

# ADHESIVE



## iPipe - HARD HAT

### Description

Originally designed specifically for a large European customer, the more we refined and defined this pipe sealant, the more we liked it. Hard Hat™ has beautifully matched break away and prevailing strengths, delivered in what one of our engineers described as the “perfect viscosity.” It’s smooth slightly tacky nature, delivers a lubricating anti-galling film, which allows for maximum joint sealing, with minimal torque, and it’s low coefficient of friction will assure easy assembly. Although iPipe Hard Hat™ is a PFTE containing anaerobic curing pipe sealant, because of its extraordinary properties we gave it bright yellow color. Hard Hat™ brings extra strength, for added security in critical applications that are exposed to extra heavy abusive environments. Hard Hat™ is suitable for gas, LP gas, compressed air, gasoline and oil, industrial fluids, CFC, and many other chemicals. Hard Hat™ is thixotropic, which will prevent the migration from the threads of the sealant before or during curing. It replaces P.T.F.E. tape and yarn. The cured product provides a thermoset plastic barrier between the pipe threads, which allows for easy disassembly, even after years of use.

### Directions of use

Clean and degrease parts for best results. Apply sealant to male threads only, use enough product to fill the joint completely. Assemble parts, avoid overtightening due to lubricating effect of product. Allow time to cure. Cure speed is affected by temperature, size of thread gaps, and type of metal. Depending on the aforementioned, as well as the pressure and material being sealed against, Hard Hat™ may provide an instant seal. Primer may be used to speed the cure.

### Properties of uncured material

* Composition	: anaerobic methacrylate
* Colour	: bright yellow
* Viscosity (25°C - mPa.s)	: 80,000 – 180,000 thixotropic
* Specific weight (25°C - gr/ml)	: 1,05
* Friction coefficient $\mu$	: about 0,10
* Max diameter of thread/gap filling	: 2" / 0,30 mm
* Flash point	: about 100°C
* Solvent content	: none
* Shelf life 77°F	: 2 years

### Curing properties and performance of cured material

(Strength is based on ASTM D5649 run on 3/8-16 fasteners)

* Handling cure time	: 20 - 40 minutes
* Functional cure time	: 1 - 3 hours
* Full cure time	: 5 - 10 hours
* Locking torque	: (ISO 10964 not preloaded)
- breakaway	: 150 inch pounds
- prevailing	: 75 inch pounds
* Temperature range	: -55 +150°C

Note: Users should evaluate product on their own parts.

### Handling and safety properties

Refer to Material Safety Data Sheet.

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Feb 2011