

Safety Data Sheet



Section 1 - Chemical Product and Company Identification

Product Identification

Name: Surgical Reality Fluid
Number: Surgical Reality Fluid
Intended Use: Embalming Fluid

Manufacture: Trinity Fluids, LLC
Address: 41158 Koppernick Rd.
 Canton, MI 48187
Phone: 810 441-8006
Emergency: 800 255-3924 (Chemtrec)

Section 2 - Hazard Identification

Pictogram



Signal word: Danger

Hazard Statements

H226 Flammable liquid and vapor.
 H302 Harmful if swallowed.
 H311 + H331 Toxic in contact with skin or if inhaled
 H314 Causes severe skin burns and eye damage.
 H317 May cause an allergic skin reaction.
 H341 Suspected of causing genetic defects.
 H350 May cause cancer
 H361 Suspected of damaging fertility or the unborn child.
 H402 Harmful to aquatic life.

Precautionary Statements

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 dust/ fume/ gas/ mist/ vapours/ spray.
 P264 Wash thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area
 P273 Avoid release to the environment.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
 Rinse mouth.
 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 with water for several minutes. Remove contact lenses if present and continue rinsing.

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.

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

Section 3 - Composition/Information on Ingredients Identification

Component	CAS#	Percent (wt)
Ethylene Glycol	107-21-1	<20%
Ammonium Nitrate	6484-52-2	<10%
Ethanol	64-17-5	<10%
Sodium Sulfite	7757-83-7	<10%
Morpholine	110-91-8	<5%
Boric acid	10043-35-3	<5%
Chlorocresol	59-50-7	<1%
Formaldehyde	50-00-0	<1%

Section 4 - First Aid Measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

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

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician

If swallowed

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

Section 5 - Fire Fighting Measures

Extinguishing media

Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

No data available

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Section 6 - Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. For personal protection see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Reference to other sections

For disposal see section 13.

Section 7 - Handling and Storage

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition - No smoking.

Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.

Conditions for safe storage, including any incompatibilities

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.

Section 8 - Exposure Controls/Personel Protection

Ingredient	OSHA TWA	OSHA STEL	ACGIH TWA	ACGIH STEL	ACGIH CELING
Ethylene Glycol					100mg/m3
Ethanol	1000ppm		1000ppm		
Morpholine	100ppm "skin"		100ppm "skin"		
Boric Acid			2mg/m3	2mg/m3	
Formaldehyde	.75ppm	2ppm			0.3ppm "sen"

FORMALDEHYDE

Irritation Data:

150 ug/3 days intermittent skin-human mild; 2 mg/24 hours skin-rabbit severe; 540 mg open skin-rabbit mild; 50 mg/24 hours skin-rabbit moderate; 4 ppm/5 minutes eye-human; 1 ppm/6 minutes nonstandard exposure eye-human mild; 750 ug/24 hour eye-rabbit severe; 750 ug eye-rabbit severe; 10 mg eye-rabbit severe.

Toxicity Data:

17 mg/m3/30 minutes inhalation-human TCLO; 300 ug/m3 inhalation-man TCLO; 203 mg/m3 inhalation-rat LC50; 400mg/m3/2hours inhalation -mouse LC50; 400 mg/m3/2 hours inhalation-cat LCLO; 92 mg/m3 inhalation-mammal LC50; 270 mg/kg skin-rabbit LD50; 108 mg/kg oral-woman LDLO; 100 mg/kg oral-rat LD50; 42 mg/kg oral-mouse LD50; 260 mg/kg oral-guinea pig LD50; 420 mg/kg subcutaneous-rat LD50; 300 mg/kg subcutaneous-mouse LD50; 350 mg/kg subcutaneous-dog LDLO; 240 mg/kg subcutaneous-rabbit LDLO; 87mg/kg intravenous-rat LD50; 48 mg/kg intravenous-rabbit LDLO; 30 mg/kg intravenous-cat LDLO; 70 mg/kg intravenous-dog LDLO; 16 mg/kg intraperitoneal-mouse LDLO; 477 mg/kg unreported-man LDLO; 800 mg/kg parenteral-frog LDLO; mutagenic data (RTECS); reproductive effects data (RETCS); tumorigenic data (RTECS).

Carcinogenic Status:

OSHA carcinogen; anticipated human carcinogen (NTP); human limited evidence, animal sufficient evidence (IARC group-2A). Epidemiological studies and case reports indicate an excess occurrence of a number of cancers, but evidence for involvement for formaldehyde is strongest for nasal and nasopharyngeal cancer. A significant incidence of squamous cell carcinoma of the nasal cavity was induced in rats exposed in formaldehyde gas.

Local Effects: Corrosive - inhalation, skin, eye, ingestion.

Acute Toxicity Level: Highly toxic by inhalation, toxic by dermal absorption and ingestion.

