MANUFACTURER

TETRA-CHEM INTERNATIONAL INC.

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ChemWash
HYDROTEK TCi APPLIED SCIENCE

SPECIALTY CHEMISTRY APPLICATION TECHNOLOGY
INNOVATIVE ENGINEERING WASTE MANAGEMENT SYSTEMS

2012 EDWARDS
WICHITA, KS 67213 USA

RE-ORDER: 316-744-SOAP

# PRODUCT APPLICATION PRESENTATION

**PRODUCT IDENTIFIER:**

**PROCESS IDENTIFIER:**

## T C I 3 3 3 H. D.™

**REMOVAL OF WELDING SOOT FROM POLISHED ALUMINUM STAINLESS STEEL PASSIFIER**

### PRODUCT PRESENTATION:

**TCI 333 H.D.** is a ready to use complex liquid formulation of environmentally friendly dilute acids with unique and stable biodegradable surface active agents. It is designed for the retention and restoration of high optical reflectivity on polished aluminum, hard chrome and stainless steel surfaces.

### PRODUCT APPLICATION PROCEDURE:

**THIS PROCEDURE IS FOR TRAINED PERSONNEL ONLY**

To start operation, set up the "CHEMICAL APPLICATOR MANIFOLD SYSTEM" and regulate the air pressure to 340-400 kPa (50-60 psi). The pump will operate automatically by starting and stopping the flow on demand at the wand.

**CAUTION:** Do not spray TCI 333 H.D. directly onto a hot metal surface since it will alter the chemistry resulting in staining. Walk around the whole unit being treated and thoroughly cool and wet the entire surface on a hot sunny day. The best time is early in the morning or evenings. Spray the chemical solution directly from the drum onto the metal surface and have the PRESSURE WASHER ready for rinsing. Apply the chemical solution as a spray to a **3-6 FOOT** section of the units body starting from the bottom and working up. Assure complete thin film coverage. Once the application is complete, allow approximately a 1-3 min chemical exposure time. Exposure time is directly proportional to soil thickness. Brushing is optional.

Rinse the section with high pressure water starting at the bottom and consistently moving with a 10 cm fan or less in a horizontal pattern until the top is reached. Then rinse all residual chemical solution thoroughly from the surface working from the top down. Be sure to always rinse the chemical solution overspray from other sections in the same fashion. Special cautions apply to the bulk carriers because of their rounded tops. When the entire unit is complete, a final water rinse and flush will assure no residual chemical activity on the aluminum surface.

### PROCESS INTRODUCTION:

**TCI 333 H.D.** formula is designed to effectively remove residual dirt, oils, road film, black welding and diesel soot, corrosion, oxide film, design marker and microscopic projections from polished rolled and extruded aluminum surfaces without "WHITE" etching or pitting.

### PRECAUTIONARY NOTE:

Insufficient rinsing may result in streaks as the surface dries. (ie. trapped chemical) This precaution only applies to rolled aluminum and not to extrusions or sheeting on newly fabricated units. Since no brushing is required, be consistent with wand pattern. For extra pride, chamois surface dry.

**This chemical treatment procedure passifies aluminum metal surfaces and inhibits against corrosion. As the new aluminum surface is now exposed to the air it will form a natural aluminum oxide film protecting it against pit corrosion. Accessories on finished products, such as light assemblies, reflectors, glass & mirrors, plastics, brass, stainless steel, hard chrome, decals, logos, wood, tarps, mud flaps or rubber tires are not altered or defaced by this chemical solution when used according to directions.**

### PROCESS SPECIFICITY:

The cleaning ability of this product is restricted to quality rolled or extruded primary aluminum articles. **TCI 333 H.D.** is applied as a light mist to the surface to be cleaned using the MANUFACTURER'S approved CHEMICAL APPLICATOR MANIFOLD SYSTEM (See Brochure) and rinsed with a HIGH PRESSURE COLD WATER WASHER operating at > 20 000 kPa @ 15 L / min (2800 psi @ 4 gal / min). This product is designed for cleaning manufactured products eg. MOTOR HOMES, RV'S, HORSE TRAILERS, RECYCLING TRUCKS, FEED CARRIERS, SEMI DUMPS, BULK CARRIERS (MILK, FLOUR, CEMENT, PETROLEUM etc.) WHEELS, FUEL TANKS & CATTLE POTS at the maintenance level of the owner or fleet operators facility.

### WASTE DISPOSAL PROCEDURE:

The cleaning procedure may generate a hazardous industrial waste. Comply with EPA's Federal, Provincial, State and local regulations.

**PACKAGING: 005, 055, 330 USgal**

**CAUTION: DO NOT LET ANY CHEMICAL DRY ON THE SURFACE (WIND DRIFT CHEMICAL SPRAY IS A POTENTIAL DANGER)**
**ie. CONCENTRATED CHEMICAL WITHOUT WATER MAY STAIN SURFACES IF NOT RINSED**

PLEASE CALL OUR **TECHNICAL SUPPORT LINE** @ 1-888-658-5515 FOR SOLUTIONS TO YOUR INDUSTRY.

