**TETRA-CHEM**
INDUSTRIES LTD.

271 INGERSOLL ST. S.
INGERSOLL, ONTARIO
CANADA N5C 3J7

TEL: (519) 485-4370
TOLL FREE: (888) 658-5515
FAX: (855) 762-4446
EMAIL: info@tetra-chem.com
WEB SITE: www.tetra-chem.com



# Product Application Presentation

**Product Identifier:** **TCI 1231 H.D.**

**Process Identifier:** Hot aqueous machine coolant cleaner concentrate for raw steel-galvanized, chrome plated and aluminum pipe

## Product Presentation

**TCI 1231 H.D.** is a non-foaming liquid concentrate of biodegradable detergents, mild alkaline builders incorporating special buffers, chelating agents, corrosion inhibitors and solvent degreasers.

**TCI 1231 H.D.** is charged to a volume of hot water 60–80°C at a rate of 100 ml/L.

**TCI 1231 H.D. when used according to directions will prevent rust and corrosion of all wetted parts (steam, vapor or liquid) of the steel cabinet and solution holding reservoir.**

Immersion tank: TCI 1231 H.D. @ 10%

Instant degreasing with agitation.

Internal & external quick dry.

## Process Specificity

Hot aqueous (40–60°C) immersion with high volume flow agitation cleaning of soiled aluminum, ferrous and copper metals and their alloys pertaining to automotive and industrial piping and tubing. Soils effectively removed through manual or jet pump turbulence include: dirt, oil, machine coolants, drawing compounds, grease and metallic particles. The metals are cleaned by emulsification, dispersion, saponification and sludge settling and/or a combination of these mechanisms.

The cleaning solution comes in contact with the entire surface of the part when properly placed on a dip basket to prevent shadowing. After the alkaline cleaner has affected the soil on the part, the soil is removed from the metal surface by solution flushing, i.e. mechanical means of solution movement and allowed to air dry aided by the intrinsic heat of the vat.

The cleaning cycle (1–15 minutes) depends on the type of dirt and the type of parts cleaned. For normal temperature and product concentration extremely dirty parts will be clean in 15 minutes. Due to the hot cleaning process, parts dry quickly with no residual white powder residue. Use an airblow gun to remove the residual cleaning solution from pooling areas, threaded bolt holes, cracks and crevices.

## Packaging & Code:

**20 L carboy: 1231-020**
**205 L drum: 1231-205**
**1,000 L IBC: 1231-1000**

## Solution Maintenance

The ready to use cleaning solution concentration is maintained through simple metered addition of the **TCI 1231 H.D.** concentrate. Solution strength is determined by titrating with a dilute acid to the phenolphthalein end point with the simple **Titration Kit 1231** provided

The custom made **Quality Control Titration Kit 1231** is available from **Customer Service LAB**.

If a foaming problem should arise, due to saponifiable contamination, check solution strength first, and only if the solution strength and temperature are normal, add the **TCI 015 H.D. food grade** defoamer.

**CAUTION:** you may shut the heat off overnight or on weekends to allow the oil skimmer to remove floating protective oils and waxes that separate during cooling. The tramp oil may also be pushed to one end and vacuumed off. The solution must be back up to 60–80°C before cleaning resumes.

**Solution Disposal:** The clean chemical solution is biodegradable, but according to the Ontario Ministry of the Environment and Climate Change "Regulation 347", and local municipal by-laws the cleaning process may have generated a hazardous or liquid industrial waste in which case it must be: Discharged through a treatment system e.g. 3 stage interceptor; or Manifested and removed by a licensed carrier and received by a licensed receiver accompanied by a Generator Registration Number; OR removed by a licensed carrier and received by a licensed receiver under a service contract. Contact **Tetra-Chem Industries Ltd.** for complete and complementary analytical tests in compliance with the regulations prior to sewer discharge.

Machine coolant & drawing compound contamination

TCI 1231 H.D. @ 2.5% in 50°C water

Machine Coolant & Drawing Compound contamination removed externally by immersion and internally by flushing in alkaline cleaner with multi-metal corrosion inhibition.

Machine Coolant & Drawing Compound TRAMP OIL floating on water squeezed to one end of the tank and removed with vacuum suction to maintain solution longevity, cleaning efficiency and consistant quality control.