



TECHNICAL DATA

102 Barton Street, St. Louis, Missouri 63104

In-State (314) 865-4100/Out of State 800-325-9962/Fax (314) 865-4107 <http://www.schaefferoil.com>

#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 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 film 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 to increase equipment life and reduce downtime.
9. Will not affect any seal materials or coatings.

PREVENTS THREAD STRIPPING AND BUSTS 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 based, Penetro 90® coats the surfaces of the with an oil film that reduces friction. The penetrating oil film of Penetro 90® 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 to form a plating that provides a triple barrier shield against rust and corrosion. This triple barrier shield also rejects abrasive particles and seals out moisture.

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TRIPLES THE TIME BETWEEN APPLICATIONS:

Ordinary penetrating oils, because they are solvent based and evaporate off quickly, contain very little lubricating value. Penetro 90[®] is an oil based product which coats metal surfaces 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 that are considered to be harmful to the environment. Use Penetro 90[®] to penetrate and lubricate all types of moving parts to increase equipment life and reduce costly downtime caused by worn or dirty parts.

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

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

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 not 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.

California VOC requirements:
Product is for use in the manufacturing process only.