

## Safety Data Sheet

### PD Balance

- PD Balance 1 sachets
- + PD Balance 2 sachets
- + TUDCA Capsules

### Safety Data Sheet: PD Balance 1

#### OSHA Hazard Communication Standard 29 CFR 1910.1200. Prepared to GHS Rev 3

Revision date: December 23, 2025  
Date of issue: December 23, 2025

**Trade name: PD Balance 1**

#### SECTION 1: Identification

Product identifier used on the label: 7290019686293  
Product Name: PD Balance 1

Other means of identification:

Recommended use of the Product and restrictions on use:

Recommended use: Powder  
Recommended restrictions: Uses other than as recommended above.

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party:

Company Name: Marula & Co  
Company Address: Zohar Hamidbar Farm,  
Tlalim 8554500, Israel

Company Telephone: +97286573880

Company Contact Email: info@marulalab.org  
Emergency phone number: +97286573880

## SECTION 2: Hazard(s) identification

### **UNITED STATES:**

**Classification of the Product in accordance with paragraph (d) of §1910.1200:**

#### ***Physical hazards***

Not classified as hazardous

#### ***Health hazards***

#### ***Environmental hazards***

Not adopted under OSHA paragraph (d) of §1910.1200

#### **GHS Signal word:**

Not classified as hazardous

#### **GHS Hazard statement(s):**

None required.

#### **GHS Hazard symbol(s):**

None required.

#### **GHS Precautionary statement(s):**

##### **Prevention:**

- Keep out of reach of children.

##### **Response:**

None required.

##### **Storage:**

None required.

##### **Disposal:**

None required.

#### **Hazard(s) not otherwise classified (HNOC):**

None known.

#### **Percentage of ingredient(s) of unknown acute toxicity:**

100% of the mixture consists of ingredients of unknown acute toxicity (dermal, inhalation).

### SECTION 3: Composition/information on ingredients

**Mixture:**

Chemical name	CAS#	Concentration (weight %)
Mannitol	69-65-8	30-40%
Sunflower lecithin	8002-43-5	3-8%
Ammonium glycyrrhizate	53956-04-0	1-3%
Inulin	9005-80-5	15-30%
Marula oil	68956-68-3	35-45%
Vitamin B1 Thiamine Hydrochloride	67-03-8	0.3-1.1%

\*Note: The exact concentration has been withheld as a trade secret.

### SECTION 4: First-aid measures

**Description of necessary measures, subdivided according to the different routes of exposure, i.e., inhalation, skin and eye contact, and ingestion:** Non-toxic.

### SECTION 5: Fire-fighting measures

**Suitable (and unsuitable) extinguishing media:**

**Suitable extinguishing media:** Use water spray/fog, alcohol-resistant foam, dry chemical (powder/CO<sub>2</sub>) or carbon dioxide as suitable for surrounding materials.

**Unsuitable extinguishing media:** Do not use extinguishing media that is unsuitable to surrounding materials.

**Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products):**

Non-flammable.

**Hazardous combustion products:** During a fire, irritating and toxic gases may be generated by thermal decomposition or combustion.

Hazardous combustion products include CO (Carbon monoxide), CO<sub>2</sub> (Carbon dioxide), oxides of Nitrogen.

**Special protective equipment and precautions for fire-fighters:**

Fight fire from a protected location. Wear self-contained breathing apparatus and protective clothing. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

## SECTION 6: Accidental release measures

### Environmental Hazards

#### Methods and materials for containment and cleaning up:

Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal.

## SECTION 7: Handling and storage

Provide good ventilation in process area to prevent formation of vapor.

#### Conditions for safe storage, including any incompatibles:

Keep only in the original container in a cool place. Keep away from direct sunlight. Keep container closed when not in use.

## SECTION 8: Exposure controls/personal protection

OSHA permissible exposure limit (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available.

US OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200) (Table Z-1 Limits for Air Contaminants):		
Substance	PEL-TWA (8 hour)	PEL-STEL (15 min)
Mannitol	None known	None known
Sunflower lecithin	None known	None known
Ammonium glycyrrhizate	None known	None known
Inulin	None known	None known
Marula oil	None known	None known
Vitamin B1 Thiamine Hydrochloride	None known	None known

US ACGIH Threshold Limit Values		
Substance	TLV-TWA (8 hour)	TLV-STEL (15 min)
Mannitol	None known	None known
Sunflower lecithin	None known	None known
Ammonium glycyrrhizate	None known	None known
Inulin	None known	None known
Marula oil	None known	None known
Vitamin B1 Thiamine Hydrochloride	None known	None known

**Appropriate engineering controls:** During industrial use; use material in well-ventilated area only. Good general ventilation (typically 10 air changes per hour) should be sufficient in most cases. Ventilation rates should be matched to conditions. Maintain airborne levels to an acceptable level. Use appropriate personal protective equipment and clothing.

**Individual protection measures, such as personal protective equipment:**

**Eye/face protection:** Face shield and safety glasses. Use equipment tested and approved under appropriate government standards.

**Skin and hand protection:**

Wear appropriate chemical resistant gloves. The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Wear a complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection:** Wear respiratory protection adequate to the ventilation levels. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US).

Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

**General hygiene considerations:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## SECTION 9: Physical and chemical properties

### Appearance (physical state, color, etc.):

Physical state:	Solid (powder)
Color:	Off white
Odor:	Characteristic
Odor threshold:	No data available
pH:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point:	No data available
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Upper/lower flammability or explosive limits	
Flammability limit – lower %):	No data available
Flammability limit – upper (%):	No data available
Explosive limit – lower (%):	No data available
Explosive limit – upper (%):	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Bulk density:	No data available
Relative density (Specific gravity):	No data available
Solubility (ies):	No data available
Partition coefficient (n-octanol/water):	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity (dynamic):	No data available

## SECTION 10: Stability and reactivity

Reactivity:	Stable under normal conditions of use.
Chemical stability:	Not determined.
Possibility of hazardous reactions:	Not determined.
Conditions to avoid:	Extremely high or low temperatures.
Incompatible materials:	None known.
Hazardous decomposition products:	None known.

## SECTION 11: Toxicological information

### Information on likely routes of exposure:

<b>Inhalation:</b>	Expected to be a route of entry.
<b>Ingestion:</b>	Expected to be a route of entry.
<b>Skin:</b>	Expected to be a route of entry.
<b>Eyes:</b>	Expected to be a route of entry.
<b>Target Organs:</b>	None known.

**Symptoms related to the physical, chemical, and toxicological characteristics:**

None known.

**Delayed and immediate effects and chronic effects from short or long-term exposure:** None known

**Numerical measures of toxicity (such as acute toxicity estimates):**

**Ingredient Information:**

Substance	Test Type (species)	Value
Mannitol	LD <sub>50</sub> Oral (Rat)	13500 mg/kg
	LD <sub>50</sub> Dermal (Rabbit)	No data available
	LC <sub>50</sub> Inhalation (Rat)	No data available
Sunflower lecithin	LD <sub>50</sub> Oral (Rat)	No data available
	LD <sub>50</sub> Dermal (Rabbit)	No data available
	LC <sub>50</sub> Inhalation (Rat)	No data available
Ammonium glycyrrhizate	LD <sub>50</sub> Oral (Rat)	12,700 mg/kg
	LD <sub>50</sub> Dermal (Rabbit)	No data available
	LC <sub>50</sub> Inhalation (Rat)	No data available
Inulin	LD <sub>50</sub> Oral (Rat)	No data available
	LD <sub>50</sub> Dermal (Rabbit)	No data available
	LC <sub>50</sub> Inhalation (Rat)	No data available
Marula oil	LD <sub>50</sub> Oral (Rat)	No data available
	LD <sub>50</sub> Dermal (Rabbit)	No data available
	LC <sub>50</sub> Inhalation (Rat)	No data available
Vitamin B1 Thiamine Hydrochloride	LD <sub>50</sub> Oral (Rat)	No data available
	LD <sub>50</sub> Dermal (Rabbit)	No data available
	LC <sub>50</sub> Inhalation (Rat)	No data available