**CONSULT SERVICE REPRESENTATIVE FOR SAFE AND EFFICIENT APPLICATION**

**THE INFORMATION GIVEN HEREIN IS GIVEN IN GOOD FAITH BUT NO WARRANTY, EXPRESSED OR IMPLIED IS MADE**

Harmonized Tariff Schedule **HS 3405.90.00.00**

# M. S. D. S.

## MATERIAL SAFETY DATA SHEET

## SECTION I - PRODUCT IDENTIFICATION AND USE

**PRODUCT NAME:** T C I 3 3 3 H. D.
**PRODUCT USE:** REMOVAL OF WELDING SOOT FROM POLISHED ALUMINUM AND STAINLESS STEEL PASSIFIER
**EMERGENCY PHONE #:** (519) 454-4370
**MANUFACTURER'S NAME AND ADDRESS:**
TETRA-CHEM INTERNATIONAL INC.
71 JOHN ST. E., BRIGHT ON CA N0J 1B0
**TEL:** (519) 454-4370 - **FAX:** (519) 454-4362
**SUPPLIER'S NAME:** CHEM WASH
2012 EDWARDS
**WICHITA**, KS 67213 **TEL:** (316) 744-7627

## SECTION II - HAZARDOUS INGREDIENTS

| HAZARDOUS INGREDIENTS | CAS NUMBER | % BY WEIGHT |
|---|---|---|
| a) NITRATING ACIDS | 007-697-372 | 3-7 |

| (SPECIES-ROUTE) $LD_{L0}$ | $LC_{50}$ |
|---|---|
| a) (HUMAN-ORAL): 430 mg/kg | N.AV. |

## SECTION III - PHYSICAL DATA

**PHYSICAL STATE:** SOLID ❑ LIQUID ☒ GAS ❑
**ODOR AND APPEARANCE:** IRRITATING ACIDIC ODOR, LIGHT AMBER
**BOILING POINT:** >100 $^{o}$C or 212 $^{o}$F
**FREEZING POINT:** -10$^{o}$C or 14 $^{o}$F
**pH:** 1
**% VOLATILE:** N.AP.
**SPECIFIC GRAVITY (g/ml) (WATER=1):** 1.07
**ODOR THRESHOLD:** N.AV.
**VAPOR PRESSURE:** N.AV.
**VAPOR DENSITY (AIR=1):** N.AV.
**OIL / WATER DISTRIBUTION COEFF.:** N.AV.
**SOLUBILITY IN WATER:** 100%
**EVAPORATION RATE (n-BUTYL ACETATE=1):** N.AV.

## SECTION IV - FIRE AND EXPLOSION HAZARD

**FLAMMABILITY:** YES ❑ NO ☒
**UNDER WHAT CONDITIONS:**
**TDG FLAMMABILITY CLASSIFICATION:**
**AUTO-IGNITION TEMPERATURE:** N.AP.
**FLASH POINT:** NONE **METHOD USED:**
**FLAMMABLE LIMITS: LEL (% BY VOLUME):** N.AP.
**UEL (% BY VOLUME):** N.AP.
**MEANS OF EXTINCTION:**
**WATER** ❑ **$CO_2$** ❑ **DRY CHEMICAL** ❑ **OTHER** ❑
**UNUSUAL FIRE AND EXPLOSION HAZARDS / REMARKS:** THIS MATERIAL DOES NOT BURN. USE APPROPRIATE MEANS OF EXTINCTION FOR SURROUNDING FIRE. USE WATER SPRAY TO COOL CONTAINERS AND HELP PREVENT RUPTURE DUE TO STEAM PRESSURE FORMATION.
**EXPLOSION DATA - SENSITIVITY TO MECHANICAL IMPACT:** NONE
**SENSITIVITY TO STATIC DISCHARGE:** NONE

## SECTION V - REACTIVITY DATA

**STABILITY:** UNSTABLE ❑ STABLE ☒
**INCOMPATIBILITY TO OTHER SUBSTANCES:** BASES, METALLIC POWDERS REACTION RELEASES FLAMMABLE AND/OR POISONOUS GASES.
**CONDITIONS OF REACTIVITY:** MIXING
**HAZARDOUS DECOMPOSITION PRODUCTS:** OXIDES OF NITROGEN

