


SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Carnoy's Fluid
SYNONYMS: Carnoy Fluid, Carnoy Solution
CATALOG CODES: VCS
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 chemical
RESTRICTIONS ON USE: Use as recommended

SECTION 2: HAZARD(S) IDENTIFICATION

EMERGENCY OVERVIEW:
GHS Classification: Flammable Liquids (Category 2)
 Acute Toxicity, Oral (Category 5)
 Skin Irritation (Category 2)
 Eye Irritation (Category 2A)
 Carcinogenicity (Category 2)
 Specific target organ toxicity (Category 2)
 Repeated Exposure

GHS LABEL ELEMENTS:
Pictogram: 
Signal Word: Danger

Hazard Statement(s):
 H225 Highly flammable liquid and vapour
 H303 May be harmful if swallowed
 H315 Causes skin irritation
 H319 Causes serious eye irritation
 H351 Suspected of causing cancer
 H373 May cause damage to organs through prolonged or repeated exposure

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
 P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray
 P264 Wash skin thoroughly after handling
 P280 Wear protective gloves/ eye protection/ face protection
 P281 Use personal protective equipment as required
 P302+P352 IF ON SKIN: Wash with plenty of soap and water
 P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P308+P313 IF exposed or concerned: Get medical advice/ attention
 P312 Call a POISON CENTER/doctor/physician if you feel unwell
 P314 Get medical advice/attention if you feel unwell
 P321 Specific treatment (see supplemental first aid instruction on this label)

P332+P313 If skin irritation occurs: Get medical advice/ attention
 P337+P313 If eye irritation persists: Get medical advice/ attention
 P362 Take off contaminated clothing and wash before reuse
 P370+P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction
 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.
Ethanol (<65%)	64-17-5 200-578-6 603-002-00-5
Chloroform (<30%)	67-66-3 200-663-8 602-006-00-4
Acetic acid (<15%)	64-19-7 200-580-7 607-002-00-6

SECTION 4: FIRST AID MEASURES

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Consult a physician

INGESTION: If swallowed, vomiting may occur spontaneously, but DO NOT INDUCE. If vomiting occurs, keep head below hips to prevent aspiration into lungs. Never give anything by mouth to an unconscious person. Take victim immediately to hospital. Rinse mouth with water. Consult a physician

SKIN: Immediately flush skin with plenty of soap and water. Remove contaminated clothing and shoes, wash before reuse. Consult a physician

EYE: Immediately flush eyes with plenty of water for at least 15 minutes. Consult a physician

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR: **Percentage by Volume**
 Upper: 3.5%
 Lower: 17.0%

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: Wear protective equipment. Keep unprotected persons away. Do not allow product to reach sewage system or any water course. Inform

respective authorities in case of seepage into water course or sewage system. Dilute with plenty of water. Do not allow to enter sewers/surface or ground water. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste. Ensure adequate ventilation. Do not flush with water or aqueous cleansing agents

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols. Keep ignition sources away – No smoking. Protect against electrostatic charges. Store in a cool location. Keep receptacle tightly sealed. Store in a cool, dry location

INCOMPATIBILITIES: -

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Component	CAS-No.	Reference	OSHA		ACGIH	
			ppm	mg/m ³	ppm	mg/m ³
Ethanol	64-17-5		1,000	1,900	1,000	1,900
			PEL	PEL	TLV	TLV
Chloroform	67-66-3		50	240	10	50
			PEL	PEL	TLV	TLV
Acetic acid	64-19-7		10	25	10	25
			PEL	PEL	TLV	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: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Use proper glove removal technique to avoid skin contact with this product. Wash and dry hands

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

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: liquid, colourless
ODOR: Phenol-like
SOLUBILITY: -
pH: -
BOILING POINT: -
MELTING POINT: -
VAPOR PRESSURE: -
SPECIFIC GRAVITY: -
MOLECULAR WEIGHT: -
DENSITY: -
VISCOSITY: -
REFRACTIVE INDEX: -

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable under recommended conditions of use and storage

CONDITIONS TO AVOID: Heat, flames, ignition sources

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: No data available

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:
Acute Toxicity: Oral rat LD50: 908 mg/kg
 Dermal rat LD50: 75 mg/kg
Skin/Eye Irritation: Irritant to skin and mucous membrane

Carcinogenicity: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA

IARC: 2B – Group 2B: Possibly carcinogenic to humans (Chloroform)

NTP: Reasonably anticipated to be a human carcinogen (Chloroform)

ROUTES OF ENTRY: Inhalation/Ingestion/Skin

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: Extremely hazardous for water. Do not allow product to reach ground water, water course or sewage system, even in small quantities. Danger to drinking water if even extremely small quantities leak into the ground

Toxicity: No data available

Persistence and degradability: No data available

Mobility in soil: No data available

PBT/vPvB Results: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

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. Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in an RCRA approved waste facility. Processing, use, or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state, and local requirements. Dispose of as unused product

SECTION 14: TRANSPORT INFORMATION

US DOT	IATA	IMDG/IMO
Shipping Name: Ethanol Solution	Shipping Name: Ethanol Solution	Shipping Name: ETHANOL SOLUTION
Hazard Class: 3	Hazard Class: 3	Hazard Class: 3
UN Number: 1170	UN Number: 1170	UN Number: 1170
Packing Group: II	Packing Group: II	Packing Group: II

SECTION 15: REGULATORY INFORMATION

SARA 302	67-66-3
SARA 313	67-66-3
SARA 311/312 Hazards	Fire hazard, Acute Health Hazard, Chronic Health Hazard
State	Right to know lists: MA: 64-17-5, 67-66-3, 64-19-7 PA: 64-17-5, 67-66-3, 64-19-7 NJ: 64-17-5, 67-66-3, 64-19-7 California Prop. 65 Components: 67-66-3

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.