**Skin corrosion/irritation:** Not expected to cause skin corrosion/irritation.

**Serious eye damage/eye irritation:** Not expected to cause serious eye damage/irritation.

**Respiratory sensitization:** Not expected to cause respiratory sensitization.

**Skin sensitization:** Not expected to cause allergic reactions.

**Germ cell mutagenicity:** No information available on the mixture, however none of the components have been classified for germ cell mutagenicity (or are below the concentration threshold for classification).

**Carcinogenicity:**

This product does not contain any ingredient designated as probable or suspected human carcinogens by: NTP, IARC, OSHA, ACGIH.

**Reproductive toxicity:**

Not expected to cause reproductive toxicity.

**Specific target organ toxicity-  
Single exposure:**

Not expected to cause specific target organ toxicity after a single exposure.

**Specific target organ toxicity-  
Repeat exposure:**

Not expected to cause specific target organ toxicity after repeated exposure.

**Aspiration hazard:**

Not expected to be an aspiration hazard if swallowed.

**SECTION 12: Ecological information**

**Ecotoxicity (aquatic and terrestrial, where available):**

**Product data:** Not determined.

**Ingredient Information:**

Substance	Test Type	Species	Value
Mannitol	LC <sub>50</sub>	Fish	No data available
	EC <sub>50</sub>	Daphnia magna (Water flea)	No data available
	EC <sub>50</sub>	Algae	No data available
Sunflower lecithin	LC <sub>50</sub>	Fish	No data available
	EC <sub>50</sub>	Daphnia magna (Water flea)	No data available
	EC <sub>50</sub>	Algae	No data available
Ammonium glycyrrhizate	LC <sub>50</sub>	Fish	No data available
	EC <sub>50</sub>	Daphnia magna (Water flea)	>100 mg/L 48 h
	EC <sub>50</sub>	Algae - Pseudokirchneriella subcapitata	>100 mg/L 72 h
Inulin	LC <sub>50</sub>	Fish	No data available
	EC <sub>50</sub>	Daphnia magna (Water flea)	No data available
	EC <sub>50</sub>	Algae	No data available
Marula oil	LC <sub>50</sub>	Fish	No data available
	EC <sub>50</sub>	Daphnia magna (Water flea)	No data available
	EC <sub>50</sub>	Algae	No data available
Vitamin B1 Thiamine Hydrochloride	LC <sub>50</sub>	Fish	No data available
	EC <sub>50</sub>	Daphnia magna (Water flea)	No data available
	EC <sub>50</sub>	Algae	No data available

<b>Persistence and Degradability:</b>	Not determined.
<b>Bioaccumulative Potential:</b>	Not determined.
<b>Mobility in Soil:</b>	No data available.
<b>Other adverse effects (such as hazardous to the ozone layer):</b>	Avoid unnecessary release to the environment.

### SECTION 13: Disposal considerations

**Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging.**

#### Product

Dispose of waste materials in accordance with applicable local and national laws and regulations. Where possible, recycling is preferred to disposal or incineration. Contact the proper local authorities.

#### Contaminated packaging

Since emptied containers retain product residue, follow label warnings even after container is emptied. Dispose of as unused product.

### SECTION 14: Transport Information

#### US Department of Transportation Classification (49CFR)

**UN Number:** Not regulated  
**UN proper shipping name:**  
**Transport hazard class(s):**  
**Packing group:**

#### IMDG (Transport by sea)

**UN Number:** Not regulated  
**UN proper shipping name:**  
**Transport hazard class(s):**  
**Packing group:**

#### IATA (Transport by air) (Country variations may apply)

**UN Number:** Not regulated  
**UN proper shipping name:**  
**Transport hazard class(s):**  
**Packing group:**

#### Environmental hazards

Marine pollutant: No

### Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)

No further relevant information available.

### Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises.

No data available.

## SECTION 15: Regulatory Information

### USA:

**United States Federal Regulations:** This SDS complies with the OSHA, 29 CFR 1910.1200. The product is hazardous under OSHA.

**Toxic Substances Control Act (TSCA):** All the ingredients\* are listed/registered or exempted on the U.S. EPA TSCA Inventory List.

### STATE REGULATIONS:

This SDS does not contain specific health and safety data that is applicable for state requirements. For details on your regulatory requirements, you should contact the appropriate agency in your state.

#### SARA 302 Components:

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### SARA 313 Components:

SARA 313: No chemicals in this material are subject to the reporting requirements by SARA Title III, Section 313.

#### Massachusetts Right to Know Components:

None of the ingredients are listed on the Massachusetts Right to Know list.

#### Pennsylvania Right to Know Components:

None of the ingredients are listed on the Pennsylvania Right to Know list.

#### New Jersey Right to Know Components:

None of the ingredients are listed on the New Jersey Right to Know list.

#### California Proposition 65 (California Safe Drinking Water and Toxic Enforcement Act of 1986) Components:

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## SECTION 16: Other Information

Revision Date: Dec 24, 2025

DISCLAIMER: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 1910.1200. To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier nor any of its subsidiaries assumes any liability whatsoever for completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

## **Safety Data Sheet: PD Balance 2**

**OSHA Hazard Communication Standard 29 CFR 1910.1200. Prepared to GHS Rev 3**

Revision date: December 23, 2025

Date of issue: December 23, 2025

**Trade name: PD Balance 2**

### **SECTION 1: Identification**

**Product identifier used on the label:** 7290019686293

**Product Name:** PD Balance 2

**Other means of identification:**

**Recommended use of the Product and restrictions on use:**

**Recommended use:** Powder

**Recommended restrictions:** Uses other than as recommended above.

**Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party:**

**Company Name:** Marula & Co

**Company Address:** Zohar Hamidbar Farm, Tlalim 8554500, Israel

**Company Telephone:** +97286573880

**Company Contact Email:** info@marulalab.org

**Emergency phone number:** +97286573880

### **SECTION 2: Hazard(s) identification**

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

93% of the mixture consists of ingredients of unknown acute toxicity (dermal, inhalation).

2% of the mixture consists of Salidroside, that causes serious eye irritation.

3% of the mixture consists of Vitamin B3 nicotinamide riboside (NR), that is irritating to eyes, respiratory system and skin.

2% of the mixture consists of Ambroxol, that is harmful if swallowed, causes skin irritation, and may cause respiratory irritation.

**Classification of the Product in accordance with paragraph (d) of §1910.1200:**

**Physical hazards**

Not classified as hazardous

**Note:**

93% of the mixture consists of ingredients of unknown acute toxicity (dermal, inhalation).

2% of the mixture consists of Salidroside, that causes serious eye irritation.

3% of the mixture consists of Vitamin B3 nicotinamide riboside (NR), that is irritating to eyes, respiratory system and skin.

2% of the mixture consists of Ambroxol, that is harmful if swallowed, causes skin irritation, and may cause respiratory irritation.

**Health hazards**

**Environmental hazards**

Not adopted under OSHA paragraph (d) of §1910.1200

3% of the mixture consists of Vitamin B3 nicotinamide riboside (NR), that is slightly hazardous to water and ground.

**GHS Hazard statement(s):**

None required.

**GHS Hazard symbol(s):**

None required.

GHS Precautionary statement(s):

**Prevention:**

- Keep out of reach of children.

**Hazard(s) not otherwise classified (HNOC):**

None known.

