Safety Data Sheet

Hand sanitizer

Version：V2.0.0.1
Report No.：2010101015809ME
Creation Date：2024/03/13
Revision Date：2024/03/13

***Prepared according to American OSHA HCS-2012 (29 CFR 1910.1200)**

1 Identification

Product identifier

Product Name	Hand sanitizer
Cat No.	2010101015
CAS No.	Not applicable
EC No.	Not applicable
Molecular Formula	Not applicable

Recommended use of the product and restrictions on use

Relevant identified uses	Please consult manufacturer.
Uses advised against	Please consult manufacturer.

Details of the supplier of the Safety Data Sheet

Name of the company	Trifecta Pharmaceuticals USA
Address of the company	4100 N. Powerline Road, Ste. J4, Pompano Beach, FL. 33073. USA
Postal code	——
Telephone number	954-623-7772
Fax number	888-878-3609
E-mail address	info@trifecta-pharma.com

Emergency phone number

Emergency phone number	888-296-9067

2 Hazard(s) identification

Hazard classification according to 29 CFR 1910.1200

Flammable Liquids	Category 3

Label elements

Hazard pictograms	
Signal word	**Warning**

Hazard statements

H226	Flammable liquid and vapour

Precautionary statements

◆ Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting] equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

◆ Response

P370+P378	In case of fire: Use appropriate extinguishing media mentioned in Section 5 of the SDS to extinguish.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].

◆ Storage

P403+P235	Store in a well-ventilated place. Keep cool.

◆ Disposal

P501	Dispose of contents/container in accordance with local/regional/national/ international regulations.

Other hazards

	Not applicable.

Hazard description

◆ Physical and chemical hazards

	Flammable liquids, its vapor and air mixture can form explosive mixture.

◆ Health hazards

Inhaled	Cough. Headache. Fatigue. Drowsiness.
Ingestion	Burning sensation. Headache. Confusion. Dizziness. Unconsciousness.
Skin Contact	Dry skin.
Eye	Redness. Pain. Burning.

◆ Environmental hazards

	Please refer to 12th chapter of SDS.

3 Composition/information on ingredients

Substance/mixture

	Mixture

Component	CAS No.	EC No.	Concentration (wt, %)
Water	7732-18-5	231-791-2	35~45
Ethanol	64-17-5	200-578-6	62
Glycerol	56-81-5	200-289-5	0.1~1.0
1,2-Propanediol	57-55-6	200-338-0	0.1~1.0

Crosspolymer of acrylic acid and C10-30-alkyl acrylate	NA	-	0.1~0.5
Aloe vera, ext.	85507-69-3	287-390-8	<= 0.01
Maltodextrin	9050-36-6	232-940-4	<= 0.01
Triethanolamin	102-71-6	203-049-8	0.1~0.5
3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate	7695-91-2	231-710-0	<= 0.01
Fragrance	NA	-	0.1~0.5

4 First-aid measures

Description of first aid measures

General advice	Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.
Eye contact	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Skin contact	Remove contaminated clothes. Rinse and then wash skin with water and soap.
Ingestion	Rinse mouth. Refer for medical attention.
Inhalation	Fresh air， rest.
Protecting of first-aiders	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

Most important symptoms/effects, acute and delayed

1	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

Indication of any immediate medical attention and special treatment needed

1	Treat symptomatically.
2	Symptoms may be delayed.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing media	Dry chemical, carbon dioxide or alcohol-resistant foam.
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter or spread fire.

Specific hazards arising from the substance or mixture

1	Will form explosive mixtures with air.
2	Fire exposed containers may vent contents through pressure relief valves thereby increasing fire intensity and/ or vapour concentration.
3	Vapours may travel to source of ignition and flash back.
4	Liquid and vapour are flammable.
5	Development of hazardous combustion gases or vapor possible in the event of fire.
6	May expansion or decompose explosively when heated or involved in fire.

