



<b>HANOI SOAP JOINT STOCK COMPANY</b> ----- <b>MATERIAL SAFETY DATA SHEET</b> <b>ETHANOL</b>		<b>HEALTH</b>	
		<b>FLAMMABILITY</b>	
		<b>REACTIVITY</b>	
		<b>PERSONAL PROTECTION</b>	
CAS-No: 67 – 17 - 5			
UN-No: 1170			
EINECS/ELINCS: 200 – 578 - 6			
<b>I.IDENTIFICATION</b>			
-Product name: NANO SILVER HAND SANITIZER		Product code: 6922/20/CBMP-HN	
-Component: Ethanol			
-Business Address: Block CN 3.2, Thach That – Quoc Oai Industrial Zone, Phung Xa, Thach That, Ha Noi, Viet Nam		Telephone: 0243.858.7051 Fax: 0243.858.7051	
-Company name of supplier: HASO			
-Usage for: hand sanitizing and cleaning; help: antibacterial, aromatic, maintain skin's natural moisture; preventing the growth of harmful bacteria on the skin.			
<b>II. COMPOSITION/INFORMATION ON INDEGRIENTS</b>			
Chemical name	CAS-no	Chemical formula	Weight (%)
<b>Ethanol</b>	<b>64 – 17 - 5</b>	<b>C<sub>2</sub>H<sub>5</sub>OH</b>	<b>96%</b>
<b>III. HAZARDS IDENTIFICATION</b>			
<b>HMIS Classification:</b>			
- Health: 2 - Flammability: 3 - Reactivity: 0 - Personal protection: E			
<b>WHMIS Classification:</b>			
- Group B-2: Toxic liquid flashes lower than 37.8° C - Group D-2A: Hazardous materials cause other effects (every toxic) E protection grade included: Goggles, gloves, dust mask)			
<b>GHS Classification:</b>			
<b>Flammable liquids</b>		Category 3	
<b>Eye irritation</b>		Category 2A	
<b>GHS label elements:</b>			
<b>Chemical labels:</b>			
	Flammable	Eye irritation	
<b>2.Warning is dangerous</b>			
* <b>Physical hazards:</b>			
Flammable liquid/vapor.			
* <b>Health hazards:</b>			

- Causes severe eye irritation.
  - May cause drowsiness or dizziness.
  - Causes moderate skin irritation.
  - Causes system respiratory tract irritation.
  - \* **Enviromental hazards:**
  - Not classified as environmentally hazardous according to GHS standards.
  - \* **Prevent:**
  - Keep out of reach of CHILDREN.
  - Do not expose to high temperatures, near an open fire source/near a spark/on hot surfaces.
  - No smoking.
  - Keep container tightly closed.
  - Use gloves, eyes protection and face protection (as needed to prevent skin and eye contact with liquid).
  - \* **Storage:**
  - Store in a well-ventilated environment. Keep container tightly closed.
  - Keep in a cool place.
  - Lock the warehouse carefully.
  - \* **Disposal:**
  - Waste products and containers must be stored in an appropriate place or recovered/recycled in accordance with local and national regulations.
  - \* **Severe health condition:**
  - The underlying pathology of the following organ (system) organs may be aggravated by exposure to thí material: the liver.
- 3. Routes of exposure and symptoms**
- **Eye irritation:** Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision.
  - **Respiratory irritation:** Causes respiratory irritation. If inhaled at the high concentration, may cause paralysis in the central nervous system to dizziness, lightheadedness, headache, and vomiting.
  - **Skin irritation:** Signs of dermatitis and symptoms may include a burning sensation and/or dry/cracked skin.
  - **Indigestion irritation:** If swallowed, may make irritation in mouth, throat, and stomach causing phenomenas such as coughing, choking, wheezing, shortness of breath, chest tightness, nausea, and being drunk.
- Note:** Liver damage is manifested by loss of appetite, jaundice (yellowing of the eyes and eyes), fatigue, bleeding or bruising, and occasional soreness and irritation in the upper abdomen.

#### IV. FIRST AID MESSURES

<b>General advice:</b>	In the case accident or if you feel unwell, seek medical advice immediately. When symptoms persist or in all cases of doubt seek medical advice.
<b>In case of eye contact:</b>	In case of contact, immediately flush eyes with plenty of water for at least 30 minutes. If easy to do, remove contact lens, if worn.
<b>In case of skin contact:</b>	Wash with water and soap as a precaution. Get medical attention if irritation develops and persists.