**SECTION 3: Composition/information on ingredients**

**Mixture:**

Chemical name	CAS#	Concentration (weight %)
Marula fruit and peel extract powder	68956-68-3	70-80%
Hydroxytyrosol HXT 20%	10597-60-1	1-2%
Oleuropein 40%	32619-42-4	0.5-2%
NAC <u>N-Acetyl-Cysteine</u>	616-91-1	3-6%
Salidroside	10338-51-9	1-3%
Phosphatidylserine 50%	51446-62-9	2-5%

Ubiquinol-10 (reduced CoQ10)	992-78-9	0.5-3%
Vitamin B3 nicotinamide riboside chloride (NR)	23111-00-4	1-5%
Ambroxol Hydrochloride	18683-91-5	1-3%

\*Note: The exact concentration has been withheld as a trade secret.

#### SECTION 4: First-aid measures

**Description of necessary measures, subdivided according to the different routes of exposure, i.e., inhalation, skin and eye contact, and ingestion:**

**If breathed in,** move person into fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**In case of skin contact**

Wash off with soap and plenty of water. Get medical attention if irritation develops.

**In case of eye contact**

Flush eyes with water for at least 15 minutes as a precaution. Get medical attention if irritation occurs.

#### SECTION 5: Fire-fighting measures

**Suitable (and unsuitable) extinguishing media:**

**Suitable extinguishing media:** Use water spray/fog, alcohol-resistant foam, dry chemical (powder/CO<sub>2</sub>) or carbon dioxide as suitable for surrounding materials.

**Unsuitable extinguishing media:** Do not use extinguishing media that is unsuitable to surrounding materials.

**Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products):**

Non-flammable.

**Hazardous combustion products:**

During a fire, irritating and toxic gases may be generated by thermal decomposition or combustion.

Hazardous combustion products include CO (Carbon monoxide), CO<sub>2</sub> (Carbon dioxide), oxides of Nitrogen.

**Special protective equipment and precautions for fire-fighters:**

Fight fire from a protected location. Wear self-contained breathing apparatus and protective clothing. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

#### SECTION 6: Accidental release measures

**Environmental Hazards**

**Methods and materials for containment and cleaning up:**

Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal. Prevent uncontrolled release to the environment. Avoid discharge of solutions, suspensions, or contaminated wash water to surface waters, soil, or drains without prior treatment. Collect spills promptly using methods that minimize dust generation (e.g. damp wiping, HEPA-filtered vacuum). Dispose of waste in accordance with applicable local, regional, and national regulations

**SECTION 7: Handling and storage**

Provide good ventilation in process area to prevent formation of vapor.

**Conditions for safe storage, including any incompatibles:**

Keep only in the original container in a cool place. Keep away from direct sunlight. Keep container closed when not in use.

**SECTION 8: Exposure controls/personal protection**

OSHA permissible exposure limit (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available.

US OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200) (Table Z-1 Limits for Air Contaminants):		
Substance	PEL-TWA (8 hour)	PEL-STEL (15 min)
Marula fruit and peel extract powder	None known	None known
Hydroxytyrosol HXT 20%	None known	None known
Oleuropein 40%	None known	None known
NAC <u>N-Acetyl-Cysteine</u>	None known	None known
Salidroside	None known	None known
Phosphatidylserine 50%	None known	None known
Ubiquinol-10 (reduced CoQ10)	None known	None known
Vitamin B3 nicotinamide riboside chloride (NR)	None known	None known
Ambroxol	None known	None known

US ACGIH Threshold Limit Values		
Substance	TLV-TWA (8 hour)	TLV-STEL (15 min)
Marula fruit and peel extract powder	None known	None known
Hydroxytyrosol HXT 20%	None known	None known
Oleuropein 40%	None known	None known
NAC N-Acetyl-Cysteine	None known	None known
Salidroside	None known	None known
Phosphatidylserine 50%	None known	None known
Ubiquinol-10 (reduced CoQ10)	None known	None known
Vitamin B3 nicotinamide riboside chloride (NR)	None known	None known

**Appropriate engineering controls:** During industrial use; use material in well-ventilated area only. Good general ventilation (typically 10 air changes per hour) should be sufficient in most cases. Ventilation rates should be matched to conditions. Maintain airborne levels to an acceptable level. Use appropriate personal protective equipment and clothing.

