



# Chemical Methods, Inc.

20338 Progress Drive  
Cleveland, Ohio 44149  
216/476-8400  
FAX: 216-476-1231  
www.chemicalmethods.com

## TECHNICAL DATA SHEET

### CM-5004 LOW TEMPERATURE SPRAY CLEANER

#### PRODUCT DESCRIPTION

**CM-5004** is a mildly alkaline liquid spray cleaner designed to remove oils, greases, fabricating oils, drawing and forming lubricants, cutting oils, quench oils, stamping oils, and shop dirt from ferrous metals and stainless steel. **CM-5004** is capable of being used at a wide range of operating conditions including use in Proceco type spray washers. The cleaning agents in **CM-5004** penetrate and loosen tough soils allowing them to be completely removed by rinsing. **CM-5004** is a non-silicated product and is effective in hard water and does not leave sludge or scale build-up that occurs with the use of heavily silicated cleaners.

#### BENEFITS

- Concentrated Formula With High Soil Tolerance
- Non-Silicated & Hard Water Tolerant
- Low Residue / Non-Flammable
- Sweet Agreeable Odor

#### PHYSICAL AND CHEMICAL PROPERTIES

Appearance, Concentrate	Clear Liquid
Appearance, 5% Dilution	Clear Liquid
Specific Gravity	1.188
Pounds per Gallon	9.9
pH, 5% dilution	12.5 +/- 0.4

#### USE DIRECTIONS -

Parameter	Range
Concentration	3% to 10%
Temperature	90 to 160°F
Time	30 seconds to 5 minutes
Pressure	15 to 60 psi

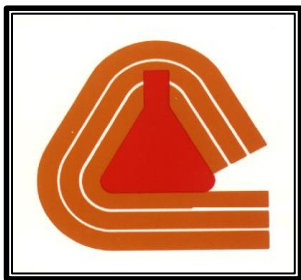
#### POWER WASHER – Tunnel Washer or Proceco Type

Charge wash tank with a 3 to 5 percent concentration of **CM-5004**. Maintain a wash solution temperature of 90°F - 150°F. Actual temperatures and concentrations will vary depending on degree of soil contamination.

*Note: Operating at higher concentrations will allow lower temperatures and shorter timeframes. Exact concentration, temperature and time will vary depending on soil types and amounts, system capabilities, part configuration, and part racking. Additions of CM-DF#6 may be necessary to control foam at very lowest temperatures.*

#### SAFETY AND HANDLING

Refer to material safety data sheet for additional information about this product.



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### CM-5004 TITRATION CONTROL PROCEDURES

#### BURET METHOD – FREE ALKALINITY

##### *EQUIPMENT:*

- Plastic 250 ml Flask
- Graduated Pipet
- 10 ml Buret
- 0.1 N HCl Titrating Solution
- Phenolphthalein Indicator Solution

##### *PROCEDURE:*

1. Measure 10ml sample in pipette.
2. Empty into flask.
3. Add 3-5 drops of Indicator Solution.
4. Add Titrating Solution slowly to flask from buret.
5. Swirl flask between and during titrant additions.
6. Continue titrating until color changes from **Deep Pink** to **Colorless**.
7. Record ml required to impart color change as Free Alkalinity.
8. Multiply ml of titrating solution by **0.80** to obtain % by volume.

#### BATH LIFE DETERMINATION - ALKALINITY RATIO METHOD

##### *PROCEDURE:*

1. Measure 10ml sample in pipette.
2. Add packet of bromocresol green indicator to flask.
3. Add Titrating Solution slowly to flask from buret.
4. Swirl test tube between titrant drop additions.
5. Continue titrating until color changes from **Deep Green** to **Red**.
6. Record ml required to impart color change as Total Alkalinity.
7. Alkalinity Ratio = Free Alkalinity / Total Alkalinity
8. Ratio of fresh bath is approximately 0.54. This value will decrease as the bath is used. The tank should be dumped and recharged when the value approaches 0.31.