



TECHNICAL DATA

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#190 PENETRO 90®

DESCRIPTION:

Penetro 90® is a premium quality high performance penetrating oil that penetrates and lubricates all types of moving parts that have become difficult to operate due to increased friction from wear, corrosion or the buildup of sludge and grime.

COMPOSITION:

Penetro 90® is blended from a unique patented formula that contains penetrating oils, synthetic isoparaffinic hydrocarbons, special friction releasing and extreme pressure additives, and three different types of rust and corrosion inhibitors.

PERFORMANCE ADVANTAGES:

1. Rapid deposition of a long lasting solid lubricant film that greatly reduces friction and wear.
2. Rapid penetration into the pores of the metal in order to free frozen bolts, sticking linkages and control cable arms.
3. Superior rust busting characteristics.
4. Formation of a Triple Barrier Shield to protect against rust and other corrosive buildup.
5. Formation of a protective that rejects abrasive particles such as dirt, sand and salt.
6. Formation of a protective shield against moisture.
7. Excellent displacement of any moisture buildup.
8. Superior extreme pressure and antiwear properties in order to increase equipment life and reduce downtime.
9. Will not affect any seal materials or coatings.

PREVENTS THREAD STRIPPING AND BUST RUST:

When sprayed onto rusty bolts ordinary penetrating oils will not allow them to loosen properly without the possibility of stripping the bolt's threads. This is because rust is packed into the threads of the bolts.

Unlike ordinary penetrating oils, which are solvent base, Penetro 90® coats the surfaces of the metal it is applied to with an oil film that cuts friction. The penetrating oil film that Penetro 90® lays down on the metal surfaces contains two different friction fighting lubricating solids that coat each rust particle and act like tiny ball bearings so the rust particles slide easily over each other without sticking to the threads. The result is busting of the rust from the threads so that the bolts release with fingertip ease.

TRIPLE BARRIER SHIELD AGAINST RUST:

Ordinary penetrating oils contain only one type of rust and corrosion inhibitor. Penetro 90® contains three. These rust and corrosion inhibitors penetrate deep into the pores of the metal forming plating that provides a triple barrier shield against rust and corrosion. This triple barrier shield also forms a protective shield that rejects abrasive particles and seal out moisture.

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TRIPLES THE LIFE OF HOIST CHAINS:

Ordinary penetrating oils fail the Timken Extreme Pressure Test at an OK Load of 1 to 2 pounds. The solid lubricants in Penetro 90® allow it to carry a 65 pound Timken OK Load. This translates over to a 100,000 PSI of protection on hoist load chains and sprockets, resulting in a tripling of the life of the hoist chains and sprockets even under heavy loads.

TRIPLES THE TIME BETWEEN APPLICATIONS:

Ordinary penetrating oils, because they are solvent based and evaporate off quickly, contain very little lubricating value. Penetro 90® being an oil based product coats the surfaces of the metals it is applied to with a light, clear lubricating film that will not wash off even under high moisture conditions and that lasts indefinitely.

APPLICATIONS AND USES:

Penetro 90®'s unique patented formula does not contain any chlorinated or chlorofluorocarbon solvents or any other types of solvents especially those that are considered to be harmful to the environment allows the Penetro 90® to penetrate and lubricate all types of moving parts. It increases equipment life and reduces costly downtime caused by worn or dirty parts.

Penetro 90® is perfect for use on the following mechanisms:

- *Valves
- *Linkages
- *Conveyors
- *Rollers
- *Taps and Dies
- *Cutting Tools
- *Hinges
- *Locks
- *Control Cables
- *Electric Power Tools
- *Air Power Tools
- *Hoist Chains

DIRECTIONS FOR USE:

1. Shake well before use.
2. When applying to heavily corroded parts, first scrape or wire brush. Allow a short time to penetrate.
3. Wipe away any accumulated dirt or grime that may appear as the part operates.
4. Do no spray onto any hot metal surface.

TYPICAL PROPERTIES

Specific Gravity	.8861
Viscosity @ 40°C, cSt (ASTM D-445)	15.50-20.5
Flash Point °F/°C (ASTM D-92)	200°-230°/93°-110°
Rust Test (ASTM D-665)	
Procedure A (Distilled Water)	Pass
Procedure B (Salt Water)	Pass
Four Ball Wear Test (ASTM D-4172) (40 kg/1200 rpm/1hr/167°F)	
Scar Diameter	0.45
Four Ball EP Test (ASTM D-2783)	
Weld Point, kgs	400
Load Wear Index	72.85
Timken EP Test (ASTM D-2782)	
Ok Load, lbs.	65 lbs.