**Individual protection measures, such as personal protective equipment:**

**Eye/face protection:** Face shield and safety glasses. Use equipment tested and approved under appropriate government standards.

**Skin and hand protection:**

Wear appropriate chemical resistant gloves. The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Wear a complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection:** Wear respiratory protection adequate to the ventilation levels. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US).

Select respirator based on its suitability to provide adequate worker protection for given working

conditions, level of airborne contamination, and presence of sufficient oxygen. If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

**General hygiene considerations:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## SECTION 9: Physical and chemical properties

### Appearance (physical state, color, etc.):

<b>Physical state:</b>	Solid (powder)
<b>Color:</b>	Yellowish
<b>Odor:</b>	Characteristic
<b>Odor threshold:</b>	No data available
<b>pH:</b>	No data available
<b>Melting point/freezing point:</b>	No data available
<b>Initial boiling point and boiling range:</b>	No data available
<b>Flash point:</b>	No data available
<b>Evaporation rate:</b>	No data available
<b>Flammability (solid, gas):</b>	No data available
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit – lower (%):</b>	No data available
<b>Flammability limit – upper (%):</b>	No data available
<b>Explosive limit – lower (%):</b>	No data available
<b>Explosive limit – upper (%):</b>	No data available
<b>Vapor pressure:</b>	No data available
<b>Vapor density:</b>	No data available
<b>Bulk density:</b>	No data available
<b>Relative density (Specific gravity):</b>	No data available
<b>Solubility (ies):</b>	No data available
<b>Partition coefficient (n-octanol/water):</b>	No data available
<b>Auto-ignition temperature:</b>	No data available
<b>Decomposition temperature:</b>	No data available
<b>Viscosity (dynamic):</b>	No data available

## SECTION 10: Stability and reactivity

<b>Reactivity:</b>	Stable under normal conditions of use.
<b>Chemical stability:</b>	Not determined.
<b>Possibility of hazardous reactions:</b>	Not determined.
<b>Conditions to avoid:</b>	Extremely high or low temperatures.
<b>Incompatible materials:</b>	None known.
<b>Hazardous decomposition products:</b>	None known.

## SECTION 11: Toxicological information

### Information on likely routes of exposure:

**Inhalation:** Expected to be a route of entry.

**Ingestion:** Expected to be a route of entry.

**Skin:** Expected to be a route of entry.

**Eyes:** Expected to be a route of entry.

**Target Organs:** None known.

### Symptoms related to the physical, chemical, and toxicological characteristics:

93% of the mixture consists of ingredients of unknown acute toxicity (dermal, inhalation).

2% of the mixture consists of Salidroside, that causes serious eye irritation.

3% of the mixture consists of Vitamin B3 nicotinamide riboside (NR), that is irritating to eyes, respiratory system and skin.

2% of the mixture consists of Ambroxol, that is harmful if swallowed, causes skin irritation, and may cause respiratory irritation.

### Delayed and immediate effects and chronic effects from short or long-term exposure:

93% of the mixture consists of ingredients of unknown acute toxicity (dermal, inhalation).

2% of the mixture consists of Salidroside, that causes serious eye irritation.

3% of the mixture consists of Vitamin B3 nicotinamide riboside (NR), that is irritating to eyes, respiratory system and skin.

2% of the mixture consists of Ambroxol, that is harmful if swallowed, causes skin irritation, and may cause respiratory irritation.

