

SAFETY DATA SHEET

Review Date 11/12/2019

Revision Date 11/12/2019

1 Identification of the Substance/Mixture and Company

Product Name: Carnoy's Fixative

MSDS Code: C2720

Product Description: Tissue Fixative

Manufacturer/Supplier:

Lab Alley LLC
22111 Highway 71 West, Suite 601
Spicewood, Texas 78669
512-668-9918

Emergency Telephone Number: Chemtrec 800-424-9300 (24 hours) - International 001-703-527-3887

2 Hazards Identification

Classification of the substance or mixture



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

H319 Causes serious eye irritation.

Acute Tox. 5 H303 May be harmful if swallowed.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Xn; Harmful

R22-40-48/20/22: Harmful if swallowed. Limited evidence of a carcinogenic effect. Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.



Xi; Irritant

R36/38: Irritating to eyes and skin.

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F; Highly flammable

R11: Highly flammable.

Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of international guidelines.

Classification system:

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

Label elements**GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).**Hazard pictograms**

GHS02



GHS07



GHS08

Signal word Danger**Hazard-determining components of labeling:**

trichloromethane

Hazard statements

Highly flammable liquid and vapour.

May be harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

Suspected of causing cancer.

May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

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

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

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

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:**NFPA ratings (scale 0 - 4)**

Health = 3

Fire = 3

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 3

Fire = 3

Reactivity = 0

Other hazards**Results of PBT and vPvB assessment****PBT:** Not applicable.

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Name: Carnoy's Fixative**3 Composition****Description:** Mixture of the substances listed below with nonhazardous additions.

Dangerous components:		
CAS: 64-17-5 EINECS: 200-578-6	ethanol, denatured ⚠ Flam. Liq. 2, H225	<65%
CAS: 67-66-3 EINECS: 200-663-8	trichloromethane ⚠ Flam. Liq. 2, H225; ☠ Carc. 2, H351; STOT RE 2, H373; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315	<30%
CAS: 64-19-7 EINECS: 200-580-7	acetic acid ⚠ Flam. Liq. 3, H226; ⚠ Skin Corr. 1A, H314	<15%

4 First Aid Measures**Description of first aid measures****General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation: In case of unconsciousness place patient stably in side position for transportation.

After skin contact: Immediately wash with water and soap and rinse thoroughly.

After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing: Immediately call a doctor.

Information for doctor:

Most important symptoms and effects, both acute and delayed: No further relevant information available.

Indication of any immediate medical attention and special treatment needed:

No further relevant information available.

5 Firefighting Measures**Extinguishing media**

Suitable extinguishing agents: CO₂, sand, extinguishing powder. Do not use water.

For safety reasons unsuitable extinguishing agents: Water

Special hazards arising from the substance or mixture: No further relevant information available.

Advice for firefighters

Protective equipment: No special measures required.

6 Accidental Release Measures**Personal precautions, protective equipment and emergency procedures:**

Wear protective equipment. Keep unprotected persons away.

Environmental precautions:

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.

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Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and Storage

Handling:
Precautions for safe handling:

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: Store in a cool location.

Information about storage in one common storage facility: Not required.

Further information about storage conditions:

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

Specific end use(s): No further relevant information available.

8 Exposure Controls/Personal Protection

Additional information about design of technical systems: No further data; see item 7.

Control parameters
Components with limit values that require monitoring at the workplace:
64-17-5 ethanol

PEL	1900 mg/m ³ , 1000 ppm
REL	1900 mg/m ³ , 1000 ppm
TLV	Short-term value: 1880 mg/m ³ , 1000 ppm

67-66-3 trichloromethane

PEL	Short-term value: C 240 mg/m ³ , C 50 ppm
REL	Short-term value: 9.78* mg/m ³ , 2* ppm *60-min; See Pocket Guide App. A
TLV	49 mg/m ³ , 10 ppm

64-19-7 acetic acid

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PEL	25 mg/m ³ , 10 ppm
REL	Short-term value: 37 mg/m ³ , 15 ppm Long-term value: 25 mg/m ³ , 10 ppm
TLV	Short-term value: 37 mg/m ³ , 15 ppm Long-term value: 25 mg/m ³ , 10 ppm

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls:**Personal protective equipment:****General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material:

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Tightly sealed goggles

9 Physical and Chemical Properties

Information on basic physical and chemical properties

General Information

Appearance

Form:	Fluid
Color:	Colorless
Odor:	Phenol-like
Odor threshold:	Not determined.

pH-value: Not determined.

Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	62°C (144 °F)

Flash point: 0°C (32 °F)

Flammability (solid, gaseous): Not applicable.

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Ignition temperature:	425°C (797 °F)
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
Explosion limits:	
Lower:	3.5 Vol %
Upper:	17.0 Vol %
Vapor pressure at 20°C (68 °F):	210 hPa (158 mm Hg)
Density at 20°C (68 °F):	1.02296 g/cm ³ (8.537 lbs/gal)
Relative density:	Not determined.
Vapour density:	Not determined.
Evaporation rate:	Not determined.
Solubility in / Miscibility with Water:	Fully miscible.
Segregation coefficient (n-octanol/water):	Not determined.
Dynamic:	Not determined.
Kinematic:	Not determined.
Other information:	No further relevant information available.

10 Stability and Reactivity

Reactivity:**Chemical stability:****Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.**Possibility of hazardous reactions:** No dangerous reactions known.**Conditions to avoid:** No further relevant information available.**Incompatible materials:** No further relevant information available.**Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicology Information

Information on toxicological effects**Acute toxicity:****LD/LC50 values that are relevant for classification:****67-66-3 trichloromethane**

Oral LD50 908 mg/kg (rat)

Dermal LD50 75 mg/kg (rat)

Primary irritant effect:**On the skin:** Irritant to skin and mucous membranes.**On the eye:** Irritating effect.**Sensitization:** No sensitizing effects known.

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Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful
Irritant**Carcinogenic categories**

IARC (International Agency for Research on Cancer)		
67-66-3	trichloromethane	2B
NTP (National Toxicology Program)		
67-66-3	trichloromethane	R

12 Ecological Information**Toxicity:****Aquatic toxicity:** No further relevant information available.**Persistence and degradability:** No further relevant information available.**Behavior in environmental systems:****Bioaccumulative potential:** No further relevant information available.**Mobility in soil:** No further relevant information available.**Additional ecological information:****General notes:**

Water hazard class 3 (Self-assessment): 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.

Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects:** No further relevant information available.**13 Disposal Considerations****Uncleaned packagings:****Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agent:** Water, if necessary with cleansing agents.**14 Transport Information**


UN-Number DOT, ADR, IMDG, IATA	UN1170
UN proper shipping name DOT, IATA ADR IMDG	ETHANOL SOLUTION 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

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Transport hazard class(es)	
DOT, ADR Class	3 Flammable liquids.
IMDG, IATA	
	
Class Label	3 Flammable liquids. 3
Packing group ADR, IATA	II
Environmental hazards Marine pollutant:	No
Special precautions for user:	Warning: Flammable liquids
Danger code (Kemler):	33
EMS Number:	F-E,S-E
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:	Not applicable.
UN "Model Regulation":	UN1170, ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, II

15 Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture
SARA

Section 355 (extremely hazardous substances):

67-66-3	trichloromethane
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Section 313 (Specific toxic chemical listings):

67-66-3	trichloromethane
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TSCA (Toxic Substances Control Act):

All ingredients are listed.

Proposition 65

Chemicals known to cause cancer:

67-66-3	trichloromethane
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Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

64-17-5	ethanol
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67-66-3	trichloromethane
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Carcinogenic categories**EPA (Environmental Protection Agency)**

67-66-3	trichloromethane	NL
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TLV (Threshold Limit Value established by ACGIH)

64-17-5	ethanol	A3
67-66-3	trichloromethane	A3

NIOSH-Ca (National Institute for Occupational Safety and Health)

67-66-3	trichloromethane
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OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).**Hazard pictograms**

GHS02 GHS07 GHS08

Signal word Danger**Hazard-determining components of labelling:**

trichloromethane

Hazard statements

Highly flammable liquid and vapour.

May be harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

Suspected of causing cancer.

May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

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

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

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

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.**16 Other Information**

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The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

Department issuing SDS: Regulatory Department

Contact: customerservice@laballey.com