<b>If inhaled:</b>	If inhaled, remove to fresh air. If symptoms persist, call a physician.
<b>If swallowed:</b>	If swallowed, DO NOT induce vomiting. Rinse mouth with water. Obtain medical attention.
<b>V. FIREFIGHTING MEASURES</b>	
<b>Flammability:</b>	3
<b>Products created when burnt:</b>	Solid and liquid mixture or vapor (smoke); CO; Burnt Ethanol produces a blue flame, without smoke, which may not be visible under normal lighting conditions.
<b>Causes of fire and explosion:</b>	Electrostatic discharge, fire, spark.
<b>Suitable extinguishing media:</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide for small fire. Do not pour water directly on the fire and the around. Do not use a solid water stream as it may scatter and spread fire. Evacuate personnel to safe areas.
<b>Special protective equipment:</b>	Wear suitable protective suit and mask.
<b>Special remarks on the fire and explosion (if any):</b>	All storage areas must be equipped with appropriate fire protection equipment. Cool nearby container tools with water spray.
<b>VI. MEASURES TO PRECAUTION, RESPOND TO INCIDENTS</b>	
Comply with all local and international regulations respectively. Avoid contacting with spilled or leaked material. Immediately jettison of contaminated equipment. Isolate dangerous areas and do not allow unauthorized or unprotected people enter them. Stand at the top of the wind and avoid lowing areas. Prevent leakage if possible and do not cause danger. Removed all sources of ignition in the surrounding area. Use absorbent materials (product absorption or fire extinguishing level) to avoid environmental contaminations. Prevent from spreading or entering drains, ditches or rivers by using sand, soil or other suitable barriers. Try to disperse the vapor or direct its flow to a safe location, for example using dust mist. Use recommended methods against static charge. Ensure continuity of electrical current by covering and grounding all devices. Follow the areas with flammable gas alarm. Notify the local authorities if it is impossible to control the spillage of the product. Vapors may form an explosive mixture with air.	
<b>1.Spill, leak in a small area:</b> small amount of chemicals spilled ( $\leq 1$ bin), transport by mechanical means to a labeled, sealed container for product recall or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Take contaminates soil and safely remove it.	
<b>2.Spill, leak in a large area:</b> large amount of chemicals spilled ( $>1$ bin), transport by mechanical means such as tank trucks to tanks for safe recovery or disposal. Do not wash disposal with water. Do not wash residue with water. Retain pollutant waster. Allow residurs to evaporate or soak up with an appropriate absorbent material and diaapose of safely. Collect contaminated soil an safely remove it.	
<b>VII. REQUIREMENT FOR STORAGE</b>	
<b>1. Measures and conditions to be applied when using and handling dangerous</b>	

**chemicals:** Avoid breathing gas/mist. Avoid contacting with skin, eyes and clothing. Extinguish all open fire. No smoking. Remove sources of ignition. Avoid sparks. Electrostatic accumulation may generate during pumping. Electrostatic discharge may cause fire. Ensure continuity of current by connecting and grounding all devices. Limit the transfer rate during the pump to avoid generating electrical discharge phenomena ( $\leq 1\text{m/s}$  until the tubing (pump) is flooded twice its diameter, then  $\leq 7\text{m/s}$ ). Avoid splashing when pumping (pumping). Do not use compressed gas for (pumping), suction, or handling operations. Keep the same the pump device's temperature at ambient temperature. Wait for 2 minutes (for small vaults) and 30 minutes (for large vaults) after pouring chemicals into the bin before opening the vaults.

**2. Measures and conditions to be applied when storing:** Must be kept in good ventilated area, away from sunlight, ignition sources and other sources of heat, Keep away from aerosols, ignitable elements, oxidizing agents, corrosives and away from other combustible products that are not harmful or toxic to humans or the environment. The vapors in containers should not be released to the atmosphere. Apnea should be controlled by an appropriate vapor treatment system. Keep the same temperature of the chemical container as ambient temperature. Keep container tightly closed when not in use. Do not use compressed air to refill, disassemble or handle.

## VIII. EXPOSURE CONTROL AND PERSONAL PROTECTIVE EQUIPMENT

### 1. Limit exposure

Element	Source	Classify	ppm	Mg/m <sup>3</sup>	Note
Ethanol	EH40 WEL	TWA	1000ppm	1920mg/m <sup>3</sup>	
	ACGIH	STEL	1000ppm		

### 2. Required contact restrictions

The level of protection and types of controls necessary will vary according to potential exposure conditions. Select the control method based on the risk assessment of the local situation. Appropriate measures included: Create adequate ventilation in storage areas. Use fitted systems as tightly as possible. Explosion-proof ventilation is suitable for controlling condensation in the air below exposure guidelines / limits. Ventilation is recommended for local exhaust.

### 3. Personal protective equipment

Personal protective equipment (PPE) must meet national standards:

Eye protection: Chemical anti-stick safety goggles

Body protection: Use protective clothing which is chemical resistant to this material.

Hand protection: Suitability and durability of a glove depends on usage, such as frequency and duration of contact, chemical resistance of glove material, glove thickness, elastic. Always consult the glove supplier. Contaminated gloves must be replaced. When handling by hand, use gloves that meet the relevant standards (eg Europe: EN374, USA: F739) made from the following materials can provide appropriate chemical protection: Nitrile rubber, PVC viton. Personal hygiene is a top priority for effective hand protection. Wear gloves only when your hands are clean.

Foot protection: Safety shoes and boots also need to be chemical resistance

Respiratory protection: If technical controls do not maintain air concentrations to an appropriate level to protect worker health, please select a protective device that suits the specific conditions of use and meets the corresponding requirements. Please check with equipment vendors. Where air-filtering respirators are suitable, select an appropriate mask and filter. Select a filter suitable for organic gases and vapors boiling point  $>65^\circ\text{C}$  meeting EN141. When air-filtering respirators are unsuitable (for

example, high air concentration, risk of oxygen deficiency, confined spaces) use pressure breathing apparatus.

