



Manufacturer of Precision Tools and Equipment

PAGE 1

MANUFACTURE INFORMATION

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PREPARATION/REVISION DATE: 11/08/99

TRADE NAME/SYNONYMS...: GRIFFITH SILVER BLACK 4 OZ
CHEMICAL NAME/SYNONYMS: MURIATIC ACID SOLUTION
CHEMICAL FAMILY.....: INORGANIC ACID SOLUTION
FORMULA.....: HCL/TEO2/H2O
PRODUCT CODE.....: 45.041

***** HAZARDOUS INGREDIENTS *****

DOES PRODUCT CONTAIN HAZARDOUS INGREDIENTS? (Y,N,N/A,N/I) : Y

CHEMICAL/COMMON NAME	CAS-NUMBER	%	PEL-OSHA TLV-ACGIH
MURIATIC ACID	7647-01-0	>25	5PPM
TELLURIUM DIOXIDE	7446-07-3	<1	0.1MG/M3
WATER	7732-18-5	<75	N/A

DOES PRODUCT CONTAIN CARCINOGENS (NTP, IARC, OR OSHA)? (Y,N,N/A,N/I): N/I

***** HEALTH HAZARD DATA *****

HEALTH EFFECTS (ACUTE AND CHRONIC)

ACUTE; CORROSIVE TO ALL BODY TISSUES WITH WHICH IT COMES IN CONTACT. THE EFFECT OF LOCAL DERMAL EXPOSURE MAY COSIST OF MULTIPLE AREAS OF SUPERFICIAL DESTRUCTION OF THE SKIN OR OF PRIMARY IRRITANT DERMATITUS. SIMILARLY, INHALATION OF DUST, SPRAY OR MIST MAY RESULT IN VARYING DEGREES OF IRRITATION OR DAMAGE TO THE RESPIRATORY TRACT TISSUES AND AN INCREASED SUSCEPTIBILITY TO RESPIRATORY ILLNESS. THESE EFFECTS OCCUR ONLY WHEN THE TLV IS EXCEEDED. HUMAN DERMAL EXPOSURE; REGARDLESS OF CONCENTRATIONS, THE SEVERITY OF DAMAGE AND EXTENT OF ITS IRREVERSIBILITY INCREASES WITH LENGTH OF CONTACT TIME. PROLONGED CONTACT WITH EVEN DILUTE SOLUTION CAN CAUSE A HIGH DEGREE OF TISSUE DESTRUCTION.

PRIMARY ROUTES OF ENTRY

INHALATION: AIRBORNE CONCENTRATIONS OF DUST, MIST, OR SPRAY OF THIS PRODUCT AT LOWER LEVELS MAY CAUSE DAMAGE TO THE UPPER RESPIRATORY TRACT. COUGHING, CHOKING, IRRITATION AND BURNING OF THE THROAT ARE COMMON SYMPTOMS. AT HIGHER LEVELS, EXPOSURE MAY CAUSE INFLAMMATION AND ULCERATION OF THE NOSE, THROAT OR LARYNX, BRONCHITIS, PNEUMONIA, AND HEADACHE. SEVERE CASES MAY HAVE NECROSIS OF THE WINDPIPE AND BRONCHIAL EPITHELIUM, DAMAGE TO THE PULMONARY BLOOD VESSELS AND EMPHYSEMA.

CHRONIC INHALATION: REPEATED OR PROLONGED EXPOSURE MAY CAUSE EROSION AND/OR DISCOLORIZATION OF EXPOSED TEETH, CHRONIC BROCHITIS, AND GASTRITIS.



Manufacturer of Precision Tools and Equipment

PAGE 2

SKIN: THIS PRODUCT IS DESTRUCTIVE TO TISSUE CONTACTED AND PRODUCES SEVERE BURNS, NECROSIS, ULCERATION, INFLAMMATION, SEVERE IRRITATION AND POSSIBLE PHOTOSENSITIZATION.

EYE CONTACT: THIS PRODUCT IS DESTRUCTIVE TO EYE TISSUE ON CONTACT. IT WILL CAUSE SEVERE IRRITATION, CONJUNCTIVITIS, CORNEAL NECROSIS AND BURNS.

INGESTION: THIS PRODUCT IF SWALLOWED, CAN CAUSE SEVERE BURNS AND COMPLETE TISSUE PERFORATION OF MUCOUS MEMBRANES OF THE MOUTH, THROAT, ESOPHAGUS, AND STOMACH WITH PAIN, NAUSEA, SALIVATION, VOMITING, DIARRHEA, CHILLS, SHOCK AND INTENSE THIRST. NEPHRITIS, FEVER, AND CIRCULATORY COLLAPSE MAY OCCUR.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
N/A

EMERGENCY FIRST AID PROCEDURES

EYES: OBJECT IS TO FLUSH MATERIAL OUT IMMEDIATELY THEN SEEK MEDICAL ATTENTION IMMEDIATELY FLUSH EYES WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES FORCIBLY HOLDING LIDS APART TO ENSURE FLUSHING OF ENTIRE SURFACE. WASHING EYES WITHIN SEVERAL SECONDS IS ESSENTIAL TO ACHIEVE MAXIMUM EFFECTIVENESS. SEEK MEDICAL ATTENTION IMMEDIATELY.

SKIN: IMMEDIATELY WASH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND FOOTWEAR WHICH CANNOT BE DECONTAMINATED. SEEK MEDICAL ATTENTION IMMEDIATELY.

INHALATION: REMOVE TO FRESH AIR; IF BREATHING IS DIFFICULT HAVE TRAINED PERSON ADMINISTER OXYGEN. IF RESPIRATION STOPS, GIVE MOUTH-TO-MOUTH RESUSITATION. SEEK MEDICAL ATTENTION IMMEDIATELY.

INGESTION: NEVER GIVE ANYTHING BY MOUTH TO AN UNCONCIOUS PERSON. IF SWALLOWED DO NOT INDUCE VOMITING. GIVE LARGE QUANTITIES OF WATER. DO NOT GIVE CARBONATES. IF VOMITING OCCURS SPONTANEOUSLY, KEEP AIRWAY CLEAR. SEEK MEDICAL ATTENTION IMMEDIATELY.

***** CHEMICAL DATA *****

BOILING POINT (F)	176	SPECIFIC GRAVITY (WATER=1)	1.16
VAPOR PRESSURE (MMHG)	25@ RT	PERCENT VOLATILE BY VOLUME (%)	100
VAPOR DENSITY (AIR=1)	>1	EVAP RATE (BUTYL ACETATE =1)	<1

SOLUBILITY IN WATER.. COMPLETE

APPEARANCE AND ODOR INFORMATION

COLORLESS TO SLIGHTLY YELLOW LIQUID, SHARP PUNGENT ODOR

***** PHYSICAL HAZARD DATA *****

FLASH POINT (METHOD USED) N/A FLAMMABLE LIMITS-LEL= N/A UEL= N/A

EXTINGUISHING MEDIA



Manufacturer of Precision Tools and Equipment

PAGE 3

THIS PRODUCT IS NOT COMBUSTIBLE. WATER SPRAY, FOAM. CARBON DIOXIDE OR DRY CHEMICAL MAY BE USED WHERE THIS PRODUCT IS STORED.

SPECIAL FIRE FIGHTING PROCEDURES

WEAR FULL PROTECTIVE CLOTHING. AVOID DIRECT CONTACT OF THIS PRODUCT WITH WATER AS THIS CAN CAUSE AN EXOTHERMIC REACTION. RUN-OFF FROM FIRE CONTROL MAY CAUSE POLLUTION. NEUTRALIZE RUN-OFF WITH LIME, SODA ASH, ETC., TO PREVENT CORROSION OF METALS AND FORMATION OF HYDROGEN GAS.

UNUSUAL FIRE AND EXPLOSION HAZARDS

REACTS WITH MOST METALS, ESPECIALLY WHEN DILUTE, TO GIVE FLAMMABLE, POTENTIALLY EXPLOSIVE HYDROGEN GAS.

***** REACTIVITY DATA *****

INCOMPATIBILITY (MATERIALS TO AVOID)

AVOID DIRECT CONTACT WITH WATER. WHEN HANDLING THIS PRODUCT, AVOID CONTACT WITH METALS, ALKALIS, METAL POWDERS, AMINES, CARBIDES, CHLORATES, GLASS, NITROGEN COMPOUNDS, AND STRONG OXIDIZING, REDUCUNG, OR COMBUSTIBLE ORGANIC MATERIALS.

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS GASES ARE EVOLVED ON CONTACT WITH CHEMICALS SUCH AS CYANIDES, SULFIDES, AND CARBIDES; CONTACT WITH COMMON METALS PRODUCES HYDROGEN WHICH MAY FORM EXPLOSIVE MIXTURES WITH AIR; THERMAL DECOMPOSITION MAY RELEASE CORROSIVE HYDROGEN CHLORIDE; CONTACT WITH STRONG OXIDIZERS MAY PRODUCE CHLORINE GAS.

WILL HAZARDOUS POLYMERIZATION OCCUR

WILL NOT OCCUR

CONDITIONS TO AVOID/POLYMERIZATION

N/A

IS THE PRODUCT STABLE

YES

CONDITIONS TO AVOID/STABILITY

FLAMMABLE, POIONOUS GASES MAY ACCUMULATE IN TANKS, HOPPER CARS, AND DRUMS.

***** SPILL AND LEAK PROCEDURES *****

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

LEAKS SHOULD BE STOPPED. SPILLS SHOULD BE CONTAINED AND CLEANED UP IMMEDIATELY. SOAK UP SMALL SPILLS WITH DRY SAND, CLAY OR DIATOMACEOUS EARTH. DIKE



Manufacturer of Precision Tools and Equipment

PAGE 4

LARGE SPILLS AND CAUTIOUSLY DILUTE, NEUTRALIZE WITH LIME OR SODA ASH, AND TRANSFER TO WASTE WATER TREATMENT SYSTEM. SINCE NEUTRALIZATION WITH THESE BASES WILL GENERATE HEAT (EXOTHERMIC), THE REACTION CAN BE VIOLENT. PERSONS PERFORMING CLEAN-UP WORK SHOULD WEAR ADEQUATE PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING. SPILLS OR RELEASES SHOULD BE REPORTED, IF REQUIRED, TO THE APPROPRIATE LOCAL, STATE, AND FEDERAL REGULATORY AGENCIES.

WASTE DISPOSAL METHOD

THE MATERIALS RESULTING FROM CLEAN-UP OPERATIONS MAY BE HAZARDOUS WASTES AND, THEREFORE SUBJECT TO SPECIFIC REGULATIONS. PACKAGE, STORE, TRANSPORT, AND DISPOSE OF ALL CLEAN-UP MATERIALS AND ANY CONTAMINATED EQUIPMENT IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL HEALTH AND ENVIRONMENTAL REGULATIONS. ENSURE THAT ALL RESPONSIBLE FEDERAL, STATE AND LOCAL AGENCIES RECEIVE PROPER NOTIFICATION OF SPILL AND DISPOSAL METHODS.

***** EXPOSURE CONTROL INFORMATION *****

VENTILATION

LOCAL EXHAUST	PREFERRED	MECHANICAL (GEN)	ADEQUATE
SPECIAL.....	N/A	OTHER.....	N/A

RESPIRATORY PROTECTION

RESPIRATORY PROTECTION MAY REQUIRED UNDER NORMAL USE. USE NIOSH/MSHA APPROVED RESPIRATORS WHERE DUST, MIST, OR SPRAY MAY BE GENERATED.

PROTECTIVE GLOVES

CHEMICAL RESISTANT GLOVES SHOULD BE WORN. GLOVES MAY BE CONTAMINATED BY WASHING WITH MILD SOAP AND WATER. NATURAL AND BUTYL RUBBER HAVE BEEN SUGGESTED.

OTHER PROTECTIVE EQUIPMENT

WEAR CHEMICAL SAFETY GOGGLES PLUS FULL FACE SHIELD TO PROTECT AGAINST SPLASHING. WEAR RUBBER APRON AND BOOTS. EYE WASH AND SAFETY SHOWER.

OTHER ENGINEERING CONTROLS

N/A

WORK PRACTICES

N/I



Manufacturer of Precision Tools and Equipment

PAGE 5

HYGENIC PRACTICES

N/I

***** SPECIAL PRECAUTIONS *****

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

AVOID SKIN CONTACT; AVOID SPLASHING INTO EYES; KEEP CONTAINERS CLOSE; AVOID MIST; WASH THOROUGHLY; KEEP AWAY FROM FOOD.

MAINTENANCE PRECAUTIONS

N/I

OTHER PRECAUTIONS

CORROSIVE LIQUID; CLEAN EQUIPMENT THOROUGHLY PRIOR TO MAINTENANCE AND/OR REPAIR.

OTHER COMMENTS

NONE