

## 1. Identification

### 1.1. Product identifier

**Product Identity** Hand Sanitizer  
**Alternate Names** Hand Sanitizer

**1.2. Relevant identified uses of the substance or mixture and uses advised against**  
**Intended use** Hand Sanitizer

### 1.3. Details of the supplier of the safety data sheet

**Company Name** AMA Systems  
8160 Lark Brown Rd  
Elkridge, MD 21075

### Emergency

**CHEMTREC (USA)** 410-312-9920  
**24 hour Emergency Telephone No.** 410-312-9920  
**Customer Service:** AMA Systems

## 2. Hazard(s) identification

### 2.1. Classification of the substance or mixture

Flam. Liq. 2;H225 Highly Flammable liquid and vapor.  
Eye Irrit. 2;H319 Causes serious eye irritation.  
STOT SE 3;H335 May cause respiratory irritation.  
Aquatic Chronic 2;H411 Toxic to aquatic life with long lasting effects.

### 2.2. Label elements



**Danger**

H225 Highly flammable liquid and vapor.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H411 Toxic to aquatic life with long lasting effects.

**[Prevention]:**



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P210 Keep away from heat, sparks, open flames, and other ignition sources - No smoking.

P233 Keep container tightly closed.

P240 Ground, bond container and receiving equipment.

P241 Use explosion-proof electrical, ventilating, light, equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P261 Avoid breathing dust, fume, gas, mist, vapors, spray.

P264 Wash thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves, eye protection, face protection.

### [Response]:

P303+361+353 IF ON SKIN (or hair): Remove, take off immediately all contaminated clothing. Rinse skin with water, shower.

P304+312 IF INHALED: Call a poison center or doctor or physician if you feel unwell.

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P337+313 If eye irritation persists: Get medical advice or attention.

P370+378 In case of fire: Use extinguishing media listed in section 5 of SDS for extinction.

P391 Collect spillage.

### [Storage]:

P403+233 Store in a well ventilated place. Keep container tightly closed.

P405 Store locked up.

### [Disposal]:

P501 Dispose of contents or container in accordance with local and national regulations.

## 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Ethanol CAS Number: 0000064-17-5	50 - 75	Flam. Liq. 2;H225	----
Methacrylic acid CAS Number: 0000079-41-4	1 - 5	Acute Tox. 4;H312 Acute Tox. 4;H302 Skin Corr. 1A;H314	----
Glycerin CAS Number: 0000056-81-5	1 - 5	Not Classified	----

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

\*PBT/vPvB - PBT-substance or vPvB-substance.

The full texts of the phrases are shown in Section 16.

## Section 4. First aid measures

### 4.1. Description of first aid measures

<b>General</b>	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
<b>Inhalation</b>	Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious, place in the recovery position and obtain immediate medical attention. Give nothing by mouth.
<b>Eyes</b>	Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.
<b>Skin</b>	Product is intended for use with bare hands, exposure not expected to cause medical issues.
<b>Ingestion</b>	If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

### 4.2. Most important symptoms and effects, both acute and delayed

<b>Overview</b>	Treat symptomatically. Exposure to solvent vapor concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.  Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage. Check section 2.2 (GHS Label Elements) for further details.
<b>Inhalation</b>	May cause respiratory irritation.
<b>Eyes</b>	Causes serious eye irritation.

## Section 5. Fire-fighting measures

### 5.1. Extinguishing media

Suitable extinguishing media :

Water spray  
Alcohol-resistant foam  
Dry chemical  
Carbon dioxide (CO<sub>2</sub>)

Unsuitable extinguishing media :  
High volume water jet

**5.2. Special hazards arising from the substance or mixture**

Hazardous decomposition: Flammable liquid and vapor. Vapors may form explosive mixture with air. Can react with strong oxidizing agents.

Keep away from heat, sparks, open flames, and other ignition sources - No smoking.

Keep container tightly closed.

Ground, bond container and receiving equipment.

Use explosion-proof electrical, ventilating, light, equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust, fume, gas, mist, vapors, spray.

**5.3. Advice for fire-fighters**

As with all fires, wear positive pressure, self-contained breathing apparatus, (SCBA) with a full face piece and protective clothing. Persons without respiratory protection should leave area. Wear SCBA during clean-up immediately after fire. No smoking.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

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**Section 6. Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

Put on appropriate personal protective equipment (see section 8).

**6.2. Environmental precautions**

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

Collect in flammable waste container for disposal.