**4. Protective equipment in case of troubleshooting:** Same method as working exposure

**5. Hygiene measures:** After using washing hands thoroughly and pat dry. Use a non-perfumed moisturizer to wash your hands.

**6. Tracking method:** The concentration of product should be monitored in workers' breathing areas or in general work areas to comply with OEL and to control exposure. For some products, appropriate biological monitoring is also required. Examples of recommended methods for monitoring air are given below or contact the supplier. Maybe available national measures: National Institute of Occupational Safety and Health (NIOSH), guidance on analytical methods

<http://www.cdc.gov/niosh/nmam/nmammenu.html> the Occupational Safety and Health Administration(OSHA). Methods of sample selection and analysis <http://www.osha-slc.gov/dts/sltc/methods/toc.html>. Hygiene and Safety England (HSE): Methods for identifying hazardous elements <http://hls.gov.uk/search.html>.

### IX. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid, air bubbles	Flash point:	13-14° C
Colour :	Colourless	Initial boiling point:	78° C
Odor:	Alcoholic	Melting point:	About -114° C
PH:	Not applicable	Auto-ignition temperature:	Approximately 362° C
Vapor Density (air=1):	0,0015g/ml at 900° C	Upper explosive limit:	23,5%(V)
Vapor pressure:	About 67 kPa at 20° C	Lower explosive limit:	3,1%(V)
Water solubility:	Soluble at 20° C	Evaporation rate:	1,5 (ASTM D3539,nBuAc=1)
Specific weight:	816,4 kg/m <sup>3</sup> at 15° C	Molecular weight:	46,07g/mol

### X. STABILITY AND REACTIVITY

<b>Chemical stability:</b>	Stable under normal conditions.
<b>Reactivity:</b>	Not classified as a reactivity hazard.
<b>Conditions to avoid:</b>	Heat, flames and sparks.
<b>Incompatible materials:</b>	Strong oxidizing elements, strong acids.
<b>Possibility of hazardous reactions</b>	Vapors may form explosive mixture with air.

### XI. TOXICOLOGICAL INFORMATION

Ingredients	Acute oral toxicity	result	Contact line	Test creatures
Ethanol	>2000mg/kg	LD50	Mouth/skin	mouse

**1.Chronic effects on humans:** Non-carcinogenic (A4 (Not classified with humans or animals) according to ACGIH, level 3 (Not classified with humans) according to IARC). Toxic to reproduction and development: Toxicity to the fetus in animals at

sufficient doses to cause toxicity on the mother's body.

**2.Other toxic effects:**

- **Skin irritation:** Mild irritation to skin. Repeated exposure may cause skin.
- **Eye irritation:** Highly irritating to eyes.
- **Respiratory irritation:** Inhalation or mist may cause respiratory irritation.
- **Sensitization:** Not a skin sensitizer.
- **Liver:** May cause chronic liver damage if exposed repeatedly to high levels.

**XII. ECOLOGICAL INFORMATION**

**1.Toxicity to creatures**

Ingredients	Creatures	Influence cycle	Result
<b>Ethanol</b>	<b>Fish, aquatic invertebrates, algae, microorganism</b>	<b>No data available</b>	<b>LL/EL/IL50&gt;100 mg/l Non-toxic</b>

**2.Environmental Effects**

Biodegradability: Readily biodegradable. Oxidises rapidly by photochemical reactions in air.

BOD and COD: no data available

Product of biodegradation: no data available

Toxicity level of biodegradable products: no data available

Mobility: Floating on water. If the product enters the soil, they will be flexible and may contaminate groundwater.

Risk of bioaccumulation: No significant bioaccumulation.



**XIII.DISPOSAL CONSIDERATIONS**

**1.Destruction information:** according to current regulations of Chemical Law No.10/VBHN-VPQH dated June 29,2018 and guiding documents.

**2.Hazardous classification of waste:** no data available

**3. Disposal methods:** Contact the appropriate authorities.

**4. Product of the destruction process, remedial measures:**

Regulatory Name	UN number	Sea transport	Hazard Class	Packing group	Labeling	Additional information
Regulations on transporting dangerous goods of Vietnam	1170	Ethanol	3	II		no data available
Provisions on international transportation of dangerous goods	1170	Ethanol	3	II		no data available

**XIV. TECHNICAL REGULATIONS AND LEGAL REGULATIONS**

1.Status of declaration and registration in regional countries in the world: Vietnam

2.Classification of hazards by country of declaration: No data available.

3.Compliant technical regulations: TCCS 05:2020/XPHN

**XV. OTHER INFORMATION**

Issuing date:
Revision date:
Name of organization or personal writing: <b>Hanoi soap joint stock company</b> <b>Note:</b> -The information in this safety data sheet ethanol is compoled based on valid and latest knowledge about hazardous chemicals and must be used to implement measures to prevent risks and accident. -Hazadous chemicals in this Coupon may have other hazardous properties depending on the circumstances of use and exposure.