

# SAFETY DATA SHEET

Regulation (EC) No 1272/2008 (REACH), Annex II  
(COMMISSION REGULATION (EU) No 2015/830)

Version 1  
Product Name ANTIBACTERIAL SOLUTION

Issue Date 5-APR-2020  
Revision date 5-APR-2020

## SECTION 1: Identification of the substance /mixture and of the company/undertaking

### 1.1. Product identifier

**Product Identity** ANTIBACTERIAL SOLUTION  
**Alternate Names** ANTIBACTERIAL SOLUTION (FLV-01 FLV-02 FLV-04 FLV-05 FLV-06 FLV-10 FLV-20  
FLV-200)

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Intended use** See Technical Data Sheet.  
**Application Method** See Technical Data Sheet.

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

**Supplier** MOISTURE 22 CO., LTD.  
**Address** 10,Lane 231, Nankan, Rd, Sec.1,Luchu,Tao Yuan City, Taiwan  
**Postal Code** 33859  
**Phone** 03-222-7470#206  
**FAX** 03-222-7469  
**E-mail** jackbai@airguard.com.tw

### 1.4. Emergency telephone number

03-2227470#206

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**  
No applicable CLP categories.

### 2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.

**According to Regulation (EC) No 1272/2008**

No applicable CLP categories.

**[Prevention]:**

No CLP prevention statements

**[Response]:**

No CLP response statements

**[Storage]:**

No CLP storage statements

**[Disposal]:**

No CLP disposal statements

### 2.3. Other hazards

This product contains no PBT/vPvB chemicals.

## SECTION 3: Composition/information on ingredients

### 3.1 Mixture

If the product contains substances that present a hazard according to Regulation (EC) No. 1272/2008 [CLP/GHS] (as amended by (EU) 2015/830), they are listed below.

Chemical Name	EC No	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Water	231-791-2	7732-18-5	40-50	Not classified
o-Cymen-5-ol	221-761-7	3228-02-2	0.05-0.1	Not classified
Glycerol	200-289-5	56-81-5	10-25	Not classified
1,2-Propylene glycol	200-338-0	57-55-6	10-25	Not classified
Triethylene glycol	203-953-2	112-27-6	1-10	Not classified
Silver	231-131-3	7440-22-4	0.001-0.003	Not classified
Pine Oil	616-792-1	8002-09-3	0.1-0.3	Eye Irrit. 2;H319 Skin Irrit. 2;H315

^CLP 31 Reference EC No. 1272/2008 1.1.3.1. Notes relating to the identification, classification and labelling of substances (Table 3.1).

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.

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] 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

#### General advice

In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

#### Inhalation

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.

#### Skin Contact

Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.

#### Eye contact

Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

#### Ingestion

If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

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

#### Overview

No specific symptom data available.

Treat symptomatically See section 2 for further details.

### 4.3. Indication of any immediate medical attention and special treatment needed

#### Notes to physician

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Recommended extinguishing media; alcohol resistant foam, CO<sub>2</sub>, powder, water spray.

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

Hazardous decomposition: Carbon Dioxide, Carbon Monoxide

## 5.3. Advice for firefighters

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

ERG Guide No. ----

## 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.

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

Small Spill: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

Large Spill: Flush spill area with water spray. Prevent runoff from entering drains, sewers, or streams. Dike for late disposal.

### 6.4. Reference to other sections

See Section 1 for emergency contact information.

See Section 8 for information on appropriate personal protective equipment.

See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Store in cool, dry ventilated area. Avoid excessive heat. Always keep containers tightly closed when not in use.

Avoid contact with eyes. Provide adequate ventilation. Wear appropriate personal protective equipment.

Observe good industrial hygiene practices.

See section 2 for further details. - [Prevention]:

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

Incompatible materials: Strong oxidizing agents

See section 2 for further details. - [Storage]:

### 7.3. Specific end use(s)

No available information

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

CAS No.	Ingredient	Exposure	
		Source	Value
7732-18-5	Water	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
56-81-5	Glycerol	OSHA	TWA 15 mg/m <sup>3</sup> (total dust) TWA 5 mg/m <sup>3</sup> (resp)

		ACGIH	TWA: 3 mg/m3 (respirable) 10 mg/m3 (mist)
		NIOSH	No established RELs
		Supplier	No Established Limit
3228-02-2	o-Cymen-5-ol	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
57-55-6	1,2-Propylene glycol	OSHA	No Established Limit
		ACGIH	TWA(Aerosol): 10 mg/m3
		NIOSH	No Established Limit
		Supplier	No Established Limit
112-27-6	Triethylene glycol	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
7440-22-4	Silver	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
8002-09-3	Pine Oil	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit

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

## 8.2. Exposure controls

### Respiratory

If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.

### Eyes

Protective safety glasses recommended

### Skin

Avoid skin contact. Protective gloves recommended.

### Engineering Controls

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.

