APEX FLAVORS, INC.

SAFETY DATA SHEET.

Version 1

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Number 1035BEV, 1035TTB

Manufacturer
Apex Flavors, Inc.
1371 Brass Mill Rd.
Suite A
Belcamp, MD 21017
(410) 565-6600

Product name Goji Berry Type, Natural Flavor Blend
Pure substance/mixture Mixture

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

Recommended Use No information available

1.3. Details of the supplier of the safety data sheet

For further information, please contact:

E-mail Address cpisano@apexflavors.com

1.4. Emergency telephone number

Emergency telephone Chemtrec: 1-800-424-9300 for US/ 703-527-3887 outside US

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Flammable liquids	Category 4

Classification according to EU Directives 67/548/EEC or 1999/45/EC
For the full text of the R-phrases mentioned in this Section, see Section 16

2.2. Label elements

Signal Word
Warning

H227 - Combustible liquid

Precautionary Statements
P403 + P235 - Store in a well-ventilated place. Keep cool
P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P280 - Wear protective gloves/ eye protection/ face protection

2.3. Other information

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical Name	EC-No	CAS-No	Alternate CAS #	Weight %	Classification according to Directive 67/548/EEC or 1999/45/EC	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number
PROPYLENE GLYCOL	200-338-0	57-55-6		50-90%	-	No data available	No data available
ACETIC ACID	Present	64-19-7		1-5%	R10 C; R35	Skin Corr. 1A (314) (EFFA) Eye Dam. 1 (H318) (EFFA) Flam. Liq. 3 (H226)(EFFA) Skin Corr. 1A (H314) Eye Dam. 1 (H318) Skin Corr. 1A (H314) Flam. Liq. 3 (H226)	No data available

For the full text of the R-phrases mentioned in this Section, see Section 16

4. FIRST AID MEASURES

4.1. Description of first aid measures

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

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Ingestion Clean mouth with water and drink afterwards plenty of water.

Inhalation Move to fresh air.

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

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

Note to physicians Treat symptomatically

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

Extinguishing media which shall not be used for safety reasons
No information available

5.2. Special hazards arising from the substance or mixture

Special Hazard
None

5.3. Advice for firefighters

Special protective equipment for fire-fighters
As in any fire, wear self-contained breathing apparatus and full protective gear

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

See Section 12 for additional Ecological Information

6.2. Environmental precautions

Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust)

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Ensure adequate ventilation.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific end use(s)

Exposure scenario N/A

Other Guidelines N/A

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Chemical Name	European Union	The United Kingdom	France	Spain	Germany
PROPYLENE GLYCOL 57-55-6		STEL: 450 ppm STEL: 1422 mg/m³ STEL: 30 mg/m³ TWA: 150 ppm TWA: 474 mg/m³ TWA: 10 mg/m³			
ACETIC ACID 64-19-7	TWA 10 ppm TWA 25 mg/m³		STEL: 10 ppm STEL: 25 mg/m³	STEL: 15 ppm STEL: 37 mg/m³ TWA: 10 ppm TWA: 25 mg/m³	TWA: 10 ppm TWA: 25 mg/m³ Ceiling / Peak: 20 ppm Ceiling / Peak: 50 mg/m³

Chemical Name	Italy	Portugal	The Netherlands	Finland	Denmark
ACETIC ACID 64-19-7		STEL: 15 ppm TWA: 10 ppm TWA: 25 mg/m³	TWA: 25 mg/m³	TWA: 5 ppm TWA: 13 mg/m³ STEL: 10 ppm STEL: 25 mg/m³	TWA: 10 ppm TWA: 25 mg/m³

Chemical Name	Austria	Sweden - Occupational Exposure Limits - TLVs (LLVs)	Switzerland	Poland	Norway

PROPYLENE GLYCOL 57-55-6					TWA: 25 ppm TWA: 79 mg/m³ STEL: 37.5 ppm STEL: 118.5 mg/m³
ACETIC ACID 64-19-7	STEL 20 ppm STEL 50 mg/m³ TWA: 10 ppm TWA: 25 mg/m³	5 ppm NGV 13 mg/m³ NGV	STEL: 20 ppm STEL: 50 mg/m³ TWA: 10 ppm TWA: 25 mg/m³	STEL: 30 mg/m³ TWA: 15 mg/m³	TWA: 10 ppm TWA: 25 mg/m³ STEL: 20 ppm STEL: 37.5 mg/m³

Component	Ireland
PROPYLENE GLYCOL 57-55-6 (50-90%)	TWA: 150 ppm TWA: 470 mg/m³ TWA: 10 mg/m³
ACETIC ACID 64-19-7 (1-5%)	TWA: 10 ppm TWA: 25 mg/m³ STEL: 15 ppm STEL: 37 mg/m³

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC) No information available

8.2. Exposure controls

Engineering Controls Ensure adequate ventilation, especially in confined areas

Personal protective equipment

Eye Protection Tightly fitting safety goggles

Hand Protection Protective gloves

Skin and body protection Long sleeved clothing

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

Environmental Exposure Controls No information available

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	liquid	**Appearance**	clear
Odor	fruity characteristic of cranberry	**Color**	colorless

