TN-64

IMMERSION TITANIUM NITRIDE STRIPPER

FOR FAST REMOVAL OF TITANIUM NITRIDE FROM

STEEL AND STAINLESS STEEL

MANUFACTURED BY

METALX SPECIALTY PRODUCTS, INC.

1333 Virginia Street SW
LENOIR, NC 28645

828-758-4997

INTRODUCTION

TN-64 is an immersion stripper for titanium nitride coatings. It was designed primarily to strip titanium nitride from steel or stainless steel although it will strip from many substrates. Each application should be thoroughly tested in a laboratory setting to determine its usefulness.

EQUIPMENT

TANKS: Tanks should be lined or made of stainless steel.

HEATERS: Teflon coated heaters are recommended although stainless heaters can be used.

MIXERS: Stainless steel

CHEMICALS

- TN-64 STRIPPER (one pound/gallon)
- Commercial (50 %) Hydrogen Peroxide (15 % by volume)

MAKEUP

Note: All calculations are based on the final working volume of the stripping tank.

1. Fill the tank to about 60 % of the working volume with 130 F water.
2. Add one pound of TN-64 per gallon (calculated using final working volume).

Example: 100-gallon working volume would require 100 pounds of TN-64

3. Stir and dissolve the TN-64 completely.
4. Add 15 % by volume (calculated using final working volume) of hydrogen peroxide (50 % strength). Example: 100 gallon working volume would require 15 gallons 50% hydrogen peroxide.
5. Top off the tank with 130 F water to its working volume.
6. Stir thoroughly before use, and occasionally during use.
7. Heat to 130-145 F before use.

PREPARATION OF PARTS

Parts should be clean and free of grease, dirt, paint, and etc. A general rule is that if it is clean enough to coat it is clean enough to strip.

STRIPPING PROCEDURE

Parts are racked or placed in baskets. Racks should have stainless rack tips. Baskets should be plastic (polypropylene), however stainless baskets may to used.

The parts are immersed into the hot TN-64 stripping solution. The titanium nitride coating will begin to effervesce and will continue to do so until stripped.

The stripping rate is temperature dependent, however, a maximum temperature of 145 Fahrenheit is recommended because of the excessive decomposition of hydrogen peroxide at higher temperatures.

BATH MAINTENANCE

The hydrogen peroxide content is monitored using the procedure listed on the attached graph. Low hydrogen peroxide will cause slow stripping rates. When the addition of hydrogen peroxide does not increase the stripping rate the bath should be discarded and a new one made up.

DISPOSAL

The spent bath will contain sodium titanate and should be disposed of accordingly. The spent bath will contain residual hydrogen peroxide that can be destroyed by the careful addition of dilute solution of sodium bisulfite. CAUTION: This reaction is exothermic .

SAFETY

Read the MSDS for 50 % hydrogen peroxide supplied by the manufacturer. Take no chances with the eyes, always wear eye protection. Solution that contain hydrogen peroxide can be dangerous if exposed to the eyes or skin. Always wear eye protection when working with hydrogen peroxide. The greater the hydrogen peroxide content of the solution the greater the danger. The 15 % solution is dangerous to the eyes and, if exposed, should be washed immediately with clean water. Get immediate medical attention. If the skin is exposed, it may sting and/or turn white. Immediately wash with water. The whitening of the skin will normally disappear in a couple of hours with no detrimental effect. 50 % hydrogen peroxide can cause skin burns, therefore, special care should be taken when handling. Permanent eye damage, even blindness, can result if contact is made with 50 % hydrogen peroxide.

NOTICE: METALX SPECIALTY PRODUCTS, INC. believes the information contained herein is accurate. The suggested procedures are based on experience as of the date of publication. They are not necessarily all-inclusive or fully adequate in every circumstance. Also, the suggestions should not be confused with nor followed in violation of applicable laws, regulations, rules or insurance requirements.

NO WARRANTY IS MADE, EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE.