

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.

U.S. Department of Labor

Occupational Safety and Health Administration
 (Non-Mandatory Form)
 Form Approved
 OMB NO. 1218-0072

Identity (As used on Label and List) VAN GIESON'S SOLUTION	Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.		
Section 1 EMS CAT# 26046-05			
Manufacture's Name ELECTRON MICROSCOPY SCIENCES	Emergency Telephone Number 800-424-9300 (Chemtrec)		
Address (Number, Street, City, State and ZIP Code) 1560 INDUSTRY ROAD	Telephone Number for Information TEL.215-412-8400 FAX 215-412-8450		
PO BOX 550	Date Prepared REVISED 01/15/2008		
HATFIELD, PA 19440	Signature of Preparer (optional)		

Section II - Hazardous Ingredients / Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% optional
1. PICRIC ACID (88-89-1) (2,4,6-(NO ₂) ₃ C ₆ H ₂ OH) RTECS# TJ7875000 SYNONYMS: 2,4,6-TRINITROPHENOL; PICRONITRIC ACID; MELINITE TLV AND PEL LISTED DENOTE (SKIN) THRESHOLD LIMIT VALUE: (TLV/TWA): 0.1mg/m ³ (ppm) Toxicity: Oral-Rat LD50:200mg/kg SHORT TERM EXPOSURE LIMIT (STEL): 0.3mg/m ³ (ppm) PERMISSIBLE EXPOSURE LIMIT (PEL): 0.1mg/m ³ (ppm) CARCINOGENICITY: NTP: NO IARC: NO Z LIST: NO OSHA REG: NO				approx. 1.6%
2. ACID FUCHSIN C.I. 42685 CAS# 3244-88-0 TRADE NAME: ACID VIOLET 19 CHEMICAL FAMILY : SULFONPHTHALIEN DYE FORMULA: C ₂₀ H ₁₇ N ₃ Na ₂ O ₉ S ₃ ***** ACID FUCHSIN IS A CANCER SUSPECT AGENT! *****				0.05%
3. WATER (7732-18-5) H ₂ O				98.5%

Section III - Physical / Chemical Characteristics

Boiling Point	N/A	Specific Gravity (H2O = 1)	N/A
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	YES		
Appearance and Odor	YELLOW, AQUEOUS SOLUTION, ODORLESS		

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used) PICRIC ACID, SOLID: 302°F	Flammable Limits N/A	LEL	UEL
Extinguishing Media	USE WATER SPRAY		
Special Fire Fighting Procedures	FIREFIGHTERS SHOULD WEAR PROPER PROTECTIVE EQUIPMENT AND SELF CONTAINED BREATHING APPARATUS. USE WATER TO KEEP FIRE EXPOSED CONTAINERS COOL.		
Unusual Fire and Explosion Hazards	IF PICRIC ACID HAS LESS THAN 10% WATER IT BECOMES AN EXPLOSIVE. IT CAN REACT VIOLENTLY WITH SHOCK, FRICTION OR HEAT. FORMS HIGHLY EXPLOSIVE PICRATES WITH METALS, PARTICULARLY COPPER, LEAD AND ZINC.		

(Reproduce locally)

OSHA 174, Sept. 1985

Section V -Reactivity Data

Stability	Unstable	<input type="checkbox"/>	Conditions to Avoid PICRIC ACID CONTAINING LESS THAN 10% WATER, HEAT, FLAME, IGNITION SOURCES, DRYNESS
	Stable	X	
Incompatibility (Materials to Avoid) MOST COMMON METALS, STRONG BASES, AMMONIA, STRONG REDUCING AND OXIDIZING AGENTS, PLASTER, SALTS, GELATIN, ALKALOIDS			
Hazardous Decomposition or Byproducts OXIDES OF NITROGEN, EXPLOSIVE DECOMPOSITION IS LIKELY IF MATERIAL IS INVOLVED IN A FIRE.			
Hazardous Polymerization	May Occur	<input type="checkbox"/>	Conditions to Avoid N/A
	May Not Occur	X	