**Numerical measures of toxicity (such as acute toxicity estimates):**

**Ingredient Information:**

Substance	Test Type (species)	Value
Marula fruit and peel extract powder	LD <sub>50</sub> Oral (Rat)	No data available
	LD <sub>50</sub> Dermal (Rabbit)	No data available
	LC <sub>50</sub> Inhalation (Rat)	No data available
Hydroxytyrosol HXT 20%	LD <sub>50</sub> Oral (Rat)	2,000–5,000 mg/kg bw
	LD <sub>50</sub> Dermal (Rabbit)	No data available
	LC <sub>50</sub> Inhalation (Rat)	No data available
Oleuropein 40%	LD <sub>50</sub> Oral (Rat)	> 2,000 mg/kg bw
	LD <sub>50</sub> Dermal (Rabbit)	No data available
	LC <sub>50</sub> Inhalation (Rat)	No data available
Salidroside	LD <sub>50</sub> Oral (Rat)	No data available
	LD <sub>50</sub> Dermal (Rabbit)	No data available
	LC <sub>50</sub> Inhalation (Rat)	No data available
Phosphatidylserine 50%	LD <sub>50</sub> Oral (Rat)	No data available
	LD <sub>50</sub> Dermal (Rabbit)	No data available
	LC <sub>50</sub> Inhalation (Rat)	No data available
NAC <u>N-Acetyl-Cysteine</u>	LD <sub>50</sub> Oral (Rat)	No data available
	LD <sub>50</sub> Dermal (Rabbit)	No data available
	LC <sub>50</sub> Inhalation (Rat)	No data available
Ubiquinol-10 (reduced CoQ10)	LD <sub>50</sub> Oral (Rat)	No data available
	LD <sub>50</sub> Dermal (Rabbit)	No data available
	LC <sub>50</sub> Inhalation (Rat)	No data available
Ambroxol	LD <sub>50</sub> Oral (Rat)	300–1000 ,mg/kg bw
	LD <sub>50</sub> Dermal (Rabbit)	No data available
	LC <sub>50</sub> Inhalation (Rat)	No data available

**Persistence and Degradability:**

Not determined.

**Bioaccumulative Potential:**

Not determined.

**Mobility in Soil:**

No data available.

**Other adverse effects (such as hazardous to the ozone layer):**

Avoid unnecessary release to the environment.

## SECTION 13: Disposal considerations

**Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging.**

### Product

Dispose of waste materials in accordance with applicable local and national laws and regulations. Where possible, recycling is preferred to disposal or incineration. Contact the proper local authorities.

### Contaminated packaging

Since emptied containers retain product residue, follow label warnings even after container is emptied. Dispose of as unused product.

## SECTION 14: Transport Information

### US Department of Transportation Classification (49CFR)

UN Number: Not regulated

UN proper shipping name:

Transport hazard class(s):

Packing group:

### IMDG (Transport by sea)

UN Number: Not regulated

UN proper shipping name:

Transport hazard class(s):

Packing group:

### IATA (Transport by air) (Country variations may apply)

UN Number: Not regulated

UN proper shipping name:

Transport hazard class(s):

Packing group:

### Environmental hazards

Marine pollutant: No

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)

No further relevant information available.

**Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises.**

No data available.

## SECTION 15: Regulatory Information

### USA:

**United States Federal Regulations:** This SDS complies with the OSHA, 29 CFR 1910.1200. The product is hazardous under OSHA.

**Toxic Substances Control Act (TSCA):** All the ingredients\* are listed/registered or exempted on the U.S. EPA TSCA Inventory List.

### STATE REGULATIONS:

This SDS does not contain specific health and safety data that is applicable for state requirements. For details on your regulatory requirements, you should contact the appropriate agency in your state.

#### **SARA 302 Components:**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### **SARA 313 Components:**

SARA 313: No chemicals in this material are subject to the reporting requirements by SARA Title III, Section 313.

#### **Massachusetts Right to Know Components:**

None of the ingredients are listed on the Massachusetts Right to Know list.

#### **Pennsylvania Right to Know Components:**

None of the ingredients are listed on the Pennsylvania Right to Know list.

#### **New Jersey Right to Know Components:**

None of the ingredients are listed on the New Jersey Right to Know list.

