



**SAFETY DATA SHEET**  
**In Accordance with ISO/DIS 11014**

Review Date 01/29/2018

Revision Date 01/29/2018

**1 Identification of the Substance/Mixture and Company**

**Product Name:** Carnoy's 2000

**SDS Code:** SSFXCAR2

**Product Description:** Tissue Fixative

**Manufacturer/Supplier:**

American MasterTech  
1330 Thurman Street  
Lodi, CA 95240  
USA  
(800) 860-4073

**European Authorized Representative:**

Emergo Europe  
Prinsessegracht 20  
2514 AP The Hague,  
The Netherlands

**Emergency Telephone Number:** Infotrac (800) 535-5053 (24 hours) - International (011) 352-323-3500

**2 Hazards Identification**

**Classification of the substance or mixture**



GHS02 Flame

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



GHS08 Health hazard

Carc. 1A H350 May cause cancer.



GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

**Label elements**

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

**Hazard pictograms**



GHS02



GHS05



GHS08

**Signal word** Danger

**Hazard-determining components of labeling:**

ethanol

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acetic acid

**Hazard statements**

Highly flammable liquid and vapor.

Causes severe skin burns and eye damage.

May cause cancer.

**Precautionary statements**

Obtain special instructions before use.

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

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

Keep container tightly closed.

Ground/bond container and receiving equipment.

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

Use only non-sparking tools.

Take precautionary measures against static discharge.

Do not breathe dusts or mists.

Wash thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

Immediately call a poison center/doctor.

Specific treatment (see on this label).

Wash contaminated clothing before reuse.

In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.

Store in a well-ventilated place. Keep cool.

Store locked up.

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

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

Health = 2

Fire = 3

Reactivity = 0

**HMIS-ratings (scale 0 - 4)**

Health = 2

Fire = 3

Reactivity = 0

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

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### 3 Composition

**Chemical characterization: Mixtures****Description:** Mixture of the substances listed below with nonhazardous additions.**Dangerous components:**

64-17-5	ethanol	50-100%
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64-19-7	acetic acid	<30%
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### 4 First Aid Measures

**Description of first aid measures**
**General information:** Immediately remove any clothing soiled by the product.

**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. Then consult a doctor.

**After swallowing:** Drink copious amounts of water and provide fresh air. 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.
 

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### 5 Firefighting Measures

**Extinguishing media**
**Suitable extinguishing agents:**

 CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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

**Advice for firefighters**
**Protective equipment:** No special measures required.
 

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### 6 Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures:**

Wear protective equipment. Keep unprotected persons away.

**Environmental precautions:**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

**Methods and material for containment and cleaning up:**

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

Use neutralizing agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

**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.

**Protective Action Criteria for Chemicals**

<b>PAC-1:</b>		
64-17-5	ethanol	1,800 ppm
64-19-7	acetic acid	5 ppm
<b>PAC-2:</b>		
64-17-5	ethanol	3300* ppm
64-19-7	acetic acid	35 ppm

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<b>PAC-3:</b>		
64-17-5	ethanol	15000* ppm
64-19-7	acetic acid	250 ppm

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## 7 Handling and Storage

**Handling:****Precautions for safe handling:** Ensure good ventilation/exhaustion at the workplace.**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	Long-term value: 1900 mg/m <sup>3</sup> , 1000 ppm
REL	Long-term value: 1900 mg/m <sup>3</sup> , 1000 ppm
TLV	Short-term value: 1880 mg/m <sup>3</sup> , 1000 ppm

**64-19-7 acetic acid**

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

Store protective clothing separately.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

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**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

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## 9 Physical and Chemical Properties

<b>Information on basic physical and chemical properties</b>	
<b>General Information</b>	
<b>Appearance</b>	
<b>Form:</b>	Liquid
<b>Color:</b>	Colorless
<b>Odor:</b>	Alcohol-like
<b>Odor threshold:</b>	Not determined.
<b>pH-value:</b>	Not determined.
<b>Change in condition</b>	
<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	78 °C (172.4 °F)
<b>Flash point:</b>	13 °C (55.4 °F)
<b>Flammability (solid, gaseous):</b>	Not applicable.
<b>Ignition temperature:</b>	425 °C (797 °F)
<b>Decomposition temperature:</b>	Not determined.
<b>Auto igniting:</b>	Product is not selfigniting.
<b>Danger of explosion:</b>	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
<b>Explosion limits:</b>	
<b>Lower:</b>	3.5 Vol %
<b>Upper:</b>	17 Vol %
<b>Vapor pressure at 20 °C (68 °F):</b>	59 hPa (44.3 mm Hg)
<b>Density at 20 °C (68 °F):</b>	0.8634 g/cm <sup>3</sup> (7.20507 lbs/gal)
<b>Relative density:</b>	Not determined.
<b>Vapour density:</b>	Not determined.
<b>Evaporation rate:</b>	Not determined.

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<b>Solubility in / Miscibility with Water:</b>	Fully miscible.
<b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
<b>Other information:</b>	No further relevant information available.