## SECTION VI - TOXICOLOGICAL PROPERTIES

**WHMIS:** CORROSIVE MATERIAL (E)

**POTENTIAL HEALTH HAZARDS**
**ROUTES OF ENTRY:**
**SKIN (ABSORPTION):** YES **(CONTACT):** YES **INGESTION:** YES
**INHALATION (ACUTE) :** YES **(CHRONIC):** YES **EYE:** YES

| INGREDIENT | ACGIH TLV | OSHA PEL |
|---|---|---|
| a) NITRATING ACIDS | 5 mg/m$^3$ (8 H TWA) | |

**EFFECTS OF ACUTE EXPOSURE TO PRODUCT:**
**EYE CONTACT:** MAY CAUSE PAIN, AND SEVERE EYE IRRITATION, WITH CORNEAL INJURY WHICH MAY RESULT IN IMPAIRMENT OF VISION, EVEN BLINDNESS.
**SKIN CONTACT:** MAY CAUSE SKIN BURNS WITH YELLOW SKIN DISCOLORATION.
**INHALATION:** IRRITATION OF THE NOSE AND THE THROAT.
**INGESTION:** BURNS TO THE MOUTH AND THROAT, PAIN IN THE STOMACH, NAUESA, VOMITING. IN SEVERE CASES, COLLAPSE AND DEATH.
**CARCINOGENICITY, REPRODUCTIVE EFFECTS, TERATOGENICITY, MUTAGENICITY:**
NO REPORTED EFFECTS ON HUMANS UNDER NORMAL CONDITIONS OF USE.
**TARGET ORGANS:** NONE KNOWN
**MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:**
LUNG DISEASES
**EFFECTS OF CHRONIC EXPOSURE TO PRODUCT:**
DERMATITIS MAY OCCUR FROM PROLONGED OR REPEATED SKIN CONTACT.
**SENSITIZATION TO PRODUCT:** N.AV.
**SYNERGISTIC PRODUCTS:** N.AV.

## SECTION VII - PREVENTIVE MEASURES

**RESPIRATORY PROTECTION AND TYPE:** IN CONFINED AREAS USE: NIOSH APPROVED RESPIRATOR FOR ACID MIST AND VAPORS BELOW 250 mg/m$^3$.
**PROTECTIVE GLOVES:** NITRILE, NEOPRENE
**EYE PROTECTION:** SAFETY GOGGLES **FOOT WEAR:** SAFETY SHOES
**OTHER SPECIFIC CLOTHING OR EQUIPMENT REQUIRED:** EYE BATH STATION
**ENGINEERING CONTROLS:** MECHANICAL VENTILATION IN CONFINED AREAS TO MAINTAIN AIR QUALITY BELOW TLV.
**LEAK AND SPILL PROCEDURE:** FOR SMALL SPILLS NEUTRALIZE WITH SODIUM BICARBONATE (NaHCO3) OR A MIXTURE OF SODA ASH/SLAKED LIME. FOR LARGE SPILLS RECOVER LIQUID IF IT CAN BE DONE SAFELY.
**WASTE DISPOSAL:**
**THE CLEANING PROCESS MAY GENERATE A HAZARDOUS INDUSTRIAL WASTE. COMPLY WITH CANADIAN MINISTRY OF THE ENVIRONMENT & ENERGY REGULATION 347 AND LOCAL MUNICIPAL BY-LAWS.**
**COMPLY WITH USA EPA'S FEDERAL, STATE & LOCAL REGULATIONS.**

**HANDLING PROCEDURES AND EQUIPMENT:** ACID SAFETY REGULATIONS.
**STORAGE REQUIREMENTS:** INDOORS AT AMBIENT TEMPERATURES.
**SPECIAL SHIPPING INFORMATION:** CORROSIVE LIQUIDS, N.O.S.* (NITRATING ACID MIXTURE) CLASS 8 (9.2), UN1760, PG III

## SECTION VIII - FIRST AID MEASURES

**EYE CONTACT:** FLUSH EYES WITH WATER FOR 15 MIN.TURN BACK EYE LIDS. GET MEDICAL ATTENTION.
**INHALATION:** MOVE PATIENT TO FRESH AIR. IF BREATHING HAS STOPPED, OR IS LABORED, GIVE OXYGEN OR ARTIFICIAL RESPIRATION. GET MEDICAL ATTENTION.
**SKIN CONTACT:** REMOVE CONTAMINATED CLOTHING. FLUSH AREA WITH WATER FOR 15 MINUTES. GET MEDICAL ATTENTION.
**INGESTION:** DO NOT INDUCE VOMITING. ONLY IF CONSCIOUS, GIVE LARGE AMOUNTS OF MILK OR WATER. KEEP PATIENT CALM. CALL PHYSICIAN IMMEDIATELY.
**SOURCES USED:** SUPPLIER MSDS
**ADDITIONAL INFORMATION:** ALWAYS ADD ACID TO WATER UPON DILUTION

## SECTION IX - PREPARATION DATA

**PREPARED BY:** HEALTH AND SAFETY COMMITTEE **DATE:** 06 JAN 2009
**CONTACT:** AL STRUTHMANN (Hon. BSc.) **TEL:** (519) 454-4370
**CANADA & USA TOLL FREE** 1-888-658-5515 **FAX:** (519) 454-4362

**NOTE: N. AP. = NOT APPLICABLE N. AV. = NOT AVAILABLE**