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COLPHOS MN 25

TECHNICAL DATA
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COLPHOS MN 25

MEDIUM TO HEAVY IMMERSION MANGANESE PHOSPHATE

COLPHOS MN 25	is a medium to heavy immersion manganese phosphate formulated to provide an excellent basis for painting and rubber bonding.
COLPHOS MN 25	is a nickel free bath with added chelators to reduce sludge formation.
COLPHOS MN 25	can be used as a medium or a heavy manganese phosphate depending on makeup concentration and process time.
COLPHOS MN 25	effectively carries lubricant to provide exceptional lubricity for tube and wire drawing.

OPERATING PARAMETERS

	<u>RANGE</u>
COLPHOS MN 25	8.0 - 12.0% by volume
Iron	0 - 5 points
Free Acid	2 - 4 points
Total Acid	10 - 15 points
Time	10 - 60 minutes
Temperature	165 - 210° F

SOLUTION MAKEUP

1. Fill the tank with water to approximately 75% of the required operation level.
2. Heat to 120° F.
3. Add desired volume of COLPHOS MN 25 and mix well.
4. Fill to full operating level with water, heat to operating temperature and begin operation.

EQUIPMENT

Tanks may be constructed of mild steel. For maximum life, 316 stainless steel is recommended. Heating coils should be stainless steel.

TYPICAL CYCLE

1. CLEAN
2. RINSE
3. PICKLE
4. RINSE
5. PHOSPHATE
6. RINSE
7. OIL

ANALYTICAL PROCEDURE

IRON ANALYSIS

1. Pipette a 10 mL sample of the working bath into an Erlenmeyer flask.
2. Add 10 - 15 droplets of 50% sulfuric acid.
3. Titrate sample with 0.2N potassium permanganate.

CALCULATION: mL Titrated = points of iron

TOTAL ACID ANALYSIS

1. Pipette a 10 mL sample of the phosphate solution into an Erlenmeyer flask.
2. Add 3 - 4 droplets of 50% phenolphthalein.
3. Titrate sample with 0.1N sodium hydroxide to a pink endpoint.

CALCULATION: mL Titrated = total acid points of the bath

FREE ACID ANALYSIS

1. Pipette a 10 mL sample of phosphate solution into an Erlenmeyer flask.
2. Add 3 - 4 droplets of bromophenol blue.
3. Titrate sample with 0.1N sodium hydroxide to a blue endpoint.

CALCULATION: mL Titrated = free acid points of the bath


NOTE: Regular analysis of the bath for correct chemical concentration is recommended. New baths will have higher than average numbers for free and total acid. These will quickly fall into range as loads are added to the bath.

HANDLING & STORAGE

Columbia Chemical recommends referring to the specific product Safety Data Sheets for safety, handling, and storage precautions.

NON-WARRANTY

The data contained in this bulletin is believed by Columbia Chemical Corp. to be accurate, true, and complete. Since, however, final methods of use of this product are in the hands of the customer and beyond our control, we cannot guarantee that the customer will obtain the results described in this bulletin, nor can we assume responsibility of the use of this product by the customer in any process which may infringe the patents of third parties.

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