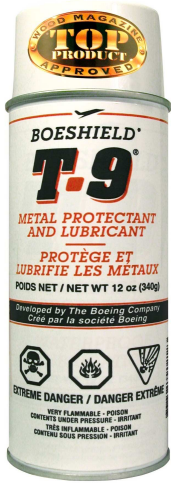


BOESHIELD T-9[®] Metal Protectant and Lubricant General Information Document



Boeshield T-9[®] inhibits corrosion and at the same time provides lubrication. It can be used on all metal surfaces where corrosion protection and/or sliding or rolling lubrication are needed (some limits apply). It was developed by the Boeing Company for long term metal protection. Licensed by Boeing's Materials Technology Laboratories Boeshield T-9[®] is effective due its excellent water displacement, penetration, and protective film development.

Boeshield T-9[®] is a solvent and paraffin wax based formula with over a dozen components which include corrosion inhibitors. It can be applied in a thick film coating (spray on, do not wipe) for maximum protection or thin film coating (spray lightly and wipe dry) where slipperiness or appearance are more important. It is very clean and can even be buffed to a shine.

- * Boeshield T-9[®] exhibits excellent results in salt spray exposure, "EXCO" immersion tests, and dielectric current tests, and will outlast competitive treatments. Because of its high dielectric characteristic it may be applied to electrical circuits, controls, wiring, and wiping type contacts.
- * When applied as a thick film coating (spray on, do not wipe) Boeshield T-9[®] sets to a soft, translucent, colourless film approximately 5 mil thick. This waxy barrier develops in all areas.
- * When set Boeshield T-9[®] is not sticky, does not attract grit, tends to shed dirt, and provides lubrication. The resulting coating is waterproof. Due to the wax component Boeshield T-9[®] is not suitable as a primer coat for paint.
- * Simple water washing will not remove Boeshield T-9[®]. Any common degreaser may be used to remove Boeshield T-9[®], though most often lightly re-spraying Boeshield T-9[®] and wiping dry is sufficient.
- * Boeshield T-9[®] penetrates into metal pores and existing corrosion. Because it has excellent penetrating abilities and high creep rate it will, by capillary action, penetrate and seep into lap joints, seams, rivet holes and gaps and will not trap or encapsulate moisture.
- * Boeshield T-9[®] displaces moisture, stops existing corrosion, lubricates, and forms a long lasting coating. Durability depends on coating thickness, service, and environmental conditions. A thick film application can last months and even years. A thin film application (spray lightly and wipe dry) requires reapplication more often, perhaps monthly or weekly.
- * Generally a thick film application is used for storage, such as tools, or for long term protection such as engine compartments, body panels, undercarriage, electrical panels, tube frames, etc.
- * Where lubrication is the primary interest a thick film application is usually used.
- * Typically a thin film application is used on working machinery such as a table saw top, or where handling of the surface is necessary such as the bright work on a boat, or where appearance is a concern such as the chrome logo on the side of a motorcycle gas tank.

- * Set time varies from seconds for thin film application to hours, and possibly days, for thick film application depending on environment (air circulation, temperature, humidity, etc.) and thickness of coating.
- * To be most effective Boeshield T-9 must be in contact with the metal and the solvent portion be allowed to evaporate.
- * Boeshield T-9[®] is easily applied using a variety of methods including spray, drip, brushing, dipping, and fogging (very fine mist, no heat). For spraying, all that is necessary is enough pressure and nozzle adjustment to form a mist. A conventional sprayer or good quality hand garden sprayer may be used. An HVLP (high volume/low pressure) sprayer is especially effective due to minimal bounce-back of spray and control of spray pattern.
- * Reapplication of Boeshield T-9[®] simply softens the existing coating, redistributes itself, and does not build up.
- * Boeshield T-9 contains no UV inhibitors and therefore must be reapplied more frequently (perhaps every 4 to 6 months) when exposed to direct sunlight for long periods in outdoor applications.
- * Boeshield T-9[®] contains no harsh solvents and is safe to use around most paints, plastics, vinyls, wiring, and many glues and does not affect finishing of wood when working with treated tools.
- * Boeshield T-9[®] does not require mixing, is not damaged by freezing, and shelf life is indefinite.
- * A little goes a long way. Coverage for a single 340g. (12oz. net wt.) aerosol can may exceed 46sq.m. (500sq.ft.) depending on method of application and thickness of coating.
- * For thick film coating, proper rate of application for spray method can be determined by observation. As Boeshield T-9[®] is being applied it should have a heavy "orange peel" look and begin to gloss over in a few minutes at room temperature. If it is immediately glossy then reduce the amount being applied. Check the surface again after a few minutes and touch up any bare spots. Excessive coating wastes material and may extend set time due to puddling.

Boeshield T-9[®] Technical Data

1. Corrosion inhibition

Meets BSS7220 and FED-STD-791, Method 4001 (Max. 3 dots 1 mm per 10 square inches after 100 hours salt spray). Meets ASTM G-34 (Exfoliating test).

2. Water displacement ability

Meets MIL-C-16173D, Paragraph 46.11 No evidence of pitting, mottling, or staining.

3. Penetrability

Capillary height of rise 1.2" minimum in bore $\varnothing=0.015$ " at room temperature.

4. Wetability

30 dynes/cm

5. Flow

Viscosity is 6 centistokes at 75±1°F.

6. Adhesion at low temperature

Flaking less than 1/32" at -40±5K (MIL-O-16173D).

7. Removeability

Aliphatic Naptha, Cleaning solvent.

8. Solids

38%

9. Flash point

Approximately 160°F (71°C), (TCC).

10. Coverage

500 to 1000 sq.ft. per US gallon.

Application temperature range

The aerosol form can be applied in temperatures ranging from +35°F to +100°F (+2°C to +38°C). The liquid form can be applied from 0°F to +100°F (-18°C to +38°C).

Effectiveness temperature range:

Boeshield T-9®'s corrosion inhibiting properties are effective from -40°F to +250° F (-40°C to +120°C).

Warning

Very flammable. Poison. Aerosol contents under pressure. Contents may catch fire. Container may explode if heated. May irritate skin and eyes. Do not smoke. Do not puncture. Do not burn. Do not get in eyes. Do not get on skin or clothing. Do not swallow. Do not breathe fumes.

Use only in a well ventilated area. Keep away from flames, such as pilot lights, and any object that sparks, such as an electric motor. Store away from heat. Do not store at temperatures over 50°C (122°F), such as in vehicle in hot sun.

Wear rubber gloves, safety glasses. Keep out of reach of children.

First Aid treatment

Contains petroleum distillates, Propane, and Butane. If swallowed call a doctor or poison control centre immediately. DO NOT induce vomiting.

If in eyes, rinse immediately with water for 15 minutes. Wash off if on skin.

Boeshield T-9® Shipping Information

Boeshield T-9®, in the aerosol format and in the liquid 1-US gal. and under container format, is considered Consumer Commodity for shipment by land, is labeled ORM-D on the carton, and is shipped as a lubricant.

Shipment by water is reasonably done.

Though shipping by air is possible, even for the aerosol format, the cost of shipping by air is generally prohibitive due to hazardous materials shipping, packaging, and handling requirements and the associated costs to meet those requirements.

Please contact us for detailed shipping information if required.