Target Effects: Sensitizer - respiratory, dermal. Poisoning may also affect the kidneys.

At Risk from Exposure: Persons with asthma, chronic skin disease or preexisting lung disease.

Key to abbreviations

A = Acceptable Maximum Peak

ACGIH = American Conference of Governmental Industrial Hygienists.

C = Ceiling Limit

F = Fume

IPEL = Internal Permissible Exposure Limit

OSHA = Occupational Safety and Health Administration

R = Respirable

Z = OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances

S = Potential skin absorption

SR = Respiratory sensitization

SS = Skin sensitization

STEL = Short term Exposure limit values

TD = Total dust

TLV = Threshold Limit Value

TWA = Time Weighted Average

Section 8 - Exposure Controls/Personal Protection

Recommended monitoring: procedures	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
Engineering measures:	Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
Hygiene measures:	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
<u>Personal protection</u>	
Eyes:	Safety glasses with side shields.
Hands:	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Respiratory:	If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Skin:	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
Environmental exposure: controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Section 9 - Physical and Chemical Properties

Physical state:	Liquid	Vapor Density:	Heavier than air
Flash point:	85°F	Volatility:	95.0%
Explosion limits:	6 LEL 36 UEL	Evaporation rate:	less than n-butyl acetate
Odor:	Pungent	pH	6.8 to 7.2
Color:	Red		
Boiling/condensation point:	190°F		
Specific gravity:	Greater than 1		

Section 10 - Stability and Reactivity

Stability:	Stable under recommended storage and handling conditions (see Section 7).
Conditions to avoid:	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Materials to avoid:	Reactive or incompatible with the following materials: oxidizing materials, strong acids, strong alkalis.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization:	Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11 - Toxicological Information**Information on toxicological effects****Acute toxicity Inhalation**

No data available

Dermal

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity**IARC:**

3 - Group 3: Not classifiable as to its carcinogenicity to humans (Sodium sulphite)

2A - Group 2A: Probably carcinogenic to humans (Potassium nitrate)

1 - Group 1: Carcinogenic to humans (Formaldehyde)

NTP: Known to be human carcinogen (Formaldehyde)**OSHA:** OSHA specifically regulated carcinogen (Formaldehyde)**Reproductive toxicity**

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Section 12 - Ecological Information**Toxicity**

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Results of PBT and vPvB assessment

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

Other adverse effects

No data available

Section 13 - Disposal Considerations

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

Section 14 - Transport Information

Regulation	UN number	Proper shipping name	Classes	PG*	Additional information
UN	1198	Formaldehyde Solutions, Flammable	3	III	
IMDG	1198	Formaldehyde Solutions, Flammable	3	III	
DOT	1198	Formaldehyde Solutions, Flammable	3	III	Reportable quantity See Section 15

PG* : Packing group

Section 15 - Regulatory Information

SARA 302 Components

The following components in this material are subject to the reporting requirements of SARA Title III, Section 302:

Component	CAS
Formaldehyde	50-00-0

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

Component	CAS
Ethylene glycol	107-21-1
Ammonium nitrate	6484-52-2
Potassium nitrate	7757-79-1
Formaldehyde	50-00-0

SARA 311/312 Hazards

Fire Hazard, Reactive Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

Component	CAS
Ethylene glycol	107-21-1
Ethanol	64-17-5
Morpholine	110-91-8
Ammonium nitrate	6484-52-2
Potassium nitrate	7757-79-1
Chlorocresol	59-50-7
Formaldehyde	50-00-0

Pennsylvania Right To Know Components

Component	CAS
Ethylene glycol	107-21-1
Water	7732-18-5
Ethanol	64-17-5
Sodium sulphite	7757-83-7
Morpholine	110-91-8
Ammonium nitrate	6484-52-2
Potassium nitrate	7757-79-1
Boric Acid	10043-35-3
Chlorocresol	59-50-7
Formaldehyde	50-00-0

New Jersey Right To Know Components

Component	CAS
Ethylene glycol	107-21-1
Ammonium nitrate	6484-52-2
Water	7732-18-5
Ethanol	64-17-5
Sodium sulphite	7757-83-7
Morpholine	110-91-8
Potassium nitrate	7757-79-1
Boric Acid	10043-35-3
Chlorocresol	59-50-7
Formaldehyde	50-00-0

California Prop. 65 Components

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Component	CAS
Ethylene glycol	107-21-1
Formaldehyde	50-00-0

Section 16 - Other Information
Hazardous Material Information System (U.S.A.)

Health: 3 * Flammability: 3 Physical hazards: 0
 (*) - Chronic effects

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National Fire Protection Association (U.S.A.)

Health: 3 Flammability: 3 Instability: 0

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning this product, and to recommend precautionary measures for the storage and handling of the product. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.