**6.3. Methods and material for containment and cleaning up**

Non-sparking tools should be used. Soak up with inert absorbent material. Suppress (knock down) gases/vapors/mists with a water spray jet. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases.

**Section 7. Handling and storage**



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### 7.1. Precautions for safe handling

Handle containers carefully to prevent damage and spillage.

Do not breathe vapors or spray mist. Do not swallow. Do not get in eyes. Avoid prolonged or repeated contact with skin. Handle in accordance with good industrial hygiene and safety practice. Non-sparking tools should be used. Keep container tightly closed. Keep away from heat and sources of ignition. Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the environment.

Check section 2.2 (GHS Label Elements) for further details. - [Prevention]:

### 7.2. Conditions for safe storage, including any incompatibilities

Keep in properly labeled containers. Keep tightly closed. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Keep away from heat and sources of ignition.

Incompatible materials: Do not store with the following product types: Strong oxidizing agents

Organic peroxides

Flammable solids

Pyrophoric liquids

Pyrophoric solids

Self-heating substances and mixtures

Substances and mixtures which in contact with water emit

flammable gases

Explosives Gases

Check section 2.2 (GHS Label Elements) for further details. - [Storage]:

### 7.3. Specific end use(s)

No data available.

## Section 8. Exposure controls / personal protection

### 8.1. Control parameters

#### Exposure

CAS No.	Ingredient	Source	Value
0000056-81-5	Glycerin	OSHA	TWA 15 mg/m3 (total dust) TWA 5 mg/m3 (resp)
		ACGIH	TWA: 3 mg/m3 (respirable) 10 mg/m3 (mist)
		NIOSH	No established RELs
0000064-17-5	Ethanol	OSHA	TWA 1000 ppm (1900 mg/m3)
		ACGIH	No Established Limit
		NIOSH	TWA 1000 ppm (1900 mg/m3)
0000079-41-4	Methacrylic acid	OSHA	No Established Limit
		ACGIH	TWA: 20 ppm
		NIOSH	TWA 20 ppm (70 mg/m3) [skin]

Contains mineral oil. The exposure limits for oil mist are 5 mg/m3 OSHA PEL and 10 mg/m3 ACGIH.

### 8.2. Exposure controls

<b>Respiratory</b>	If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.
<b>Eyes</b>	Wear safety glasses with side shields to protect the eyes. An eye wash station is suggested as a good workplace practice.
<b>Skin</b>	None needed under normal use.
<b>Engineering Controls</b>	Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.
<b>Other Work Practices</b>	Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

Check section 2.2 (GHS Label Elements) for further details.

## Section 9. Physical and chemical properties

<b>Appearance</b>	Clear Liquid
<b>Odor</b>	Not Provided.
<b>Odor threshold</b>	Not determined
<b>pH</b>	6.5 -8.5
<b>Melting point / freezing point</b>	No data available
<b>Initial boiling point and boiling range</b>	70 °C
<b>Flash Point</b>	14 °C
<b>Evaporation rate (Ether = 1)</b>	Not Measured
<b>Flammability (solid, gas)</b>	Not Applicable
<b>Upper/lower flammability or explosive limits</b>	<b>Lower Explosive Limit:</b> No data available <b>Upper Explosive Limit:</b> No data available
<b>Vapor pressure (Pa)</b>	No data available
<b>Vapor Density</b>	Not Measured
<b>Relative Density</b>	Not Measured
<b>Solubility in Water</b>	Soluble
<b>Partition coefficient n-octanol/water (Log Kow)</b>	Not Measured
<b>Auto-ignition temperature</b>	Not Measured
<b>Decomposition temperature</b>	Not Measured
<b>Viscosity (cSt)</b>	3.500 - 23.000 mm <sup>2</sup> /s (20 °C)
<b>Density</b>	0.875p g/cm <sup>3</sup>

### 9.2. Other information

No other relevant information.

## Section 10. Stability and reactivity

**10.1. Reactivity**

Hazardous Polymerization will not occur.

**10.2. Chemical stability**

Stable under normal circumstances.

**10.3. Possibility of hazardous reactions**

No data available.

**10.4. Conditions to avoid**

High temperatures and fires.

**10.5. Incompatible materials**

Do not store with the following product types: Strong oxidizing agents

Organic peroxides

Flammable solids

Pyrophoric liquids

Pyrophoric solids

Self-heating substances and mixtures

Substances and mixtures which in contact with water emit

flammable gases

Explosives Gases

**10.6. Hazardous decomposition products**

Flammable liquid and vapor. Vapors may form explosive mixture with air. Can react with strong oxidizing agents.

