



Technical Data

Physical Characteristics

Appearance	Clear or slightly cloudy
Colour	Light amber
Odour	Very slight characteristic pleasant odour
Specific Gravity	.800± .020 at 72°F. (22°C)
Viscosity	27.5± 1.0 sec. Zahn #1 at 72°F. (22°C)
Flash Point (minimum)	110°F. open cup (43°C)
Percent Non-Volatile	min. 22% by weight

Percent Volatile	max 78% by weight aliphatic petroleum distillate.
Pour Point	Less than -100°F. (-73°C)
Low Temperature Stability	Excellent
Coverage	600 to 1000 sq. ft. per gallon
Boiling Point (initial)	300°F (minimum) (149°C)
Weight, applied coating	3.4 x 10 ⁻⁴ lbs. sq.ft.
Thickness	.0001 to .0003 inch

Effects On Materials

General: Nearly all materials react to WD-40 as they would to high grade aliphatic petroleum spirits with the same exposure, i.e. spray, quick dip or prolonged immersion.

Rubber: No visible effects on surfaces of various types of rubber sprayed with WD-40. Certain types of rubber will swell upon prolonged immersion in WD-40.

High Strength Steels (for hydrogen embrittlement):
Certified SAFE according to Lawrence Hydrogen Effusion Test.

Fabrics: The following fabrics were exposed to WD-40 with no effect, except slight staining which was readily removed with naphtha or dry cleaning solvent: *Nylon, Orlon, Wool, Dacron, Cotton.*

Painted Surfaces: Many types of paint on various surfaces have been exposed to WD-40 with no effect. Wax polishes and certain wax coatings may be softened by WD-40.

Plastics: The following plastics were immersed in WD-40 for 168 hours with no visible effects: *Polyethylene, Formica, Epoxy, Delrin, Polypropylene, Acrylic, Vinyl, Teflon, Polyester, Nylon.* Clear polycarbonate and polystyrene may stress craze or crack in contact with WD-40.

Note: Application of permanent coatings over WD-40: Best results will be obtained when the surface is cleaned. *Mineral spirits, lacquer thinner, vapour degreasing or alkaline cleaner are suitable.*

Properties

Corrosion Protection (on freshly sanded mild steel panels)

Exposure*	Results
Humidity (JAN-H-792)	No rust after 1000 hours
Salt Spray (FED STD 151)	No rust after 50 hours
Salt Spray (FED STD 151)	Rust beginning after 100 hours

*USA standards

Under actual conditions the duration of protection obtained using WD-40 will vary with the type of material being protected and the conditions of exposure. Generally, on mild steel the protection under various conditions will be approximately as follows:

1. Covered or indoor storage *1 year or longer*
2. Protected exterior storage *6 months to 1 year*
3. Normal exterior exposure *30 to 60 days*
4. Severe exterior exposure *15 to 30 days*
(on or very near the beach, subject to high humidity, salt spray and salt fog)

If longer protection is desired, WD-40 should be lightly reapplied when necessary.

Lubrication: Dynamic coefficient of friction

BEARING PRESSURE	COEFFICIENT	TEST
100psi	0.112	Heat treated 4340 steel
1000psi	0.114	with normal blue oxide
2000psi	0.129	film against itself
3000psi	0.138	lubricated with
4000psi	0.145	WD-40.

Electrical: Dielectric strength ASTM D-877 12,000V. per 0.100in. Contact resistance ASTM B-182 modified.

	BARE CONTACTS	WD-40 TREATED CONTACTS	CONTACT RESISTANCE OF FILM
before cycling	0.0066 ohm	0.0083 ohm	0.0017 ohm
after 5 cycles	0.0067 ohm	0.0085 ohm	0.0018 ohm
after 100 cycles	0.0069 ohm	0.0086 ohm	0.0017 ohm
after 1000 cycles	0.0074 ohm	0.0085 ohm	0.0011 ohm
after 20,000 cycles	0.0083 ohm	0.0098 ohm	0.0015 ohm

Application

WD-40 can be applied by the following methods:

1. Sprayed on by aerosol or spray applicator.
2. Brushed on.
3. Immersing item in a bath of WD-40.