

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Davidson's Fixative

SYNONYMS: Hartman's fixative, Hartmann's solution

CATALOG CODES: VHF

MANUFACTURER: Volu-Sol

ADDRESS: 5095 West 2100 South
Salt Lake City, UT 84120

EMERGENCY PHONE: (800) 535-5053

OTHER CALLS: (801) 974-9474

FAX: (801) 974-9553

CHEMICAL FAMILY: -

CHEMICAL FORMULA: -

PREPARED BY: Volu-Sol

RECOMMENDED USE: Laboratory chemicals, synthesis of substances

RESTRICTIONS ON USE: Use as recommended

SECTION 2: HAZARD(S) IDENTIFICATION

EMERGENCY OVERVIEW:

GHS Classification:

Flammable liquids	(Category 3)
Acute toxicity, Oral	(Category 4)
Acute toxicity, Inhalation	(Category 4)
Acute toxicity, Dermal	(Category 4)
Skin corrosion	(Category 1A)
Serious eye damage	(Category 1)
Skin sensitisation	(Category 1)
Germ cell mutagenicity	(Category 2)
Carcinogenicity	(Category 1A)
Acute aquatic toxicity	(Category 3)
Specific target organ toxicity	
Single Exposure - CNS	

GHS LABEL ELEMENTS:



Pictogram:

Signal Word:

Danger

Hazard Statement(s):

H226 Flammable liquid and vapour

H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled

H314 Causes severe skin burns and eye damage

H317 May cause an allergic skin reaction

H336 May cause drowsiness or dizziness

H341 Suspected of causing genetic defects

H350 May cause cancer

H402 Harmful to aquatic life

Precautionary Statement(s):

P201 Obtain special instructions before use

P202 Do not handle until all safety precautions have been read and understood

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking

P233 Keep container tightly closed

P240 Ground/bond container and receiving equipment

P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment

P242 Use only non-sparking tools

P243 Take precautionary measures against static discharge

P261 Avoid breathing dusty/ fume/ gas/ mist/ vapours/ spray

P264 Wash skin thoroughly after handling

P270 Do not eat, drink or smoke when using this product

P271 Use only outdoors or in a well-ventilated area

P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment

P280 Wear protective gloves/ eye protection/ face protection

P301+P312+P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

P304+P340+P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor

P305+P351+P338+P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor

P308+P313 IF exposed or concerned: Get medical attention

P333+P313 IF skin irritation or rash occurs: Get medical advice/ attention

P363 Wash contaminated clothing before reuse

P370+P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

P403+P233 Store in a well-ventilated place. Keep container tightly closed

P403+P235 Store in a well-ventilated place. Keep cool

P405 Store locked up

P501 Dispose of contents/container to an approved waste disposal plant

OTHER HAZARDS: -

HMIS Classification:

Health hazard: 3

Chronic health hazard: -

Flammability: 3

Physical hazards: 0

NFPA Rating:

Health hazard: 3

Fire: 3

Reactivity Hazard: 0

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT	CAS NO. EC-NO. Index-NO.
2-Propanol (Trade Secret%)	67-63-0 200-661-7 603-117-00-0
Formaldehyde (Trade Secret%)	50-00-0 200-001-8 605-001-00-5
Acetic acid (Trade Secret%)	64-19-7 200-580-7 607-002-00-6
Ethanol (Trade Secret%)	64-17-5 200-578-6 603-002-00-5

SECTION 4: FIRST AID MEASURES

INHALATION: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician

INGESTION: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician

SKIN: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician

EYE: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR: Percentage by Volume
Upper: %
Lower: %

FLASH POINT: -

AUTOIGNITION TEMPERATURE:

EXTINGUISHING MEDIA: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

FIRE FIGHTING PROCEDURES: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode

FIRE AND EXPLOSION HAZARDS: Use water spray to cool unopened containers

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage

INCOMPATIBILITIES: Oxidizing agents, acid anhydrides, hydroxides

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS: Reported in a time-weighted average (TWA)

Component	CAS-No.	OSHA		ACGIH	
		ppm	mg/m ³	ppm	mg/m ³
2-Propanol	67-63-0	400	980	200 TLV	
Formaldehyde	50-00-0	0.75 PEL		0.3 TLV	
Acetic acid	64-19-7	10	25	10 TLV	
Ethanol	64-17-5	1,000	1,900	1,000 TLV	

VENTILATION SYSTEM: Local and/or general exhaust is recommended to keep exposure below limits. Local exhaust ventilation is preferred for control of the emissions at its source, preventing dispersion into the general work area. Please refer to the ACGIH document, *Industrial Ventilation: A Manual of Recommended Practices*, for details

PERSONAL RESPIRATORS: If exposure limit is exceeded and engineering controls are not feasible, a half-face organic vapour respirator may be worn for 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 organic vapour 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-face, positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres

SKIN PROTECTION: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

EYE PROTECTION: Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: liquid
ODOR: -
SOLUBILITY: -
pH: -
BOILING POINT: -
MELTING POINT: -
VAPOR PRESSURE: -
DENSITY: -
VISCOSITY: -
REFRACTIVE INDEX: -

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable under recommended conditions of use and storage

CONDITIONS TO AVOID: Heat, flames, and sparks
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: No data available

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

Acute Toxicity: No data available
Skin/Eye Irritation: No data available
Carcinogenicity:
IARC: 1-Group 1: Carcinogenic to humans (Formaldehyde)
NTP: Known to be human carcinogen (Formaldehyde)
OSHA: OSHA specifically regulated carcinogen (Formaldehyde)

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life

Toxicity: No data available
Persistence and degradability: No data available
Mobility in soil: No data available
PBT/vPvB Results: No data available

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material

SECTION 14: TRANSPORT INFORMATION

US DOT	IATA	IMDG/IMO
Shipping Name: Corrosive liquids, flammable, n.o.s. (Ethanol, Acetic acid)	Shipping Name: Corrosive liquids, flammable, n.o.s. (Ethanol, Acetic acid)	Shipping Name: Corrosive liquids, flammable, n.o.s. (Ethanol, Acetic acid)
Hazard Class: 8 (3)	Hazard Class: 8 (3)	Hazard Class: 8 (3)
UN Number: 2920	UN Number: 2920	UN Number: 2920
Packing Group: II	Packing Group: II	Packing Group: II

SECTION 15: REGULATORY INFORMATION

SARA 302	50-00-0
SARA 313	67-63-0, 50-00-0
SARA 311/312 Hazards	Fire Hazard, Acute Health Hazard, Chronic Health Hazard
State	Right to know lists: MA: 67-63-0, 50-00-0, 64-19-7, 64-17-5 PA: 7732-18-5, 67-63-0, 50-00-0, 64-19-7, 64-17-5 NJ: 7732-18-5, 67-63-0, 50-00-0, 64-19-7, 64-17-5 California Prop. 65 Components: 50-00-0

SECTION 16: OTHER INFORMATION

Disclaimer: The information is provided without any representation or warranty, express or implied, regarding the accuracy or correctness. The conditions or methods of handling, storage, use, and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with the handling, storage, use, or disposal of the product.