

MATERIAL SAFETY DATA SHEET

May be used to comply with
 OSHA's Hazard Communication Standard
 29 CFR 1910.1200. Standard must be consulted for specific requirements.

Identity (As used on Label and List) COPPER ANTI-SEIZE TAPE
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Section I

Manufacture's Name UNASCO P/L	Emergency Telephone Number NONE AVAILABLE
Address (Number, Street, State and ZIP Code) 4/921 TRANSPORT WAY PETALUMA CA 94954	Telephone Number for Information (TEL): 707 763 5413 (TOLL FREE): 1 800 773 5413 (FAX): 707 763 5487
Date Prepared APRIL 2009	Prepared by DAVID BENTLEY

Section II – Hazardous Ingredients/Identity Information

Ingredients	OSHA PEL	CAS Number	ACGIH TLV
Polytetrafluoroethylene	N/A	9002-84-0	N/A
Petroleum Solvent	N/A	64742-47-8	N/A
Copper	N/A	7440-50-8	N/A

Section III – Physical/Chemical Characteristics

Boiling Point N/A	Specific Gravity (H ₂ O = 1) 2.7
Vapor Pressure (mm Hg) N/A	Melting Point N/A
Vapor Density (air = 1) N/A	Evaporation Rate (Butyl Acetate = 1) N/A
Solubility in Water INSOLUBLE	Appearance and Odor COPPER COLORED FILM/ODORLESS

Section IV – Fire and Explosion Hazard Data

Flash Point (Method Used) N/A	Flammable Limits N/A	LEL	UEL
Extinguishing Media ANY STANDARD MEDIUM			
Special Fire Fighting Procedures COMBUSTIBLE SOLID. WILL BURN IF IN CONTACT WITH FLAME. COMBUSTION CEASES WHEN FLAME IS REMOVED. DECOMPOSITION ON HEATING ABOVE 260°C RESULTS IN THE EMISSION OF TOXIC FUMES. FIRE FIGHTERS TO WEAR SELF CONTAINED BREATHING APPARATUS IF THERE IS A RISK OF EXPOSURE TO PRODUCTS OF COMBUSTION AND DECOMPOSITION.			
Unusual Fire and Explosion Hazards TOXIC FUMES GIVEN OFF ABOVE 260°C.			

Section V – Reactivity Data

Stability:	Stable <input type="checkbox"/> Unstable <input type="checkbox"/>	Conditions to Avoid TEMPERATURES ABOVE 260°C WITHOUT ADEQUATE VENTILATION.
Incompatibility (Materials to Avoid) ALKALI METALS, EXTREMELY POTENT OXIDISERS E.G. FLUORINE, CHLORINE TRI-FLUORIDE, 80% NaOH OR KOH, METAL HYDRIDES SUCH AS BORANES (E.G. B ₂ H ₆) ALUMINIUM CHLORIDE, AMMONIA CERTAIN AMINES (R-NH ₂) IMINES (RH-NH) AND 70% NITRIC ACID AT TEMPERATURES NEAR 260°C. DO NOT USE ON OXYGEN LINES.		
Hazardous Polymerization:	May Occur <input type="checkbox"/> Will Not Occur <input type="checkbox"/>	Conditions to Avoid TEMPERATURE ABOVE 260°C.

Section VI – Health Hazard Data

Health Hazards (Acute)			
Swallowed? NO ADVERSE EFFECT KNOWN			
Eye? MAY CAUSE PHYSICAL IRRITATION TO THE EYES			
Skin? NO ADVERSE EFFECT KNOWN. <u>Copper</u> VERY RARELY EXPOSURE TO COPPER HAS RESULTED IN ALLERGIC CONTACT DERMITITIS.			
Inhalation? <u>Polytetrafluoroethylene (PTFE)</u> THE MATERIAL IS NOT NORMALLY AN INHALATION HAZARD AT TEMPERATURES BELOW 260°C AS IT REMAINS AN INERT SOLID. HOWEVER, EXPOSURE TO THERMAL DEGRADATION PRODUCTS AT TEMPERATURES ABOVE 260°C OR FUMES FROM TOBACCO CONTAMINATED WITH PARTICLES OF THE PRODUCT MAY RESULT IN “POLYMER FUME FEVER” OR INFLUENZA-LIKE SYMPTOMS (CHILLS, HEADACHES, DIFFICULTY IN BREATHING AND FEVER). SYMPTOMS MAY APPEAR SEVERAL HOURS AFTER EXPOSURE BUT WILL DISAPPEAR WITHIN 24-48 HOURS. THERE ARE EXPOSURE STANDARDS FOR DECOMPOSITION PRODUCTS.			
		TWA	STEL
HF*	ppm	mg/m ³	ppm mg/m ³
	3	2.6	PEAK LIMITATION
*MEASURED AS AN INSPIRABLE FACTION			
CARBONYL FLUORIDE IS THE MAIN DECOMPOSITION PRODUCT FORMED WHEN PTFE IS SUBJECT TO EXTENDED EXPOSURE AT NORMAL SINTERING TEMPERATURES (400°C). CARBONYL FLUORIDE IS IMMEDIATELY CONVERTED TO HIGHLY CORROSIVE HYDROGEN FLUORIDE IN THE PRESENCE OF MOIST AIR.			
<u>Copper</u> THE CHIEF EFFECT FROM INDUSTRIAL EXPOSURES IS ON THE UPPER RESPIRATORY TRACT, EXPRESSING ITSELF AS A METAL FUME FEVER WITH ATROPHIC CHANGES IN THE NASAL MUCAS MEMBRANE AND SUBJECTIVE EFFECTS ASSOCIATED WITH THE IRRITATIVE NATURE OF THE COPPER FUME, DUSTS AND MISTS. SNEEZING, COUGHING AND DIGESTIVE DISORDERS CAN RESULT FROM INHALATION OF COPPER DUST.			
PEAK LIMITATION – A CEILING CONCENTRATION WHICH SHOULD NOT BE EXCEEDED OVER A MEASUREMENT PERIOD WHICH SHOULD BE AS SHORT AS POSSIBLE BUT NOT EXCEEDING 15 MINUTES.			
TLV – THRESHHOLD LIMIT VALUE.			
TWA – (THE TIME WEIGHTED AVERAGE) – AIRBORNE CONCENTRATIONS OVER AN EIGHT HOUR WORKING DAY FOR A FIVE DAY WORKING WEEK OVER AN ENTIRE WORKING LIFE			
STEL – (SHORT TERM EXPOSURE LIMIT) – THE AVERAGE AIRBORNE CONCENTRATION OVER A 15 MINUTE PERIOD WHICH SHOULD NOT BE EXCEEDED AT ANY TIME DURING A NORMAL 8 HOUR WORKING DAY. ACCORDING TO CURRENT KNOWLEDGE THESE CONCENTRATIONS SHOULD NOT IMPAIR THE HEALTH OF, OR CAUSE UNDUE DISCOMFORT TO, HEALTHY WORKERS.			