Section VI - Health Hazard Data

Route(s) of Entry:	Inhalation ? N/A	Skin? YES	Ingestion? YES
Health Hazards (Acute and Chronic) DANGER! KEEP WET! EXPLOSIVE IF DRY. CAUSES SEVERE EYE IRRITATION. HARMFUL IF INHALED OR ABSORBED THROUGH SKIN AND RESPIRATORY TRACT. MAY CAUSE ALLERGIC SKIN REACTION, AFFECTS LIVER, KIDNEYS AND BLOOD. INHALATION: CAUSES IRRITATION TO THE RESPIRATORY TRACT. SYMPTOMS MAY INCLUDE COUGHING, SHORTNESS OF BREATH. SYSTEMIC POISONING CAN CAUSE HEADACHE, DIZZINESS, NAUSEA, VOMITING, ABDOMINAL PAIN AND DIARRHEA. HEAVY EXPOSURES CAN CAUSE RED BLOOD CELL DESTRUCTION RESULTING IN BLOODY URINE, LIVER AND KIDNEY DAMAGE, CONVULSIONS, WEAKNESS, MUSCLE PAIN, COMA AND DEATH. INGESTION: CAUSES IRRITATION TO THE GASTROINTESTINAL TRACT. SYMPTOMS MAY INCLUDE NAUSEA, VOMITING AND DIARRHEA. OTHER SYMPTOMS MAY PARALLEL THOSE FROM INHALATION. INGESTION OF 1 TO 2 GRAMS HAS CAUSED SEVERE POISONING. SKIN CONTACT: CAUSES IRRITATION TO SKIN. SYMPTOMS INCLUDE REDNESS, ITCHING AND PAIN. MAY CAUSE ALLERGIC SKIN REACTIONS. MAY BE ABSORBED THROUGH THE SKIN WITH POSSIBLE SYSTEMIC EFFECTS. EYE CONTACT: FUME IS IRRITATING TO EYES. SPLASHES CAUSE EYE INJURY. CHRONIC EXPOSURE: PROLONGED OR REPEATED EXPOSURES CAN CAUSE LIVER, KIDNEY AND BLOOD EFFECTS. HAIR AND SKIN MAY BECOME YELLOW (NOT JAUNDICE). CONJUNCTIVA OF THE EYE MAY ALSO BECOME YELLOW WITH CORRESPONDING YELLOW VISION. AGGRAVATION OF PREEXISTING CONDITIONS; PERSONS WITH PRE-EXISTING SKIN, BLOOD, LIVER AND KIDNEY DISORDERS MAY BE MORE SUSCEPTIBLE TO THE EFFECTS OF THIS SUBSTANCE.			
Carcinogenicity	NTP? NO	IARC Monographs? NO	OSHA Regulated? NO
Signs And Symptoms of Exposure DERMATITIS, IRRITATION TO RESPIRATORY PASSAGES AND/OR LUNGS, KIDNEY AND/OR LIVER DAMAGE.			
Medical Conditions Generally Aggravated by Exposure NONE IDENTIFIED			
Emergency and First Aid Procedures INHALATION: REMOVE TO FRESH AIR. IF NOT BREATHING,GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. GET MEDICAL ATTENTION. INGESTION: IF SWALLOWED. DO NOT INDUCE VOMITING. GIVE LARGE QUANTITIES OF WATER. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL ATTENTION. SKIN CONTACT: IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. GET MEDICAL ATTENTION. WASH CLOTHING BEFORE REUSE. THOROUGHLY CLEAN SHOES BEFORE REUSE. KEEP CONTAMINATED CLOTHING WET AFTER REMOVING. EYE CONTACT: IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES, LIFTING LOWER AND UPPER EYELIDS OCCASIONALLY. GET MEDICAL ATTENTION IMMEDIATELY.OTHER CONTROL MEASURES: CLOTHING CONTAMINATED WITH THIS MATERIAL SHOULD BE KEPT SOAKED WITH WATER AND DISPOSED OF IN THE SAME MANNER AS THE MATERIAL ITSELF.			

Section VII – Precautions For Safe Handling And Use

Steps to Be Taken in Case Material is Released or Spilled REMOVE ALL SOURCES OF IGNITION. VENTILATE AREA OF LEAK OR SPILL. KEEP UNNECESSARY AND UNPROTECTED PEOPLE AWAY FROM AREA OF SPILL. WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT AS SPECIFIED IN SECTION 8, **SPILLS:** CLEAN UP PERSONNEL SHOULD BE AWARE OF MATERIALS EXPLOSIVE CAPABILITIES. WET DOWN SPILL AND ABSORB WITH SODIUM BICARBONATE OR SAND-SODA ASH MIXTURE (90:10 MIX) CAREFULLY SCOOP INTO GLASS CONTAINER (MAKE SURE MATERIAL HAS AT LEAST 10% WATER.) USE NON METALLIC TOOLS AND NON SPARKING EQUIPMENT. DO NOT FLUSH TO SEWER. LARGE SPILLS MAY NEED THE ATTENTION OF EXPLOSIVES EXPERTS. IF HANDLING PICRIC ACID CONTAINED IN A JAR, GENTLY TILT BOTTLE TO SEE IF CRYSTALS ROLL OVER EACH OTHER. IF THEY DO THE ACID IS DRY AND CAPABLE OF EXPLOSION CONTACT PERSONNEL TRAINED IN EXPLOSIVES. DRIED CRYSTALS MAY ALSO BE PRESENT WITHIN THREADS OF SCREW TOP CONTAINERS AND PRESENT A DETONATION HAZARD WHEN OPENING CONTAINER.