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### 10 Stability and Reactivity

**Reactivity:** No further relevant information available.

**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.

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### 11 Toxicology Information

**Information on toxicological effects**

**Acute toxicity:**

**LD/LC50 values that are relevant for classification:**

**64-19-7 acetic acid**

Oral	LD50	3,310 mg/kg (rat)
Dermal	LD50	1,060 mg/kg (rabbit)

**Primary irritant effect:**

**On the skin:** Caustic effect on skin and mucous membranes.

**On the eye:**

Strong caustic effect.

Strong irritant with the danger of severe eye injury.

**Sensitization:** No sensitizing effects known.

**Additional toxicological information:**

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

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

**Carcinogenic categories**

**IARC (International Agency for Research on Cancer)**

64-17-5	ethanol	1
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**NTP (National Toxicology Program)**

None of the ingredients are listed.

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<b>OSHA-Ca (Occupational Safety &amp; Health Administration)</b>
None of the ingredients are listed.

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## 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 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.


Must not reach bodies of water or drainage ditch undiluted or unneutralized.

**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

<b>UN-Number</b>	UN2924
<b>DOT, ADR, IMDG, IATA</b>	
<b>UN proper shipping name</b>	Flammable liquids, corrosive, n.o.s. (Ethanol, Acetic acid, glacial)
<b>DOT</b>	2924 Flammable liquids, corrosive, n.o.s. (Ethanol, Acetic acid, glacial)
<b>ADR</b>	FLAMMABLE LIQUID, CORROSIVE, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETIC ACID, GLACIAL)
<b>IMDG</b>	FLAMMABLE LIQUID, CORROSIVE, N.O.S. (ETHANOL, ACETIC ACID, GLACIAL)
<b>IATA</b>	FLAMMABLE LIQUID, CORROSIVE, N.O.S. (ETHANOL, ACETIC ACID, GLACIAL)
<b>Transport hazard class(es)</b>	
<b>DOT</b>	
	
<b>Class</b>	3 Flammable liquids

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<b>Label</b>	3, 8
<b>ADR</b>	
	
<b>Class Label</b>	3 Flammable liquids 3+8
<b>IMDG</b>	
	
<b>Class Label</b>	3 Flammable liquids 3/8
<b>IATA</b>	
	
<b>Class Label</b>	3 Flammable liquids 3 (8)
<b>Packing group DOT, ADR, IMDG, IATA</b>	II
<b>Environmental hazards Marine pollutant:</b>	No
<b>Special precautions for user:</b>	Warning: Flammable liquids
<b>Danger code (Kemler):</b>	338
<b>EMS Number:</b>	F-E,S-C
<b>Segregation groups</b>	Acids
<b>Stowage Category</b>	B
<b>Stowage Code</b>	SW2 Clear of living quarters.
<b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:</b>	Not applicable.
<b>Transport/Additional information:</b>	
<b>DOT Quantity limitations</b>	On passenger aircraft/rail: 1 L On cargo aircraft only: 5 L
<b>ADR Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml



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<b>IMDG</b>	
<b>Limited quantities (LQ)</b>	1L
<b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
<b>UN "Model Regulation":</b>	UN 2924 FLAMMABLE LIQUIDS, CORROSIVE, N.O.S. (ETHANOL, ACETIC ACID, GLACIAL), 3 (8), II

### 15 Regulatory Information

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

**Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

**Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

**TSCA (Toxic Substances Control Act):**

All ingredients are listed.

**Proposition 65**
**Chemicals known to cause cancer:**

None of the ingredients is listed.

**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

**Carcinogenic categories**
**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

**TLV (Threshold Limit Value established by ACGIH)**

64-17-5 | ethanol

A3

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

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   GHS05   GHS08

**Signal word** Danger

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**Hazard-determining components of labeling:**

ethanol  
acetic acid

**Hazard statements**

Highly flammable liquid and vapor.  
Causes severe skin burns and eye damage.  
May cause cancer.

**Precautionary statements**

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
Keep container tightly closed.  
Ground/bond container and receiving equipment.  
Use explosion-proof electrical/ventilating/lighting/equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Do not breathe dusts or mists.  
Wash thoroughly after handling.  
Wear protective gloves/protective clothing/eye protection/face protection.  
If swallowed: Rinse mouth. Do NOT induce vomiting.  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If exposed or concerned: Get medical advice/attention.  
Immediately call a poison center/doctor.  
Specific treatment (see on this label).  
Wash contaminated clothing before reuse.  
In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.  
Store in a well-ventilated place. Keep cool.  
Store locked up.  
Dispose of contents/container in accordance with local/regional/national/international regulations.

**National regulations:****Additional classification according to Decree on Hazardous Materials:**

Carcinogenic hazardous material group III (dangerous).

**Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

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

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## 16 Other Information

This information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of the material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.

**Department issuing SDS:** Regulatory Department

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**Contact:** Phone (800) 860-4073**Date of preparation / last revision** 01/29/2018 / -**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety &amp; Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Carc. 1A: Carcinogenicity – Category 1A

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