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TETRA-CHEM INTERNATIONAL INC.

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Chem Wash
HYDROTEK TCI APPLIED SCIENCE

SPECIALTY CHEMISTRY INNOVATIVE ENGINEERING
APPLICATION TECHNOLOGY WASTE MANAGEMENT SYSTEMS

2012 EDWARDS
WICHITA, KS 67213 USA



email: info@tetra-chem.com



RE-ORDER: 316-744-SOAP

PRODUCT APPLICATION PRESENTATION

PRODUCT IDENTIFIER:

TCI 524 H.D.™

PROCESS IDENTIFIER:

"NEW" EXTRUDED ALUMINUM BRIGHTENER AND CLEANER

PRODUCT PRESENTATION:

TCI 524 H.D. is a concentrated amber colored formulation of mild acids and powerful biodegradable detergents. **TCI 524 H.D.** is pumped from the shipping container and applied to the surface as is. This solution is made of high foaming detergents for fast surface coverage and thorough soil penetration. This product is designed for tarnished stainless steel tankers and extruded aluminum articles on horse and cattle trailers.

PROCESS INTRODUCTION:

The applied solution formulation is designed to effectively remove deeply embedded road films, dirt, oils, diesel soot, black welding soot, corrosion and oxide coatings without etching the surface to a white finish or leaving undesirable streaks. This procedure must only be used once a year. In the meantime, regular washing should be done with **TCI 710 H.D.** Every time you clean, another layer of silicate protection is added to the aluminum to protect against salt corrosion.

PROCESS SPECIFICITY:

THIS PROCEDURE IS FOR TRAINED PERSONNEL ONLY

To start operation, set up the "CHEMICAL APPLICATOR FOAMING SYSTEM" and regulate the air pressure to 340-400 kPa (30-50 psi). The pump will operate automatically by starting and stopping the flow on demand at the wand.

CAUTION: Do not spray or foam TCI 524 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 or foam 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 the entire surface of the units body starting from the bottom and working up. Assure complete coverage. Once the application is complete, allow approximately a 15-30 min chemical exposure time. Exposure time is directly proportional to soil thickness. Brushing is optional.

Rinse the section with high pressure @ 3000 psi 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 will assure no residual chemical activity on the aluminum or stainless steel surfaces.

PACKAGING: 005, 055, 330 USgal



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

SECTION I - PRODUCT IDENTIFICATION AND USE

PRODUCT NAME: T C I 5 2 4 H. D.
PRODUCT USE: REMOVAL OF CHEMICAL AND ATMOSPHERIC
 CORROSION FROM EXTRUDED ALUMINUM ARTICLES
 AND FILMING FROM STAINLESS STEEL
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) HYDROGEN FLUORIDE	7664-39-3	5-10

(SPECIES-ROUTE) LD₅₀ LC₅₀

a) N.AV. (MONKEY - inhalation): (4320ppm, 1hr)

SECTION III - PHYSICAL DATA

PHYSICAL STATE: SOLID ☐ LIQUID ☒ GAS ☐

ODOR AND APPEARANCE: IRRITATING ACIDIC ODOR, LIGHT AMBER

BOILING POINT: >100 °C or 212 °F

FREEZING POINT: -20°C or 10 °F

pH: 1

% VOLATILE: >50

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.AV.

FLASH POINT: NONE **METHOD USED:**

FLAMMABLE LIMITS: LEL (% BY VOLUME): N.AV.
 UEL (% BY VOLUME): N.AV.

MEANS OF EXTINCTION:

WATER ☐ **CO₂** ☐ **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; REACTS VIOLENTLY WITH REDUCING AGENTS: WOOD, PAPER, ALCOHOL, TURPENTINE, HYDROGEN SULPHIDE, METALLIC POWDERS etc.

REACTION RELEASES FLAMMABLE AND/OR POISONOUS GASES. POTENTIALLY DANGEROUS REACTIONS CAN OCCUR INCLUDING FIRES. **CONDITIONS OF REACTIVITY:** MIXING

HAZARDOUS DECOMPOSITION PRODUCTS: OXIDES OF NITROGEN

SECTION VI - TOXICOLOGICAL PROPERTIES

CANADA WHMIS: CORROSIVE MATERIAL (E)
 CAUSING IMMEDIATE AND SERIOUS TOXIC EFFECTS (D1)

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) HYDROGEN FLUORIDE 2.5 mg/m³ (STEL)

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, NAUSEA, 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/m³.

PROTECTIVE GLOVES: NITRILE, NEOPRENE

EYE PROTECTION: FACE SHIELD **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/SKAKED 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 LIQUID, TOXIC, N.O.S. CLASS 8 (6.1), UN2922, 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

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