Waste Disposal Method DISPOSE OF IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS. PROTECT AGAINST PHYSICAL DAMAGE. STORE IN A COOL, DRY WELL-VENTILATED LOCATION, AWAY FROM ANY AREA WHERE THE FIRE HAZARD MAY BE ACUTE. OUTSIDE OR DETACHED STORAGE IS PREFERRED. SEPARATE FROM INCOMPATIBLES. CONTAINERS SHOULD BE BONDED AND GROUNDED FOR TRANSFERS TO AVOID STATIC SPARKS. STORAGE AND USE AREAS SHOULD BE NO SMOKING AREAS. USE NON SPARKING TYPE TOOLS AND EQUIPMENT, INCLUDING EXPLOSION PROOF VENTILATION. STORE IN GLASS NOT METAL CONTAINERS AND WET SCREW TOPS BEFORE SEALING. STORE IN AS SMALL A QUANTITY AS POSSIBLE AND KEEP MOIST (AT LEAST 10% WATER-CHECK PERIODICALLY). DO NOT STORE IN CONCRETE FLOORS (CAN FORM EXPLOSIVE CALCIUM PICRATE) ENCLOSE ALL PROCESSES AND EMPLOY AUTOMATIC MECHANICAL HANDLING TECHNIQUES AND WET METHODS WHERE POSSIBLE. IF HANDLING ACID CONTAINED IN A JAR, GENTLY TILT BOTTLE TO SEE IF CRYSTALS ROLL OVER EACH OTHER. IF THEY DO, THE ACID IS DRY AND CAPABLE OF EXPLOSION-CONTACT PERSONNEL TRAINED IN EXPLOSIVES. DRIED CRYSTALS MAY ALSO BE PRESENT WITHIN THREADS IF SCREW TOP CONTAINERS AND PRESENT A DETONATION HAZARD WHEN OPENING CONTAINER. CONTAINERS OF THIS MATERIAL ARE HAZARDOUS WHEN EMPTY SINCE THEY RETAIN PRODUCT RESIDUES.; OBSERVE ALL WARNINGS FOR THE PRODUCT.

Precautions to be taken in handling and storing PROTECT AGAINST PHYSICAL DAMAGE. STORE IN COOL, DRY WELL-VENTILATED LOCATION, AWAY FROM ANY AREA WHERE THE FIRE HAZARD MAY BE ACUTE

Other Precautions IF THE WATER CONTENT DECREASES BELOW 10%, PICRIC ACID BECOMES AN EXPLOSIVE. AVOID CONDITIONS THAT LEAD TO LOSS OF WATER.

Respiratory Protection (Specify Type) **AIRBORNE EXPOSURE LIMITS:** OSHA PERMISSIBLE EXPOSURE LIMIT (PEL) 0.1 MG/M³(TWA), SKIN ACGIH THRESHOLD LIMIT VALUE (TLV) 0.1 MG/M³ (TWA)
VENTILATION SYSTEM: A SYSTEM OF LOCAL AND/OR GENERAL EXHAUST IS RECOMMENDED TO KEEP EMPLOYEE EXPOSURES BELOW THE AIRBORNE EXPOSURE LIMITS. LOCAL EXHAUST VENTILATIONS GENERALLY PREFERRED BECAUSE IT CAN CONTROL THE EMISSIONS OF THE CONTAMINANT AT ITS SOURCE, PREVENTING DISPERSION OF IT INTO THE GENERAL WORK AREA. PLEASE REFER TO THE ACGIH DOCUMENT, INDUSTRIAL VENTILATION A MANUAL OF RECOMMENDED PRACTICES, MOST RECENT ADDITION FOR DETAILS. USE EXPLOSION PROOF EQUIPMENT.

