

## DESCRIPTION

SOOT STICKS soot combustion catalyst is a combination of efficient combustion catalysts to remove fireside deposits at a controlled rate. The severity of fireside deposits is mainly dependent on the ash and carbon residue content of the fuel and overall combustion efficiency. Controlled fireside deposit removal permits burning to take place without the hazards of soot fires which occur when oxidation is too rapid.

SOOT STICKS combustion catalyst reacts with combustible carbonaceous deposits in the soot, breaking down the combustible binders that hold the deposits together and cause its adhesion to boiler screen and superheater tubes. The loose, dry ash resulting from the action of SOOT STICKS combustion catalyst is then carried out with the stack gases or is broken up and eliminated during normal soot blowing operation. SOOT STICKS combustion catalyst helps reduce fireside corrosion by removing the binders of corrosion deposits. Generally, in order for untreated soot to ignite and burn, the temperature must reach approximately 593° C. SOOT STICKS combustion catalyst acts to reduce the ignition temperature of the carbonaceous combustibles in the cooler areas of the boiler so that they will burn off and release the incombustible ash for easy removal by the soot blowers.

SOOT STICKS combustion catalyst start to work at temperatures in the cooler parts of the boiler as low as 150°C and is suitable for all higher temperatures (e.g., 200°C to 600°C) in other areas of the boiler.

Formation of excessive fireside deposits is often the result of correctable conditions that encourage incomplete combustion. Proper fuel preparation and correctly adjusted equipment will promote optimum combustion. SOOT STICKS soot combustion catalyst helps to prevent problems when these conditions are not being met.

## FEATURES

- Removes combustible binder which causes fly ash to adhere to the tube metal
- Conditions deposits so that they can be removed by soot blowers
- Keeps soot deposits in the uptakes at a minimum
- Convenient stick form

## APPLICATION & USE

It is recommended that fuel deliveries are representatively sampled and analyzed to monitor overall fuel quality and to determine levels of contamination. Consult your local Drew Marine representative for further discussion on fuel samplers, fuel analysis services and onboard fuel testing.

SOOT STICKS soot combustion catalyst can be conveniently introduced through a “peephole” or burner barrel tube after removing the burner. The firebrick and furnace tubes should be as hot as possible when SOOT STICKS combustion catalyst is added. Immediately put the idle burner on with as little air as possible. Allow approximately 10 or 20 minutes for the fumes to be given off. This insures that the volatilized active ingredients will settle on the soot. The increase in air is the controlling factor to successfully ignite the soot.

**BLOW TUBES**—Adjust to normal firing conditions.

SOOT STICKS combustion catalyst should be administered in the following quantities before blowing the tubes: Scotch Boilers - Initially: 1 stick per furnace, 2 times daily for 2 weeks; then 1 stick per furnace daily.

Low Pressure Water Tube Boilers up to 35 kg/cm<sup>2</sup> (498 psi) - Initially: 4 sticks per boiler, 2 times daily for 1 week; then 5 sticks per boiler daily.

High Pressure Water Tube Boilers above 35 kg/cm<sup>2</sup> (above 498 psi)

- Up to 6,800 kg/hr (15,000 lb/hr) evaporation rate; initially, 5 sticks per boiler 2 times daily for 1 week; then 6 sticks daily thereafter.
- 6,800 - 11,300 kg/hr (15,000-25,000 lb/hr) evaporation

## BENEFITS

- Better heat transfer and increased boiler efficiency
- Minimizes the risk of stack fires
- Maintains cleaner heat transfer surfaces to reduce cleaning costs
- Easy to use



Contact your Drew Marine representative for more information

rate; initially, 6 sticks per boiler 2 times daily for 1 week; then 7 sticks daily.

- 11,300 - 22,700 kg/hr (25,000-50,000 lb/hr) evaporation rate; initially, 7 sticks per boiler 2 times daily for 1 week; then 8 sticks daily.
- 22,700 kg/hr (50,000 lb/hr +) evaporation rate; initially, 8 sticks per boiler 2 times daily for 1 week; then 9 sticks daily.

These recommended quantities can be adjusted to the actual requirements of the individual boiler. Furthermore, variations in fuel quality, load, boiler design, heating surface configuration and the amount of carbonaceous and incombustible deposits may alter the dosage rates listed. If stubborn deposits persist, it may be necessary to slightly increase the amounts until the condition is improved. Excessive dosage requirements may indicate that mechanical alterations or adjustments are in order.

## TYPICAL PHYSICAL PROPERTIES

Appearance:	Flowing fine gray/black to dark red powder
Density:	1.3 kg/l
Flash Point (PMCC):	None

**NOTE:** Always wear the appropriate personal protective equipment when using this product.

## PACKAGING

SOOT STICKS soot combustion catalyst is available in 25-kg kegs each containing 50 sticks (PCN 0041400).

## IMPORTANT INFORMATION

Drew Marine maintains Safety Data Sheets on all of its products. Safety Data Sheets contain health and safety information for your development of appropriate product handling procedures to protect your employees.

Our Safety Data Sheets should be read and understood by all of your supervisory personnel and employees before using Drew Marine products



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# **Drew Marine®**

**100 South Jefferson Road  
Whippany, NJ 07981 USA  
1-973-526-5700  
Drew-Marine.com**

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