#### **California Proposition 65 (California Safe Drinking Water and Toxic Enforcement Act of 1986) Components:**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## SECTION 16: Other Information

Revision Date: December 24, 2025

**DISCLAIMER:** This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 1910.1200. To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier nor any of its subsidiaries assumes any liability whatsoever for completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

## **Safety Data Sheet: TUDCA Capsules**

(Tauroursodeoxycholic acid) 500mg

### **OSHA Hazard Communication Standard 29 CFR 1910.1200. Prepared to GHS Rev 3**

**Revision date:** December 23, 2025

**Date of issue:** December 23, 2025

**Trade name: TUDCA Capsules**

#### **Section 1 - Chemical Product and Company Identification**

**Product Name** TUDCA (Tauroursodeoxycholic acid) 500 mg Capsules  
**Product identifier used on the label:** 7290019686293

**Company** Marula & Co  
**Address** Zohar Hamidbar Farm, Tlalim 8554500, Israel  
**Tel.** +97286573880

**Company Contact Email:** info@marulalab.org

#### **Section 2 – Composition, Information on Ingredients**

**CAS# :** 14605-22-2  
**Formula:** C<sub>26</sub>H<sub>45</sub>NO<sub>6</sub>S.2H<sub>2</sub>O  
**Molecular Weight:** 499.7

#### **Section 3 –Physical and Chemical Properties**

**Appearance:** White Solid  
**Solubility in water:** No data available  
**Melting Point** No data available

#### **Section 4 – First Aid Measures**

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### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

### **Inhalation**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

### **Skin contact**

Wash off with soap and plenty of water. Consult a physician.

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### **Eyes contact**

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

### **Ingestion**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### **Other**

Remove and wash/dispose of contaminated clothing promptly.

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## **Section 5 – Handling and Storage**

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### **Storage**

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

### **Precautions for safe handling**

Provide appropriate exhaust ventilation at places where dust is formed.

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## **Section 6 – Hazards Identification**

### **Inhalation**

May be harmful if inhaled. May cause respiratory tract irritation.

### **Skin**

May be harmful if absorbed through skin. May cause skin irritation.

### **Eyes**

May cause eye irritation.

### **Ingestion**

May be harmful if over amount swallowed.

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**EC risk phrase** No data available

**EC safety phrase** No data available

**Hazard symbols** No data available

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## Section 7 – Exposure Controls/Personal Protection

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### Control parameters

Components with workplace control parameters

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### Appropriate engineering controls

General industrial hygiene practice

### Personal protection

#### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

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## Section 8 – Fire Fighting Measures

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### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

### Unusual fire and explosion hazards

During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

### Special fire fighting procedures

Wear a self-contained breathing apparatus if necessary

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## Section 9 – Accidental Release Measures

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### Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing vapors, mist or gas

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### Environmental precautions

Do not let product enter drains

### Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal

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## Section 10 – Stability and Reactivity

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### Stability

No data available

### Incompatibilities

Strong oxidizing agents

### Decomposition

Carbon oxides (CO<sub>x</sub>), Nitric oxides(NO<sub>x</sub>)

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## Section 11 – Toxicological Information

### Acute toxicity

no data available

### Respiratory or skin sensitization

No data available

### Germ cell mutagenicity

no data available

### Carcinogenicity

IARC: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

### Reproductive toxicity

no data available

### Specific target organ toxicity - single exposure

no data available

### Specific target organ toxicity - repeated exposure

no data available

### Aspiration hazard

no data available

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## Section 12 – Ecological Information

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Do not allow product to enter drinking water supplies, waste water or soil

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## Section 13 – Disposal Considerations

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### Product

Offer surplus and non-recyclable solutions to a licensed disposal company

### Contaminated packaging

Dispose of as unused product.

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## Section 14 – Transport Information

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Not dangerous goods

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## Section 15 – Regulatory Information

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No data available

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## Section 16 – Other Information

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*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. User should make their own investigations to determine the suitability of the information for their particular purposes.*

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