<p>Health Hazards (Chronic)</p> <p><u>Copper</u> LONG TERM EXPOSURE TO COPPER FUME AND DUST, ETC CAN RESULT IN HEMOCHROMATOSIS, HEPTIC CIRRHOSIS, BRAIN DAMAGE, DEMYELINATION AND KIDNEY DEFECTS.</p>
<p>Skin?</p> <p>REPEATED CONTACT WITH METALLIC COPPER CAN CAUSE SENSITIVITY AND ALLERGIC SKIN RASHES</p>
<p>Toxicity</p> <p><u>PTFE</u> NO LD50 DATA IS AVAILABLE ON PTFE. NO TOXICITY WAS OBSERVED IN MALE/FEMALE RATS FED PTFE (UP TO 25%) FOR 90 DAYS. LOCAL SARCOMAS WERE INDUCED IN MICE AND RATS IMPLANTED SUBCUTANEOUSLY OR INTRAPERITONEAL-LY WITH PTFE. HOWEVER, THIS IS NOT CONSIDERED RELEVANT TO NORMAL INDUSTRIAL USAGE.</p> <p><u>Copper</u> ORAL (HUMAN): TDLo: 120 mg/kg (GASTROINTESTINAL EFFECT).</p>
<p>Carcinogenicity</p> <p><u>PTFE</u> PTFE HAS BEEN CLASSIFIED BY THE INTERNATIONAL AGENCY FOR RESEARCH INTO CANCER AS A GROUP III AGENT. AS SUCH IT IS NOT CLASSIFIABLE AS TO ITS CARCINOGENEITY TO HUMANS.</p>
<p>Emergency and First Aid Procedures</p> <p>Swallowed: RINSE MOUTH WITH WATER. GIVE PLENTY OF WATER TO DRINK. SEEK MEDICAL ADVICE.</p> <p>Eye: IRRIGATE THE EYES WITH PLENTY OF WATER FOR 15 MINUTES. IN ALL CASES OF EYE CONTAMINATION IT IS A SENSIBLE PRECAUTION TO SEEK MEDICAL ADVICE.</p> <p>Skin: IF IRRITATION OCCURS WASH THE CONTAMINATED AREA WITH PLENTY OF SOAP AND WATER. REMOVE ANY CONTAMINATED CLOTHING AND WASH PRIOR TO REUSE. IF IRRITATION CONTINUES, SEEK MEDICAL ADVICE.</p> <p>Inhalation: REMOVE VICTIM FROM EXPOSURE – AVOID BECOMING A CASUALTY. ALLOW PATIENT TO ASSUME MOST COMFORTABLE POSITION AND KEEP WARM. KEEP AT REST UNTIL FULLY RECOVERED. IF BREATHING LABORED AND PATIENT CYANOTIC (BLUE) INSURE THAT AIRWAYS ARE CLEAR AND HAVE A QUALIFIED PERSON GIVE OXYGEN THROUGH A FACEMASK. IF BREATHING HAS STOPPED APPLY ARTIFICIAL RESPIRATION AT ONCE. IN EVENT OF CARDIAC ARREST APPLY EXTERNAL CARDIAC MASSAGE. SEEK MEDICAL ADVICE.</p>

Section VII – Precautions for Safe Handling and Use

<p>Steps to be Taken in Case Material is Released or Spilt SWEEP UP</p>
<p>Waste Disposal Method BURNING IS NOT RECOMMENDED. COMPLY WITH LOCAL REGULATIONS.</p>
<p>Precautions to be Taken in Handling and Storing KEEP AWAY FROM FLAMES. STORE BELOW 260°C.</p>

Section VIII – Control Measures

<p>Respiratory Protection NO SPECIAL CONTROLS ARE NECESSARY IF USED WITHIN RECOMMENDED OPERATION TEMPERATURES (i.e. -260°C TO +260°C).</p>	
<p>Ventilation SEE ABOVE.</p>	
<p>Protective Gloves SEE ABOVE</p>	<p>Eye Protection SEE ABOVE.</p>
<p>Other Protective Clothing or Equipment SEE ABOVE.</p>	<p>Work/Hygienic Practices SEE ABOVE.</p>