Special protective equipment and precautions for fire-fighters

1	As in any fire, wear self-contained breathing apparatus（MSHA/NIOSH approved or equivalent) and full

	protective gear.
2	Fight fire from a safe distance, with adequate cover.
3	Prevent fire extinguishing water from contaminating surface water or the ground water system.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

1	Avoid breathing vapours and contacting with skin and eye.
2	Beware of vapours accumulating to form explosive concentrations.
3	Vapours can accumulate in low areas.
4	Emergency personnel wear positive pressure self-contained breathing apparatus. Wear protective and anti-static clothing. Wear chemical impermeable gloves.
5	Use personal protective equipment,do not breathe gas/mist/vapour/spray.
6	Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
7	Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental precautions

1	Prevent further leakage or spillage if safe to do so.
2	Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

1	It is recommended that emergency personnel wear positive pressure self-contained breathing apparatus and wear anti-static clothing.
2	In case of small amount of spillage, use clean non sparking tools to collect absorption materials.
3	In case of large amount of spillage, construct cofferdam or dig a hole to collect the spillage. Use foam cover to reduce evaporation. Water spray mist can reduce evaporation, but can not reduce the flammability of the leakage in the restricted space.
4	Collect absorbent material using a clean, non-sparking tool.
5	Cover with anti-solvent foam to reduce evaporation.
6	Cover with DRY earth, DRY sand or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.
7	Water spray reduces evaporation but does not reduce the flammability of spills in confined spaces.
8	Cut off the source of the leak as much as possible.
9	Keep leaks in a ventilated place.
10	Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by bunding.
11	Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.
12	Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container.
13	Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

7 Handling and storage

Precautions for safe handling

1	Avoid inhalation of vapors.
2	Use only non-sparking tools.
3	To prevent fire caused by electrostatic discharge steam, equipment on all metal parts should be grounded.

4	Use explosion proof equipment.
5	Handling is performed in a well ventilated place.
6	Wear suitable protective equipment.
7	Avoid contact with skin and eyes.
8	Keep away from heat/sparks/open flames/ hot surfaces.

Conditions for safe storage, including any incompatibilities

1	Keep containers tightly closed.
2	Keep containers in a dry, cool and well-ventilated place.
3	Keep away from heat/sparks/open flames/hot surfaces.
4	Store away from incompatible materials and foodstuff containers.

8 Exposure controls/personal protection

Control parameters

Component	Country/Region	Limit value - Eight hours		Limit value - Short term	
		ppm	mg/m³	ppm	mg/m³
Ethanol	USA - OSHA	1000	1900	-	-
	South Korea	1000	1900	-	-
	Ireland	-	-	1000	-
	Germany (AGS)	500	960	1000	1920
	Denmark	1000	1900	2000	3800
	Australia	1000	1880	-	-
	USA-ACGIH	-	-	1000	-
Glycerol	USA - OSHA	-	15	-	-
	South Korea	-	10	-	-
	Ireland	-	10	-	-
	Germany (DFG)	-	50	-	100
	Belgium	-	10	-	-
	Australia	-	10	-	-
1,2-Propanediol	United Kingdom	-	10	-	-
	New Zealand	150	474	-	-
	Latvia	-	7	-	-
	Ireland	-	10	-	-
	Canada - Ontario	-	10	-	-
	Australia	-	10	-	-
Triethanolamin	Switzerland	-	5	-	20
	Sweden	0.8	5	1.6	10
	Ireland	-	5	-	-
	Germany (DFG)	-	5	-	20

	Denmark	0.5	3.1	1	6.2
	Australia	-	5	-	-
	USA-ACGIH	-	5	-	-

Engineering controls

1	Ensure adequate ventilation, especially in confined areas.
2	Ensure that eyewash stations and safety showers are close to the workstation location.
3	Use explosion-proof electrical/ventilating/lighting/equipment.
4	Set up emergency exit and necessary risk-elimination area.

Personal protection equipment

General requirement	
Eye protection	Must wear appropriate safety goggles.
Hand protection	Must wear anti static chemical protective gloves.
Respiratory protection	Must wear appropriate personal respiratory protective equipment.
Skin and body protection	Must wear anti static chemical protective clothing and anti static shoes.

