the following products for watertight sealing of composite to composite, composite to stainless steel, and composite to bronze material threads installed above and below the water line.

### Adhesive Sealants:

The following sealants offer several advantages over traditional tape sealing methods (also listed below). The advantages include:

- Faster installation times – not having to screw and unscrew parts to work out exactly how much tape should be applied. Sealant can simply be applied (once), parts screwed together and wound to their desired orientations.
- Greater flexibility of installation – sealants can be applied to either female or male threads, unlike tapes which are only applied to male threads (and can be awkward to access).
- Improved sealing – sealants adhere to the substrate they are applied to unlike tapes that are ‘sandwiched’ in between. The permanent elasticity characteristic of sealants helps in keeping seals watertight when faced with conditions such as thermal expansion, water absorption, movement and vibrations.

#### SIKAFLEX® 291i Marine Sealant

A one-part polyurethane adhesive/sealant. Starts to cure (tack-free) in approx. 2 hours, after which hoses can be attached. Full cure takes 24 hours – refer to product literature. Creates a permanent seal and can also be used for installing Skin Fittings in to a hull. Available colours = Black, White.



#### 3M™ Marine Adhesive Sealant Fast Cure 5200

A one-part polyurethane adhesive/sealant. Starts to cure (tack-free) in approx. 2 hours, after which hoses can be attached. Full cure takes 24 hours – refer to product literature. Creates a permanent seal and can also be used for installing Skin Fittings in to a hull. Colour = White.



**Note:** 3M™ Marine Adhesive Sealant Fast Cure 4200 is also available and approximately half the strength (once cured) of 5200 which allows for eventual disassembly of parts – useful for threaded connections only and not for installation of Skin Fittings in to hulls.

#### LOCTITE® 5331

A one-part acetoxy silicone sealant. Starts to cure (tack-free) in approx. 10 minutes, after which hoses can be attached. Full cure is achieved within 12 hours (at min. 40% atmospheric humidity) – refer to product literature. Creates a permanent seal for threaded connections only and not for installation of Skin Fittings in to hulls. Colour = White.



### Tapes & Others:

#### PTFE (Teflon™) Thread Tape

PTFE (Teflon™) tape is a traditional thread sealing method which provides a good seal when applied correctly. However, in some cases if the position or tightness of the Ball Valve or Skin Fitting is incorrect, they have to be unscrewed and more tape applied, slowing the assembly process. Additionally, the fittings can sometimes be turned by hand after being installed.



#### LOCTITE® 55 Pipe Sealing Cord

A coated multi-filament cord designed as a faster method than Teflon tape to seal threaded fittings. The main advantage is that a component, for example a Ball Valve, could be screwed down then screwed back a turn to suit positioning whilst still maintaining a tight seal. This eliminates the need to remove the entire Ball Valve and apply more tape as with traditional Teflon tape. Colour = White.



# THREAD FORMS

## Parallel Threads:

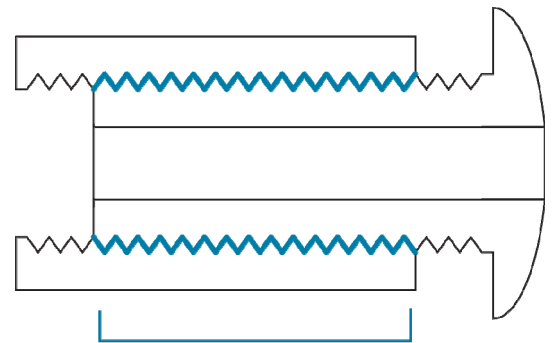
To comply with International Marine Standards, all **TRUDESIGN**® Skin Fittings, Ball Valves and threaded connectors are manufactured with **parallel threads**. This ensures threaded connections utilise full thread engagement, resulting in greater strength and sealing ability.

- Provides a strong mechanical connection with full thread engagement
- Sealing is independent of position and rotation
- Fittings can be cut-down in length without affecting their strength or sealing
- Allow for use of backing nuts to secure fittings if desired
- Have less risk of cross-threading on installation

**TRUDESIGN**® parallel thread types are available in:

1.) BSP(P) – British Standard Pipe (Parallel) – used widely throughout most parts of the world including Europe, Asia, and Australasia – *Identified on parts with an embossed 'B'.*

2.) NPS – National Pipe Straight (American National Pipe) – predominantly used within North America – *Identified on parts with an embossed 'N'.*



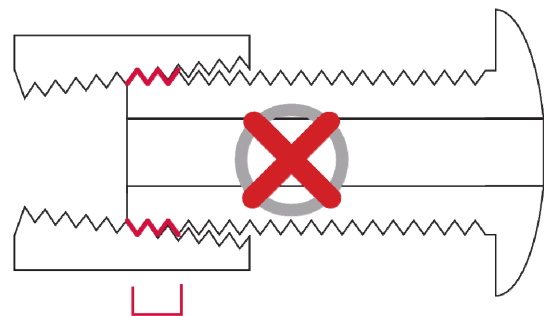
Thread Engagement Long.  
Large Sealing Surface Area.



## Tapered Threads:

**Do not use tapered thread valves or fittings!**

Tapered BSPT and NPT threads, such as those used in the agricultural industry, should **never** be used in marine applications due to their lack of strength and sealing reliability caused by poor thread engagement.



Thread Engagement Short!