PERSONAL RESPIRATORS (NIOSH APPROVED): IF THE EXPOSURE LIMIT IS EXCEEDED, A HALF-FACE DUST/MIST RESPIRATOR MAY BE WORN FROM UP TO TEN TIMES THE EXPOSURE LIMIT OR THE MAXIMUM USE CONCENTRATION SPECIFIED BY THE APPROPRIATE REGULATORY AGENCY OR RESPIRATOR SUPPLIER, WHICHEVER IS LOWEST. A FULL-FACE PIECE DUST/MIST RESPIRATOR MAY BE WORN UP TO 50 TIMES THE EXPOSURE LIMIT, OR THE MAXIMUM USE CONCENTRATION SPECIFIED BY THE APPROPRIATE REGULATORY AGENCY, OR RESPIRATOR SUPPLIER, WHICHEVER IS LOWEST. FOR EMERGENCIES OR INSTANCES WHERE THE EXPOSURE LEVELS ARE NOT KNOWN USE A FULL FACEPIECE POSITIVE PRESSURE, AIR SUPPLIED RESPIRATOR. WARNING! AIR PURIFYING RESPIRATORS DO NOT PROTECT WORKERS IN OXYGEN-DEFICIENT ATMOSPHERES. SKIN PROTECTION: WEAR IMPERVIOUS PROTECTIVE CLOTHING, INCLUDING BOOTS, GLOVES, LAB COAT, APRON OR OVERALLS AS APPROPRIATE TO PREVENT SKIN CONTACT. **EYE PROTECTION:** USE CHEMICAL SAFETY GOGGLES AND OR A FULL FACE SHIELD WHERE SPLASHING IS POSSIBLE. MAINTAIN EYE WASH FOUNTAIN AND QUICK-DRENCH FACILITIES IN WORK AREA **OTHER CONTROL MEASURES:** CLOTHING CONTAMINATED WITH THIS MATERIAL SHOULD BE KEPT SOAKED WITH WATER AND DISPOSED OF IN THE SAME MANNER AS THE MATERIAL ITSELF.

ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE:

WHEN RELEASED INTO THE SOIL, THIS MATERIAL IS NOT EXPECTED TO BIODEGRADE. WHEN RELEASED INTO THE SOIL, THIS MATERIAL IS NOT EXPECTED TO EVAPORATE SIGNIFICANTLY. THIS MATERIAL HAS AN EXPERIMENTALLY DETERMINED BIOCONCENTRATION FACTOR (BCF) OF LESS THAN 100. THIS MATERIAL IS NOT EXPECTED TO SIGNIFICANTLY BIOACCUMULATE. ENVIRONMENTAL TOXICITY: THIS MATERIAL IS NOT EXPECTED TO BE TOXIC TO AQUATIC LIFE. THE LC50/96 HOUR VALUES FOR FISH ARE OVER 100mg/l.

TRANSPORT INFORMATION:

DOMESTIC (LAND, D.O.T.) PROPER SHIPPING NAME: TRINITROPHENOL, WETTED HAZARD CLASS 4.1 UN/NA NA1344

REGULATORY INFORMATION

FEDERAL, STATE AND INTERNATIONAL REGULATIONS PART 1

INGREDIENT	SARA 302		SARA 313	
	RO	TPQ	LIST/	CHEMICAL CATG
PICRIC ACID(88-89-10)	NO	NO	YES	NO
WATER (7732-18-5)	NO	NO	NO	NO

FEDERAL, STATE AND INTERNATIONAL REGULATIONS PART 2

INGREDIENT	CERCLA	RCRA	TSCA
		261.33	8 (d)
PICRIC ACID (88-89-1)	NO	NO	NO
WATER (7732-18-5)	NO	NO	NO

CHEMICAL WEAPONS CONVENTION: NO TSCA 12(b): NO CDTA: NO

SARA 311/312 ACUTE: YES CHRONIC: YES FIRE YES PRESSURE : NO REACTIVITY: YES (MIXTURE/SOLID)

OTHER INFORMATION

NFPA RATINGS: HEALTH 3 FLAMMABILITY: REACTIVITY

LABEL HAZARD WARNING:

DANGER! KEEP WET EXPLOSIVE IF DRY. FLAMMABLE SOLID. CAUSES SEVERE EYE IRRITATION. HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. CAUSES IRRITATION TO SKIN AND RESPIRATORY TRACT. MAY CAUSE ALLERGIC SKIN REACTION. AFFECTS LIVER, KIDNEYS AND BLOOD.

LABEL PRECAUTIONS:

KEEP WET DO NOT CONTACT WITH METALS KEEP AWAY FROM HEAT, SPARKS AND FLAME. STORE IN A TIGHTLY CLOSED CONTAINER. AVOID CONTACT WITH EYES, SKIN AND CLOTHING. WASH THOROUGHLY AFTER HANDLING. AVOID BREATHING MIST. USE ONLY WITH ADEQUATE VENTILATION.

LABEL FIRST AID:

IF SWALLOWED, DO NOT INDUCE VOMITING. GIVE LARGE QUANTITIES OF WATER. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES OR SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. WASH CLOTHING BEFORE REUSE. KEEP CONTAMINATED CLOTHING WET AFTER REMOVING. IF INHALED REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. IN ALL CASES GET MEDICAL ATTENTION.

PRODUCT USE: LABORATORY REAGENT.