### Other Work Practices

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

See section 2 for further details. - [Prevention]:

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

**Appearance**

Transparent Liquid

**Odor**

Specific smell

**Odor Threshold**

No available information

**pH**

5.5-6.5

**Melting point/freezing point**

No available information

**Initial boiling point and boiling range**

554°F 290°C at 1.013hPa (decomposition)

<b>Flash point</b>	Ca. 356°F 180°C Method:open cup
<b>Evaporation rate (Ether = 1)</b>	No available information
<b>Flammability (solid, gas)</b>	No available information
<b>Upper/lower flammability or explosive limits</b>	Not Classified as explosive
<b>Vapor pressure (Pa)</b>	No available information
<b>Vapor Density</b>	No available information
<b>Specific Gravity</b>	No available information
<b>Solubility in Water</b>	In water (20 °C)soluble
<b>Partition coefficient n-octanol/water (Log Kow)</b>	No available information
<b>Auto-ignition temperature</b>	No available information
<b>Decomposition temperature</b>	>290°C
<b>Viscosity (cSt)</b>	No available information
<b>Oxidising properties</b>	No available information
<b>Explosive properties</b>	No available information

**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 available information

**10.4. Conditions to avoid**

Avoid temperatures exceeding the flash point. Contact with incompatible materials.

**10.5. Incompatible materials**

Strong oxidizing agents

**10.6. Hazardous decomposition products**

Carbon Dioxide, Carbon Monoxide

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**Acute toxicity**

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).

CAS No.	Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapour LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
7732-18-5	Water	No data available	No data available	No data available	No data available	No data available

56-81-5	Glycerol	23,000.00, Mouse - Category: NA	56,750.00, Guinea Pig - Category: NA	No data available	No data available	No data available
3228-02-2	o-Cymen-5-ol	No data available	No data available	No data available	No data available	No data available
57-55-6	1,2-Propylene glycol	22,000.00, Rat - Category: NA	> 2,000.00, Rabbit - Category: NA	No data available	No data available	No data available
112-27-6	Triethylene glycol	>16,000.00, Rat - Category: NA	16,000.00, Rabbit - Category: NA	> 5.20, Rat - Category: NA	No data available	No data available
7440-22-4	Silver	No data available	No data available	No data available	No data available	No data available
8002-09-3	Pine Oil	No data available	No data available	No data available	No data available	No data available

**Carcinogen Data**

CAS No.	Ingredient	Source	Value
7732-18-5	Water	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
56-81-5	Glycerol	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
3228-02-2	o-Cymen-5-ol	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
57-55-6	1,2-Propylene glycol	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
112-27-6	Triethylene glycol	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
7440-22-4	Silver	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
8002-09-3	Pine Oil	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
<b>Classification</b>		<b>Category</b>	<b>Hazard Description</b>
Acute toxicity (oral)		---	Not Applicable
Acute toxicity (dermal)		---	Not Applicable
Acute toxicity (inhalation)		---	Not Applicable
Skin corrosion/irritation		---	Not Applicable

Serious eye damage/irritation	---	Not Applicable
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

## SECTION 12: Ecological information

### 12.1. Toxicity

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

#### Aquatic Ecotoxicity

CAS No.	Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
7732-18-5	Water	Not available	Not available	Not available
56-81-5	Glycerol	54,000.00, Oncorhynchus mykiss	1,955.00, Daphnia magna	Not available
3228-02-2	o-Cymen-5-ol	Not available	Not available	Not available
57-55-6	1,2-Propylene glycol	40,613.00, Salmo gairdneri	18,340.00, Ceriodaphnia dubia	24,200.00 (72 hr), Raphidocelis subcapitata
112-27-6	Triethylene glycol	>10,000.00, Lepomis macrochirus	>10,000.00, Daphnia magna	20,518.00(96hr), Not Defined
7440-22-4	Silver	Not available	Not available	Not available
8002-09-3	Pine Oil	Not available	Not available	Not available

### 12.2. Persistence and degradability

No information available.

### 12.3. Bioaccumulative potential

No information available.

### 12.4. Mobility in soil

No information available.

### 12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

### 12.6. Other adverse effects

No information available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

## SECTION 14: Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	Not Applicable	Not Regulated	Not Regulated
14.2. UN proper shipping name	Not Regulated	Not Regulated	Not Regulated
14.3. Transport hazard class(es)	DOT Hazard Class: Not Applicable	IMDG: Not Applicable Sub Class: Not Applicable	Air class: Not Applicable
14.4. Packing group	Not Applicable	Not Applicable	Not Applicable
14.5. Environmental hazards			
IMDG	Marine Pollutant: No;		
14.6. Special precautions for user	No information available		
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not Applicable		

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU Legislation

REGULATION (EU) 2015/830 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

#### National Legislation

None noted.

### 15.2. Chemical Safety Assessment

No Chemical Safety Assessment has been carried out.

## SECTION 16: Other information

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 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:

H315 Causes skin irritation.

H319 Causes serious eye irritation.

**This material safety data sheet complies with the requirements of Regulation (EC) No. 1272/2008**

Issue Date	5-APR-2020
Revision date	5-APR-2020
Revision Note	Not applicable

----- End of Safety Data Sheet -----



**Product Name** ANTIBACTERIAL SOLUTION (FLV-01 FLV-02 FLV-04 FLV-05 FLV-06  
FLV-10 FLV-20 FLV-200)

**Revision date** 5-APR-2020

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