



TECHNICAL DATA

E-Tec™ 501
E-Tec™ 502
E-Tec™ 503

Water Displacing Rust Preventives

The **E-Tec 501**, **E-Tec 502** and **E-Tec 503** formulations are solvent/calcium based rust and corrosion inhibitors and lubricants for ferrous and non-ferrous metals. They rapidly displace moisture, twice as fast as conventional barium base formulas, from metal pores and recesses leaving a thin, transparent film which seals out moisture. The films are continuous, polar and non-conductive. They will not gum under high humidity or high temperature conditions. They are harmless to plastic, rubber, paints and certain silicones.

RECOMMENDED USES

They are used at 100% by volume and can be applied to wet or dry metal parts for protection while in process or storage.

Used to seal and enhance the depth of black of **EPI's Insta-Blak**, **B/OX**, and **Ultra-Blak** black chemical conversion metal finishes.

Excellent protection for unfinished dies, jigs, tools, machine surfaces, office machines, firearms, fasteners, automotive and marine equipment. **E-Tec 501** and **E-Tec 502** penetrate and loosen rusty "frozen" parts.

The non-conductive **E-Tec 505** film dries and lubricates electrical systems, equipment, contacts, switches and motors without interfering with their proper operation.

PROPERTIES

	<u>E-Tec 501</u>	<u>E-Tec 502 & E-Tec 503</u>
Film Characteristic	slightly oily	very slightly oily
Humidity test (ASTM-D-1748)	64 days	64 days
Salt spray test (ASTM-B117)	110-130 hours	70-90 hours
Corrosion Test Mil-C-23411	pass	pass
Corrosion Test Mil-C-81309	pass	pass
Water displacement (MIL-PRF-16173E, Grade 3)	pass	pass
Stain test (Mil-C-22235A)	pass	pass
Approximate coverage, Sq ft/gallon	2,200	2,000
Approximate film thickness-dip	0.19 mil.	0.12 mil.
Flash point T.O.C.	126°F	126°F
Weight per gallon, pounds	6.80	6.88 6.70

APPLICATION

The **E-Tec** formulations are used as received, and applied by dipping, brushing or low pressure spray. Tanks and other equipment may be constructed of mild steel.

When used as a sealant for **EPI's Insta-Blak** and **Ultra-Blak** black chemical conversion finishes, the parts are immersed into the E-Tec solution and pulled out completely. Repeat this 4-6 times depending on the porosity of the steel/iron then let the parts sit in the **E-Tec** solution for 2-5 minutes before removing parts from the **E-Tec** to a drain table/drying area. oscarm@dovetailgc.com The **E-Tec** will displace the rinse water to the bottom of the tank, where it can be periodically drawn off. It is recommended that a sight gauge be built into the side of the tank and used to determine the level of water in the tank and to assist in determining when the water level has been drawn down sufficiently to avoid immersing the work in the water rather than the **E-Tec** solution. It is recommended that baskets and rotating barrels used to contain parts for blackening and rinsing **not** be immersed in the **E-Tec** solutions because they will become coated with the **E-Tec** solution and could contaminate by runoff of the **E-Tec** into the other solutions in the process while being transported back to the beginning of the line. The **E-Tec** tank should contain an unload chute and catch basket(s) to receive the parts upon unloading the baskets and barrels.

Tanks should be kept covered when not in use to minimize evaporation.

The **E-Tec** solutions are formulated to dry rapidly (5-10 minutes) at ambient temperatures and work may be unloaded from the tank directly into tote pans or bins for drying. Small parts can be rapidly dried in spin dryers.

E-Tec finishes may be removed with solvents, chlorinated solvent vapor degreasers or with **EPI's E-Kleen** alkaline soak cleaners.

CAUTION

Contains petroleum distillates. Solutions are combustible. Harmful or fatal if swallowed. Use with adequate ventilation. If swallowed, **do not** induce vomiting. Call a physician immediately. Wear eye protection (glasses, goggles or face shield) when preparing solutions and working with solutions. Avoid prolonged contact with skin. Wash from skin with soap and water. For eye contact, flush freely with water and get medical attention.

Do not work with the **E-Tec** products without first reading and understanding the **MATERIAL**

SAFETY DATA SHEET furnished by **EPI**.

PACKAGING

One (1) five (5) and 55 gallon non-returnable containers.

IMPORTANT NOTICE! For Industrial Use Only

The following is made in lieu of all warranties, expressed or implied, including the implied warranties of merchantability and fitness for purpose: seller's and manufacturer's only obligation shall be to replace such quantity of the product as proved to be defective. Before using, user shall determine the suitability of the product for its intended use, and user assumes all risk and liability whatsoever in connection therewith. **Neither seller nor manufacturer shall be liable either in tort or in contract for any loss or damage, direct, incidental or consequential, arising out of the use or the inability to use the product.**

1/19/2023