

OAKITE[®] 3

Alkaline Compound for Burnishing Steel, Brass, Copper and Aluminum

PRIMARY APPLICATION

OAKITE 3 is a biodegradable, mildly alkaline compound for burnishing steel, brass, copper, aluminum and precious metals in conjunction with steel burnishing media. It is also used as a soak tank cleaner for removing buffing compounds.

CHEMICAL CHARACTERISTICS

Chemical Composition	Soaps and mixed alkalis
Appearance	As Received: Tan powder As Used: In barrel - lather; In tank - milky solution
Odor	Soapy
Bulk Density	804 g/l (6.7 lbs/gal)
Flash Point	None
Foam Tendency	Pronounced
Recommended Diluents	Water
Maximum Solubility	15 g/l at 21°C; 90 g/l at 82°C (2 oz/gal at 70°F; 12 oz/gal at 180°F)
Behavior in Hard Water	Precipitates
Rinsability	Good
Biodegradable Surfactants	Yes
Phosphate-Free	No
Hygroscopic Tendency	Slight
Normal Working Concentrations	7.5 to 75 g/l (1 to 10 oz/gal)
Normal Working Temperatures	Room temperature for burnishing; 71° to 82°C (160° to 180°F) for soak tank cleaning
pH at Working Concentrations	9.2 at 7.5g/l (1 oz/gal), 21°C (70°F)
Effect of Prolonged Boiling	None

Effect of Working Solutions on Metals Rate of metal loss from 24-hour immersion in Oakite 3, 40 g/l (5.3 oz/gal) at 49°C (120°F), projected for one year, is as follows:

metal (alloy)	mm/yr	in/yr
steel (1010)	0.01	0.001
stainless steel (316)	0.01	0.001
aluminum (1100)	0.03	0.001
brass	0.02	0.001
copper	0.05	0.002
magnesium	1.07	0.042
zinc	0.63	0.025

APPLICATION PROCEDURE

Barrel Finishing: Oakite 3 is used at a concentration of 7.5 g/l (1 oz/gal). For best results, all work should be cleaned to a no-water-break surface. Steel should be pickled if oxidized or stained. Brass and copper should be cleaned and bright dipped. Aluminum should be lightly etched in an alkaline solution and desmutted, if necessary, to secure the desirable, white color essential to quality burnishing.

Preparing Solutions: Add powdered material to water and media in barrel and run for several minutes before adding work. After burnishing for a suitable length of time, determine by examining the work at intervals, the load is screened to separate the burnishing media and then rinsed with hot water and dried by tumbling in sawdust. Where electroplating will follow, thorough rinsing is essential to remove all soap film.

Soak Tank Cleaning: Use at 60 to 75 g/l (8 to 10 oz/gal), temperature 71° to 82°C (160° to 180°F). Immerse parts in baskets, with agitation to assist in removal of buffing compounds.

SOLUTIONS CONTROL

For tank application: Concentrations may be titrated using Gardotest Procedure 124

Sample Size: 1.0 ml

Factor: 3.6

NOTES ON USE (See Safety Data Sheet)

SAFETY AND HANDLING

Prior to handling and use of any of the materials referenced in this document, the Safety Data Sheets should be read and understood by all personnel in contact with these materials.

KEEP OUT OF REACH OF CHILDREN

STORAGE

Dry indoor storage at temperatures between 40°F and 100°F (4.4°C and 37.8°C) is recommended, away from any incompatible materials referenced in the Safety Data Sheets. All containers should be tightly closed when not in use.

DISPOSAL

Any disposal of the materials referenced in this document should be in accordance with all applicable federal, state, providential and local regulations. The process solution can contain components other than those present in the materials as supplied. Analysis of process solutions may be required prior to disposal.