Property	Values	Method
pH		No information available
Melting/freezing point		No information available
Boiling point/boiling range		FCC Method
Flash Point	93 °C / 200 °F	Closed cup
Evaporation rate		FCC Method
Flammability (solid, gas)		No information available
Flammability Limits in Air		No information available
Upper flammability limit		
lower flammability limit		
Vapor pressure mm Hg 20°C		No information available
Vapor density		No information available
Relative density		No information available
Specific Gravity @ 25C	1.0302 - 1.0602	FCC Method
Specific Gravity @ 20C	1.0332 - 1.0632	FCC Method
Refractive Index	1.4003 - 1.4303	FCC Method
Water solubility		No information available
Partition coefficient: n-octanol/water		No information available
Autoignition temperature		No information available
Decomposition temperature		No information available
Viscosity, dynamic		No information available

Explosive properties	No information available
Oxidizing Properties	No information available

9.2. Other information

VOC Content(%)	73.3700000895187
Molecular Weight	No information available

10. STABILITY AND REACTIVITY

10.1. Reactivity

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

10.4. Conditions to avoid

Heat, flames and sparks

10.5. Incompatible materials

No materials to be especially mentioned

10.6. Hazardous decomposition products

None under normal use conditions

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

Inhalation There is no data available for this product

Eye contact There is no data available for this product

Skin contact There is no data available for this product

Ingestion There is no data available for this product

Acute toxicity 23.067% of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document (Rev. 1, 2005):

Oral 15,604.00 mg/kg
Dermal 12,670.00 mg/kg

Inhalation
Mist 6.42 mg/l

Chemical Name	Oral LD50	Dermal LD50	LC50 Inhalation
PROPYLENE GLYCOL	20000 mg/kg (Rat)	20800 mg/kg (Rabbit)	
ACETIC ACID	3310 mg/kg (Rat)	1060 mg/kg (Rabbit)	11.4 mg/L (Rat) 4 h

Skin corrosion/irritation No information available
Eye damage/irritation No information available
Sensitization No information available
Germ Cell Mutagenicity No information available
Carcinogenicity No information available

Specific target organ systemic toxicity (single exposure) No information available

Specific target organ systemic toxicity (repeated exposure) No information available

Target Organ Effects Eyes Respiratory system Skin Teeth

Aspiration hazard No information available

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity effects Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
PROPYLENE GLYCOL	19000: 96 h Pseudokirchneriella subcapitata mg/L EC50	51600: 96 h Oncorhynchus mykiss mg/L LC50 static 41 - 47: 96 h Oncorhynchus mykiss mL/L LC50 static 51400: 96 h Pimephales promelas mg/L LC50 static 710: 96 h Pimephales promelas mg/L LC50	10000: 24 h Daphnia magna mg/L EC50 1000: 48 h Daphnia magna mg/L EC50 Static
ACETIC ACID		79: 96 h Pimephales promelas mg/L LC50 static 75: 96 h Lepomis macrochirus mg/L LC50 static	65: 48 h Daphnia magna mg/L EC50 Static

12.2. Persistence and degradability

No information available

12.3. Bioaccumulative potential

No information available

Chemical Name	log Pow
ACETIC ACID	-0.31

12.4. Mobility in soil

No information available

12.5. Results of PBT and vPvB assessment

12.6. Other adverse effects

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues / unused products Dispose of in accordance with local regulations

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal

14. TRANSPORT INFORMATION

DOT Not regulated

IMDG / IMO Not regulated

ICAO/IATA Not regulated

15. REGULATORY INFORMATION

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

WGK Classification

Chemical Name	Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes
PROPYLENE GLYCOL 57-55-6	Hazard Class 1
ACETIC ACID 64-19-7	Hazard Class 1

International Inventories
All of the components in the product are on the following Inventory lists: No information available.

TSCA -
EINECS/ELINCS -

DSL/NDSL	-
PICCS	-
ENCS	-
IECSC	-
AICS	-
KECL	-

Legend
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
PICCS - Philippines Inventory of Chemicals and Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
AICS - Australian Inventory of Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances

15.2. Chemical safety assessment

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3
H318 - Causes serious eye damage H226 - Flammable liquid and vapor H314 - Causes severe skin burns and eye damage

Revision Date	10-May-2016
Revision Note	Not applicable.
Revision#	1

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

WARNING/DISCLAIMER:
Apex Flavors, Inc.'s products are sold exclusively for use in food and drink for human consumption. These products have not been tested, nor have they been deemed safe, for inhalation or use in electronic smoking devices, electronic nicotine delivery systems, and electronic cigarettes or similar devices (collectively "E-Cigarettes"). In supplying this product(s), Apex Flavors, Inc. instructs, and purchasing recipient confirms, that this product(s) will not be used in connection with the manufacture and distribution of E-Cigarettes or any component thereof. Recipients of our products that use them outside of their intended use of food or drink do so at their own risk and without warranty, either expressed or implied, from Apex Flavors, Inc. or its suppliers. The user assumes all liability for loss, injury, damage, or expense resulting from such uses.

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