9 Physical and chemical properties and safety characteristics

Physical and chemical properties

Appearance (physical state, color, etc.)	Clear colorless gel
Odor	Slight odor
Odor threshold	No information available
pH	6.0~8.0
Melting point/freezing point(°C)	No information available
Initial boiling point and boiling range(°C)	<=35
Flash point(Closed cup,°C)	>=23,<=60
Evaporation rate	Not applicable
Flammability	Flammable
Upper/lower explosive limits[%(v/v)]	Upper limit：Not applicable；Lower limit：Not applicable
Vapor pressure	Not applicable
Vapor density(Air = 1)	Not applicable
Relative density(Water=1)	0.9
Solubility	Miscible with water
n-octanol/water partition coefficient	Not applicable
Auto-ignition temperature(°C)	Not combustible
Decomposition temperature(°C)	No information available
Kinematic viscosity	Not applicable

10 Stability and reactivity

Stability and reactivity

Reactivity	Contact with incompatible substances can cause decomposition or other chemical reactions.
Chemical stability	Stable under proper operation and storage conditions.
Possibility of hazardous reactions	In contact with active metals (alkali metals, Na, Ca etc.) causes a reaction and release hydrogen. In contact with oxidants causes severe reactions, and may cause a fire or explosion.
Conditions to avoid	Incompatible materials, heat, flame and spark.
Incompatible materials	Alkali, sodium, calcium, and other active metal, halogen, metal oxide, nonmetal oxide, acyl halide and metal phosphide. Oxidants, alkali metals, alkaline earth metals and aluminum.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 Toxicological information

Acute toxicity

Component	LD_{50}(oral)	LD_{50}(dermal)	LC_{50}(inhalation,4h)
Ethanol	7060mg/kg(Rat)	No information available	39mg/L(Mouse)
Glycerol	12600mg/kg(Rat)	> 10000mg/kg(Rabbit)	No information available
1,2-Propanediol	20000mg/kg(Rat)	20800mg/kg(Rabbit)	No information available
Triethanolamin	5530mg/kg(Rat)	＞ 22500mg/kg(Rabbit)	No information available

Carcinogenicity

Component	List of carcinogens by the IARC Monographs	Report on Carcinogens by NTP	OSHA Carcinogen List
Water	Not Listed	Not Listed	Not Listed
Ethanol	Category 1(Remark 1)	Not Listed	Not Listed
Glycerol	Not Listed	Not Listed	Not Listed
1,2-Propanediol	Not Listed	Not Listed	Not Listed
Crosspolymer of acrylic acid and C10-30-alkyl acrylate	Not Listed	Not Listed	Not Listed
Aloe vera, ext.	Not Listed	Not Listed	Not Listed
Maltodextrin	Not Listed	Not Listed	Not Listed
Triethanolamin	Category 3	Not Listed	Not Listed
3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate	Not Listed	Not Listed	Not Listed
Fragrance	Not Listed	Not Listed	Not Listed

Remark 1: for alcoholic beverages only

Others

Hand sanitizer	
Skin corrosion/irritation	Based on available data, the classification criteria are not met
Serious eye damage/irritation	Based on available data, the classification criteria are not met
Skin sensitization	Based on available data, the classification criteria are not met
Respiratory sensitization	Based on available data, the classification criteria are not met
Reproductive toxicity	Based on available data, the classification criteria are not met
STOT-single exposure	Based on available data, the classification criteria are not met
STOT-repeated exposure	Based on available data, the classification criteria are not met
Aspiration hazard	Based on available data, the classification criteria are not met
Germ cell mutagenicity	Based on available data, the classification criteria are not met
Reproductive toxicity(additional)	Based on available data, the classification criteria are not met

