



# Product Facts

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## **OPTISPERSE® ADJ0346** **Alkaline Boil-out Solution**

- Prepares new boilers for service
- Eliminates many startup problems
- Removes oil contamination and mill scale from new boilers
- Easy-to-use liquid formulation

### **DESCRIPTION AND USE**

OPTISPERSE® ADJ0346 is a specially formulated alkaline boil-out product containing inorganic and organic surfactant materials, iron sequestrants, and corrosion inhibitors. This product is designed to remove oil, grease, and mill scale from new boiler surfaces and to clean boiler water-side surfaces that have become contaminated with oil or grease during service.

### **TYPICAL APPLICATIONS**

OPTISPERSE ADJ0346 is used to remove oils, organic preservatives and mill scale from new boilers. It is a liquid product, ready to use in the boiler with adequate dilution water.

Operating boilers that have been retubed or contaminated by organics can also benefit from this alkaline boil-out product.

During boiler shipment and construction, various oils and preservatives are used to protect the metal surfaces. Also, the fabrication processes of steel cause a layer of magnetic iron oxide called mill scale to be created. If these organic and inorganic contaminants are allowed to stay in the boiler at startup, serious foaming and fouling may occur. This immediately reduces boiler reliability and efficiency, and the re-sulting corrosion can significantly shorten boiler life.

A combination of alkalinity and organic surfactants will solubilize oils and greases at temperatures at or above the boiling point of water. OPTISPERSE ADJ0346 incorporates a sequestrant that can solubilize the small amounts of iron present as mill scale. This will minimize possible corrosion sites.

Because of the high levels of alkalinity used to solubilize the organics, corrosion resulting from caustic embrittlement is possible. Therefore, inorganic corrosion inhibitors are included.

Organic contamination of condensate or feedwater of operating boilers can cause a similar problem to that of oil and preservatives in new boilers. If the contamination is limited, an out-of-service, boil-out procedure may be adequate to eliminate a slight amount of organic-based deposit. For severe or long-term contamination, the boiler may require a thorough chemical cleaning.

### **TREATMENT AND FEEDING REQUIREMENTS**

**Feedpoint:** Directly to the boiler or the feedwater line in any practical and safe manner (requires adequate rinsing).

**Feedrate:** The product is normally applied at a dosage of 10,000 ppm or 10 kgs per 1000kgs of water in the boiler.

**Dilution:** The product may be fed neat (undiluted).

**Feed Equipment:** A steel transfer pump is recommended for adding the product to the selected feed point.

After the addition of OPTISPERSE ADJ0346, close all manways and fill boiler to the top of the gauge glass with the vents open. Fire the boiler in accordance with the standard procedure. When steam is flowing freely from the vents, close those not specified by the boiler manufacturer for superheater protection. Unless contrary to the manufacturer's recommendations, raise the pressure to one-half the normal pressure and maintain this pressure for 24 to 48 hours.



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The boiler should be blown down in the amount of one-half of a gauge glass every eight hours through the bottom blowdown line. In case there is more than one blowdown line, alternate valves.

After each blowdown, refill to maximum height in the gauge glass.

At the end of the boil-out period, allow the unit to cool gradually. Cool to 200°F (93°C), open all drains and blowdown lines to drain the unit completely. Wash all water-side surfaces as thoroughly as possible with a high pressure hose. If inspection shows oil or scum remaining, the boil-out procedure should be repeated.

THESE PROCEDURES ARE MEANT TO SUPPLEMENT, NOT REPLACE THOSE OF THE BOILER MANUFACTURER.

### **GENERAL PROPERTIES**

Physical properties of OPTISPERSE ADJ0346 are shown on the Material Safety Data Sheet, a copy of which is available on request.

### **PACKAGING INFORMATION**

OPTISPERSE ADJ0346 is a liquid blend, available in a variety of containers and delivery methods. Contact your BetzDearborn representative for details.

### **STORAGE**

Store OPTISPERSE ADJ0346 at moderate temperatures and protect from freezing. If frozen, thaw completely and mix thoroughly prior to use.

### **SAFETY PRECAUTIONS**

A Material Safety Data Sheet containing detailed information about this product is available upon request.