



CORTEC
CORPORATION

Environmentally Safe VpCI®/MCI® Technologies

Boiler Lizard® Plus



DESCRIPTION

Cortec's Boiler Lizard® Plus is an easy-to-use, two-part complete preservation kit for dry layup of boilers. The kit combines a Boiler Lizard®, well-known for easy and effective dry layup, with the Boiler Egg™, which activates at the end of layup to protect against oxygen pitting at a critical time until the boiler reaches normal operating conditions. Boiler Lizard® Plus is designed to provide continuous vapor-phase corrosion protection throughout boiler internals after a boiler has been drained for seasonal or long-term layup. The Boiler Egg™ will lie intact and dormant until the boiler is started, then will dissolve and begin to scavenge oxygen and passivate metal during the initial filling of the boiler with makeup water, which is often unheated and not chemically treated.

PACKAGING & STORAGE

Boiler Lizard® Plus comes as a kit containing one Boiler Lizard® and one Boiler Egg™, each packaged in its own carton tube (one bag per tube).

Tube - 3" D x 37" L (8 cm x 94 cm)
Bag - 4" W x 34" L (10 cm x 86 cm)

To ensure best product performance, store in original packaging, indoors, and out of direct sunlight at 40-100 °F (4-38 °C).

Shelf life: 2 years

VpCI® ADDITIVES FOR WATER TREATMENT



FEATURES

- Two-in-one kit
- Water-soluble PVA bag packaging reduces direct contact with chemicals
- Biodegradable
- pH neutral
- No nitrite, heavy metals, halogens

BENEFITS

- Provides continuous corrosion protection, even on inaccessible and recessed surfaces, for up to 12 months of dry layup
- Protects against oxygen-induced damage during startup phase
- Protects all steam components (deaerator/FW tanks, boiler internals, and condensate return tanks)
- Protects ferrous metals and aluminum
- Superior to other forms of protection including nitrogen blankets, silica gel, and hydrazine
- Requires little or no surface preparation for routine shutdown maintenance
- Does not need to be removed prior to equipment startup

TYPICAL PROPERTIES

	Boiler Lizard® Powder	Boiler Egg™ Powder
Appearance	White to off-white powder	White to off-white powder
pH	6.0-7.0 (1% aqueous)	5.5-8.0 (5% aqueous)
Solubility	1.5 lbs/gal (18 g/100 mL) at 68 °F (20 °C)	1.0 lbs/gal (14 g/100 mL) at 68 °F (20 °C)

Boiler Lizard® Plus

APPLICATION

LAYUP: Completely drain and cool boiler down.

- **Boiler Lizard®:** Remove and discard outer protective water-insoluble bag. Place Boiler Lizard® flat in boiler and slit open the inner water-soluble bag to begin total corrosion protection. Slit this inner bag 2" (5 cm) from one end to 2" (5 cm) from the other end.
- **Boiler Egg™:** Remove and discard outer protective water-insoluble bag and place the Boiler Egg™ alongside the Boiler Lizard®, but do not slice the Boiler Egg™ bag open. For firetube boilers, place Boiler Egg™ at the lowest point possible to allow quicker reaction during filling. For watertube boilers, place Boiler Egg™ in steam drum below the feedwater line to allow for faster reaction time.
- Seal all openings to the boiler internals.

START UP: No product or inner bag removal is required prior to boiler startup. When the boiler is put back in service, fill with water and employ common startup procedure. The PVA bags will dissolve. The contents of Boiler Egg™ will be released and incorporated into makeup water as the boiler fills.

One Boiler Lizard® Plus treats 1,000 gallons (3,800 L) of boiler volume.

Precautions:

- Do not use in systems with yellow metals.
- Compatibility with non-metallics should be evaluated.
- Powder in Boiler Lizard®:
 - Caking of powder may occur when it is exposed to moisture and then dried. The likelihood of this is increased when powder is exposed to high heat and multiple wet/dry cycles. When the powder gets caked, baked, and hardened it requires removal by mechanical means or by aggressive acid clean. To avoid caking of powder, do not place Boiler Lizard® in standing water or where accumulation of water could occur during the shutdown.
- Powder should be removed before welding or other high temperature exposure.

4119 White Bear Parkway, St. Paul, MN 55110 USA
Phone (651) 429-1100, Fax (651) 429-1122
Toll Free (800) 4-CORTEC
info@cortecvc.com
<https://www.cortecvc.com>
<https://www.cortecwatertreatment.com>



LIMITED WARRANTY

All statements, technical information and recommendations contained herein are based on tests Cortec® Corporation believes to be reliable, but the accuracy or completeness thereof is not guaranteed.

Cortec® Corporation warrants Cortec® products will be free from defects when shipped to customer. Cortec® Corporation's obligation under this warranty shall be limited to replacement of product that proves to be defective. To obtain replacement product under this warranty, the customer must notify Cortec® Corporation of the claimed defect within six months after shipment of product to customer. All freight charges for replacement products shall be paid by customer.

Cortec® Corporation shall have no liability for any injury, loss or damage arising out of the use of or the inability to use the products.

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. No representation or recommendation not contained herein shall have any force or effect unless in a written document signed by an officer of Cortec® Corporation.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE. IN NO CASE SHALL CORTEC® CORPORATION BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.