12 Ecological information

Acute aquatic toxicity

Component	Fish	Crustaceans	Algae
Ethanol	LC_{50}：11200mg/L (96h)(Fish)	EC_{50}：9950mg/L (48h)(Crustaceans)	No information available
Glycerol	LC_{50}：885mg/L (96h)(Fish)	No information available	No information available
1,2-Propanediol	LC_{50}：＞100mg/L (96h)(Fish)	EC_{50}：>1000mg/L (48h)(Crustaceans)	ErC_{50}：>1000mg/L (72h)(Algae)
Triethanolamin	LC_{50}：11800mg/L (96h)(Fish)	EC_{50}：610mg/L (48h)(Crustaceans)	No information available

Chronic aquatic toxicity

Component	Fish	Crustaceans	Algae
1,2-Propanediol	NOEC：>100mg/L(Fish)	NOEC：1000mg/L(Crustaceans)	NOEC：1000mg/L(Algae)

Persistence and degradability

Component	Persistence (water/soil)	Persistence (air)
Ethanol	Low(Half-life = 2.17 days)	Low(Half-life = 5.08 days)
1,2-Propanediol	Low	Low
Triethanolamin	Low	Low

Bioaccumulative potential

Component	Bioaccumulative potential	Comments
Ethanol	Low	Log Kow=-0.31
1,2-Propanediol	Low	BCF=1
Triethanolamin	Low	BCF=4

Mobility in soil

Component	Mobility in soil	Soil Organic Carbon-Water Partitioning Coefficient (Koc)
Ethanol	High	1
1,2-Propanediol	High	1
Triethanolamin	Low	10

Results of PBT and vPvB assessment

Component	Results of PBT and vPvB assessment [according to (EC) No 1907/2006]
Water	Insufficient information, temporarily unable to evaluate
Ethanol	Not PBT/vPvB
Glycerol	Not PBT/vPvB
1,2-Propanediol	Not PBT/vPvB
Aloe vera, ext.	Insufficient information, temporarily unable to evaluate
Maltodextrin	Insufficient information, temporarily unable to evaluate
Triethanolamin	Not PBT/vPvB
3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate	Not PBT/vPvB

13 Disposal considerations

Disposal considerations

Waste chemicals	Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.
Contaminated packaging	Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.
Disposal recommendations	Refer to section waste chemicals and contaminated packaging.

14 Transport information

Label and Mark

Transporting Label	

US DOT (49CFR)

UN number	1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S.
Transport hazard class	3
Transport subsidiary hazard class	None
Packing group	Ⅲ
Special provisions	
DOT Reportable Quantity	No information available

(RQ)/lbs	
Environmental hazards	——

IMDG-CODE

UN number	1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S.
Transport hazard class	3
Transport subsidiary hazard class	None
Packing group	Ⅲ
Marine pollutant (Yes or no)	No

IATA-DGR

UN number	1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S.
Transport hazard class	3
Transport subsidiary hazard class	None
Packing group	Ⅲ

UN-ADR

UN number	1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S.
Transport hazard class	3
Transport subsidiary hazard class	None
Packing group	Ⅲ

15 Regulatory information

International chemical inventory

Component	EC inventory	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AIIC	ENCS
Water	√	√	√	√	√	√	√	√	√
Ethanol	√	√	√	√	√	√	√	√	√
Glycerol	√	√	√	√	√	√	√	√	√
1,2-Propanediol	√	√	√	√	√	√	√	√	√
Crosspolymer of acrylic acid and C10-30-alkyl acrylate	×	×	×	×	×	×	×	×	×
Aloe vera, ext.	√	×	√	√	√	√	×	√	×
Maltodextrin	√	√	√	√	√	√	√	√	×
Triethanolamin	√	√	√	√	√	√	√	√	√

3,4-dihydro-2,5,7,8-tetra methyl-2-(4,8,12-trimethy ltridecyl)-2H-benzopyran -6-yl acetate	√	√	√	√	√	√	√	√	√
Fragrance	×	×	×	×	×	×	×	×	×