## Section 11. Toxicological information

**Acute toxicity**

Exposure to solvent vapor concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage.

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).



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Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Ethanol - (64-17-5)	10,470.00, Rat - Category: NA	17,100.00, Rabbit - Category: NA	124.70, Rat - Category: NA	No data available	No data available
Methacrylic acid - (79-41-4)	1,320.00, Rat - Category: 4	1,000.00, Rabbit - Category: 3	7.10, Rat - Category: 3	No data available	No data available
Glycerin - (56-81-5)	10,000.00, Guinea Pig - Category: NA	56,750.00, Guinea Pig - Category: NA	No data available	No data available	No data available

### Carcinogen Data

CAS No.	Ingredient	Source	Value
0000056-81-5	Glycerin	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
		ACGIH	No Established Limit
0000064-17-5	Ethanol	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: Yes; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
		ACGIH	A3
0000079-41-4	Methacrylic acid	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
		ACGIH	No Established Limit

Classification	Category	Hazard Description
Acute toxicity (oral)	---	Not Applicable
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	---	Not Applicable
Serious eye damage/irritation	2	Causes serious eye irritation.
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	3	May cause respiratory irritation.
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable



**Section 12. Ecological information**

**12.1. Toxicity**

Toxic to aquatic life with long lasting effects.

No additional information provided for this product. See Section 3 for chemical specific data.

**Aquatic Ecotoxicity**

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Ethanol - (64-17-5)	15,400.00, Lepomis macrochirus	> 10,000, Daphnia magna	17.921 (96 hr), Ulva pertusa
Methacrylic acid - (79-41-4)	85.00, Oncorhynchus mykiss	210.00, Acartia tonsa	45.00 (72 hr), Pseudokirchneriella subcapitata
Glycerin - (56-81-5)	54,000.00, Oncorhynchus mykiss	1,955.00, Daphnia magna	Not Available

**12.2. Persistence and degradability**

There is no data available on the preparation itself.

**12.3. Bioaccumulative potential**

Not Measured

**12.4. Mobility in soil**

No data available.

**12.5. Results of PBT and vPvB assessment**

This product contains no PBT/vPvB chemicals.

**12.6. Other adverse effects**

No data available.

**Section 13. Disposal considerations**

**13.1. Waste treatment methods**

Destroy by liquid incineration. Use absorbent material and deposit in toxic landfill in accordance with local, state, and federal regulations.

**Section 14. Transport information**

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
<b>14.1. UN number</b>	UN1987	UN1987	UN1987
<b>14.2. UN proper shipping name</b>	UN1987, Alcohols, n.o.s., 3 III	Alcohols, n.o.s.	Alcohols, n.o.s.

<b>14.3. Transport hazard class(es)</b>	<b>DOT Hazard Class: 3</b>	<b>IMDG: 3</b>	<b>Air Class: 3</b>
<b>14.4. Packing group</b>	III	Sub Class: Not Applicable	III
<b>14.5. Environmental hazards</b>			
<b>IMDG</b>	Marine Pollutant: Yes; ( Methacrylic acid )		
<b>14.6. Special precautions for user</b>	Not Applicable		

## Section 15. Regulatory information

<b>Regulatory Overview</b>	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.
<b>Toxic Substance Control Act ( TSCA )</b>	All components of this material are either listed or exempt from listing on the TSCA Inventory.
<b>Note:</b>	Ethanol (Ethyl alcohol) has been placed on the California Proposition 65 Cancer and Developmental Lists when in alcoholic beverages.
<b>EPCRA 302 Extremely Hazardous:</b>	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
<b>EPCRA 313 Toxic Chemicals:</b>	Ethanol
<b>Proposition 65 - Carcinogens (&gt;0.0%):</b>	Diethanolamine
<b>Proposition 65 - Developmental Toxins (&gt;0.0%):</b>	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
<b>Proposition 65 - Female Repro Toxins (&gt;0.0%):</b>	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
<b>Proposition 65 - Male Repro Toxins (&gt;0.0%):</b>	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
<b>Proposition 65 Label Warning:</b>	



WARNING: This product can expose you to chemicals including [Diethanolamine], which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## Section 16. Other information

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The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our



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products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H225 Highly flammable liquid and vapor.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H319 Causes serious eye irritation.

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