

# Oakite® Aluminum Cleaner 164

**Inhibited alkaline compound for cleaning aluminum by tank immersion.**

## PRIMARY APPLICATION

Oakite Aluminum Cleaner 164 is an inhibited alkaline compound containing silicates. It's for heavy duty tank cleaning of aluminum castings, forgings, extrusions, etc., and for cleaning aluminum sheet prior to anodizing, deoxidizing and prepaint treatments.

Besides aluminum, the detergent can be used for cleaning steel, stainless steel, copper, zinc, brass and aluminum.

The specially formulated material removes a variety of identification inks as well as shop soils like grease and oil. It is also used for cleaning aluminum equipment in food plants, oil refineries, chemical plants and other industries. With controlled foaming, Aluminum Cleaner 164 is suitable for use in air agitated tanks. It rinses freely.

Oakite Aluminum Cleaner 164 is also authorized by the USDA for use in federally inspected meat and poultry plants.

## CHEMICAL CHARACTERISTICS

chemical composition .....	blend of alkaline salts (including silicates) and surfactants
physical form .....	as received: white powder as used: milky solution
odor .....	mild
bulk density .....	1050 g/l (8.8 lb/gal)
hygroscopic tendency .....	slight
foaming tendency .....	slight when circulated; high when sprayed
recommended diluent .....	water
maximum solubility .....	30 g/l at 21 °C; 180 g/l at 82 °C (4 oz/gal at 70 °F; 24 oz/gal at 180 °F)
behavior in hard water .....	sequesters
rinsability .....	good
biodegradable surfactants .....	no
phosphate-free .....	no
normal working concentrations .....	45 to 75 g/l (6 to 10 oz/gal) of water
normal operating temperatures .....	49° to 82 °C (120° to 180 °F)
effect of prolonged boiling .....	none
pH at working concentrations .....	11.5 to 12.5 at 21 °C (70 °F)

effect of working solutions on metals..... rate of metal loss from one-hour immersion in Oakite Aluminum Cleaner 164, at 60 g/l (8 oz/gal), 82°C (180°F), projected for one year is as follows

metal (alloy)	mm/yr	in/yr
aluminum (1100)	0.00	0.000
aluminum (2024)	0.00	0.000
steel	0.00	0.000
stainless steel	0.00	0.000
magnesium	0.00	0.000
brass	0.03	0.001
zinc	0.03	0.001
copper	0.05	0.002

## APPLICATION PROCEDURE

**Preparing Solutions:** Add the total required quantity of Oakite Aluminum Cleaner 164 to half the volume of water, cold, while stirring and heat to about 82°C (180°F). Then, add the remaining half of water and adjust solution to operating temperature.

Oakite Aluminum Cleaner 164 is normally used at a 45 to 75 g/l (6 to 10 oz/gal) of water and in the temperature range of 49° to 82°C (120° to 180°F). It may be used in air-agitated tanks without foaming excessively.

**Solution Control:** Concentrations are titrated using Gardotest Procedure 92 or Gardotest Procedure 123.

For concentrations use Gardotest Procedure 92.

Sample Size: 25 mls

Factor: 1.0

For free or total alkali use Gardotest Procedure 123. (See Procedure)

## EQUIPMENT

The Chemetall Oakite Electrodeless Conductivity/Concentration Control System and Chemical Metering Pump can be used to monitor and automatically maintain the concentration of this product using conductivity. Please contact the Chemetall Oakite Process Equipment and Engineering Department for specific recommendations.

## SAFETY AND HANDLING

Prior to handling and use of Oakite Aluminum Cleaner 164 the Material Safety Data Sheet should be read and understood by all personnel in contact with the product.

## KEEP OUT OF REACH OF CHILDREN

## DISPOSAL

Any disposal of Oakite Aluminum Cleaner 164 should be in accordance with all applicable federal, state, and local regulations.

The process solution can contain components other than those present in the product as supplied.

Analysis of the process solution may be required prior to disposal.

## STORAGE

Indoor storage at temperatures between 40°F and 100°F is recommended. All containers should be tightly closed when not in use.

Oakite Products, Inc. warrants that the product or products described herein will conform with its published specifications. The products supplied by Oakite and information related to them are intended for use by buyers having necessary industrial skill and knowledge. Buyers should undertake sufficient verification and testing to determine the suitability of the Oakite materials for their own particular purpose. Since buyer's conditions of use of products are beyond Oakite's control, Oakite does not warrant any recommendations and information for the use of such products. OAKITE DISCLAIMS ALL OTHER WARRANTIES INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE IN CONNECTION WITH THE USE OF ITS PRODUCTS.

**Chemetall**  
**Oakite**



ISO 9001:2000  
FM 93653

---

Corporate Headquarters and Eastern Branch (800) 526-4473 • Central Branch (Midwest) (877) 941-3800  
Western Branch (800) 331-1197 • David Oakite Canada Limited (800) 668-4318  
Chemetall Mexicana 011 52 55 5656 1490 • Chemetall do Brasil Ltda. (5511) 4066 8800  
Website: [www.oakite.com](http://www.oakite.com) • E-mail: [oakite.products@chemetall.com](mailto:oakite.products@chemetall.com) • Shop online at [www.oakitestore.com](http://www.oakitestore.com)

F12379R9-1/01  
Printed in the USA