[EC inventory] European Inventory of Existing Commercial Chemical Substances
[TSCA] United States Toxic Substances Control Act Inventory
[DSL] Canadian Domestic Substances List
[IECSC] China Inventory of Existing Chemical Substances
[NZIoC] New Zealand Inventory of Chemicals
[PICCS] Philippines Inventory of Chemicals and Chemical Substances
[KECI] Korea Existing Chemicals Inventory
[AIIC] Australian. Inventory of Industrial Chemical (AIIC)
[ENCS] Japan Inventory of Existing & New Chemical Substances

US chemical inventory

Component	A	B	C	D	E	F	G	H
Water	×	×	×	×	×	×	×	×
Ethanol	×	×	×	√	√	√	√	×
Glycerol	×	×	×	√	√	√	×	×
1,2-Propanediol	×	×	×	×	√	√	×	×
Crosspolymer of acrylic acid and C10-30-alkyl acrylate	×	×	×	×	×	×	×	×
Aloe vera, ext.	×	×	×	×	×	×	×	×
Maltodextrin	×	×	×	×	×	×	×	×
Triethanolamin	×	×	×	√	√	√	×	×
3,4-dihydro-2,5,7,8-tetra methyl-2-(4,8,12-trimethy ltridecyl)-2H-benzopyran -6-yl acetate	×	×	×	×	×	×	×	×
Fragrance	×	×	×	×	×	×	×	×

[A] US Clean Air Act (CAA)- Section 112, Hazardous Air Pollutants
[B] US SARA 302- Extremely Hazardous Substance List
[C] US CERCLA- Hazardous Substances List
[D] US Massachusetts Right-to-Know Substance List
[E] US New Jersey Right to Know Hazardous Substance List
[F] US Pennsylvania Right to Know Hazardous Substance List
[G] US New York City Right-to-Know Hazardous Substance List
[H] US California Proposition 65 List

Note:
"√" Indicates that the substance included in the regulations.
"×" No data or not included in the regulations.

16 Other information

Information on revision

Creation Date	2024/03/13
Revision Date	2024/03/13
Reason for revision	-

Reference

[1] IPCS: The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home。
[2] IARC, website: http://www.iarc.fr/。
[3] OECD: The Global Portal to Information on Chemical Substances, website: https://www.echemportal.org/echemportal/ 。
[4] CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple。
[5] NLM: ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp。
[6] EPA: Integrated Risk Information System, website: http://cfpub.epa.gov/iris/。
[7] U.S. Department of Transportation: ERG, website: http://www.phmsa.dot.gov/hazmat/library/erg。
[8] Germany GESTIS-database on hazard substance, website: http://gestis-en.itrust.de/。

Abbreviations and acronyms

CAS	Chemical Abstracts Service	UN	The United Nations
PC-STEL	Short term exposure limit	OECD	Organization for Economic Co-operation and Development
PC-TWA	Time Weighted Average	IMDG-CODE	International Maritime Dangerous Goods CODE
MAC	Maximum Allowable Concentration	IARC	International Agency for Research on Cancer
DNEL	Derived No Effect Level	ICAO	International Civil Aviation Organization
PNEC	Predicted No Effect Concentration	IATA	International Air Transportation Association
NOEC	No Observed Effect Concentration	ACGIH	American Conference of Governmental Industrial Hygienists
LC_{50}	Lethal Concentration 50%	NFPA	National Fire Protection Association
LD_{50}	Lethal Dose 50%	NTP	National Toxicology Program
EC_{50}	Effective Concentration 50%	PBT	Persistent, Bioaccumulative, Toxic
EC_X	Effective Concentration X%	vPvB	very Persistent, very Bioaccumulative
P_{OW}	Partition coefficient Octanol: Water	CMR	Carcinogens, mutagens or substances toxic to reproduction
BCF	Bioconcentration factor	RPE	Respiratory Protective Equipment
ED	Endocrine disruptor	HCS	Hazard Communication Standard

Disclaimer

This Safety Data Sheet (SDS) was prepared according to OSHA HCS-2012. The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.