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Product Title: **FIXODINE® M Treatment**

Product View: **FIXODINE® M Treatment**

Description:

Status:

complete

Technical Process Bulletin

Technical Process Bulletin No. 230984

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FIXODINE® M Treatment

1. Introduction:

FIXODINE M is a powdered conditioning agent used for articles of iron and steel, ahead of a PARCO LUBRITE treatment. It eliminates the coarse, crystalline coatings sometimes obtained on iron and steel surfaces, which have been pickled with acids or cleaned with strong alkalis. It promotes the formation of a dense and fine crystalline phosphate coating.

2. Operating Summary:

Chemical:	Bath Preparation per 100 Gallons:
FIXODINE M	3.5 pounds
Operation and Control:	
Time	1 minute
Temperature	120° to 190° Fahrenheit

3. Materials:

FIXODINE M

4. Equipment:

The processing tank for use with the treatment solution should be constructed of mild steel, while the mixer shaft and impeller should be of any of the 300 series of stainless steel. The heat transfer surface should be of type 316 stainless, if steam-heated, but of Schedule 80 mild steel pipe or equivalent, if gas fired.

5. The Process:

The complete process normally consists of the following steps:

- A. Cleaning using the recommended PARCO® CLEANER
- B. Water rinsing
- C. FIXODINE M treatment
- D. Treating with a PARCO LUBRITE solution
- E. Water rinsing
- F. Soluble oil (optional)

FIXODINE M is not a cleaner. The treatment is effective only on surfaces, which are free from grease, oil, scale or other foreign matter.

6. Buildup:

Fill the tank with water. Add 3.5 pounds of FIXODINE M for each 100 gallons (U.S.) of working volume. Sometimes lower concentrations may be more desirable. A Henkel Surface Technologies representative will assist in selecting a proper concentration range. The bath is ready for use as soon as it is thoroughly mixed. Heat to the operating temperature. Proper operating temperature of the Fixodine M tank is at/or 20°F less than the operating temperature of the PARCO LUBRITE product chosen. See recommended temperatures below.

	Lubrite Temperature range	Fixodine M
Temperature Range		
PARCO LUBRITE 2	205 to 210° F	180 to 190° F
Parco Lubrite 5	180 to 185° F	160 to 185° F
Parco Lubrite LT 10	135 to 155° F	115 to 140° F

FIXODINE M does not require elevated temperatures to perform its function. Operating FIXODINE M at elevated temperatures is to prevent cooling of the PARCO LUBRITE baths when processing massive parts. A means of continuous agitation, such as a mixer, must be provided to keep the FIXODINE M in suspension.

7. Operation and Control:

Operation:

The properly cleaned articles are treated with the FIXODINE M suspension at 120° to 190° Fahrenheit for a minimum of one minute. Longer periods of time (up to 10 minutes) are not detrimental to the coating process, but are not normally required. Longer times may, however, cause some sediment to deposit on the parts affecting the aesthetics of the coating. Periodic small additions of FIXODINE M are required to maintain activity. The bath life will depend on the particular operations; however, dumping at the end of each week's operation is advisable.

Testing and Control:

(This analysis requires the use of a Hach DR/2000 spectrometer, a DR/2400 spectrometer, a DR/820 colorimeter, or a "Pocket Colorimeter" specific to manganese).

Obtain a sample of the operating bath. Filter a small amount of the bath (approximately 15 -20 ml) through Whatman No. 42 filter paper. Pipette 10 mls into a clean 100 ml graduated cylinder or 100 ml volumetric flask. Dilute to line with DI water and mix well. Follow Hach procedure 8034 for method of analysis if using models DR/2000, DR/2400 or DR/820. If using Hach "Pocket Colorimeter", follow procedure provided for manganese (Mn), High Range.

Multiply reading by 10 to obtain ppm active Fixodine M.

Concentration	Reading	Active Fixodine M
0.8 lbs/100 gallons (1 g/L)	2.3	23 ppm
1.7 lbs/100 gallons (2 g/L)	4.6	46 ppm
2.5 lbs/100 gallons (3 g/L)	6.9	69 ppm
3.5 lbs/100 gallons (4.2 g/L)	9.7	97 ppm

The addition of 0.35 lbs (159 g)/100 gallons Fixodine M increases active concentration 10 ppm.

From use, and upon aging, the FIXODINE M bath becomes less effective. Whenever the PARCO LUBRITE coating is not sufficiently uniform and finely crystalline in texture, the bath should be replenished by adding about three-fourths pound of FIXODINE M per 100 gallons. If two or three additions of FIXODINE M do not produce the desired coating, discard the bath and build up a fresh one. With experience, these additions can be made at appropriate periodic intervals so that the PARCO LUBRITE coating is always finely crystalline. Frequently, an addition at the beginning of each shift is satisfactory.

After conditioning, the articles go directly into the PARCO LUBRITE solution without a water rinse.

8. Waste Disposal Information:

Applicable regulations covering disposal and discharge of chemicals should be consulted and followed.

Disposal information for the chemical in the form as supplied is given on the Material Safety Data Sheet for the product.

The treatment solution contains heavy metal and phosphate. Waste treatment may be required prior to discharge to the sewer. (Refer to Waste Treatment Information Bulletin WT1007, available on request.)

Wastewater treatment sludges from electroplating (metal treatment) operations are normally hazardous waste unless delisted or excepted. (Title 40 Code of Federal Regulations 261.3).

The treatment solution sludge can contain ingredients other than those present in the chemical as supplied and analysis of the solution and/or sludge may be required prior to disposal.

9. Precautionary Information:

When handling the chemical, in the form as supplied, the precautionary, first aid and handling recommendations on the Material Safety Data Sheet for the product should be read, understood and followed.

The treatment solution is alkaline and can cause irritation of the skin and eyes. Do not get in eyes, on skin or on clothing. In case of contact, follow the recommendations on the Material Safety Data Sheet for FIXODINE M.

Testing Reagents and Apparatus
 (Order only those items, which are not already on hand)

<u>Code</u>	<u>Quantity</u>	<u>Item</u>
205853	1	Graduated Cylinder, Glass, 100 ml
205882	1	Whatman # 42 Filter Paper

Other Equipment

<u>Supplier</u>	<u>Catalogue</u>	<u>Quantity</u>	<u>Item</u>
Hach Co. P.O. Box 389 Loveland, CO	5930000 4844000 4670015	1 1 1	Hach Spectrophotometer DR/2400 or DR/820 Hach "Pocket Colorimeter"
Manganese 80539 included)			(Mn) High Range (100 tests
	24300-00	1	Hach Test Kit for Manganese, HR (Enough for 100 tests)
(1000	12791-42	100 ml	Manganese standard solution, mg/L Mn
ml	14258-10	16/pkg	Manganese standard solution, 10 ml Voluette Ampoule, 250 mg/L Mn.
(800)227-4224 (Price Information & Ordering)			

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