

MATERIAL SAFETY DATA SHEET (MSDS)

1. IDENTIFICATION OF THE SUBSTANCE AND COMPANY

Material Name: Tucuma Virgin Butter

Chemical Description: Tucuma Virgin Butter, *Astrocaryum vulgare*.

Product Code: 0110CNBUTTER

2. COMPOSITION / INFORMATION ON INGREDIENTS

INCI name ¹ (CTFA)	CAS no.	EINECS no.	Concentration ²	EU Symbol	EU R-Phrase
<i>Astrocaryum vulgare seed butter</i>	N/A	N/A	A	No health risk	No health risk
INCI name (EU labeling) ¹	CAS no.	EINECS no.	Concentration ²	EU Symbol	EU R-Phrase
<i>Astrocaryum vulgare seed butter</i>	N/A	N/A	A	No health risk	No health risk

¹ CTFA dictionary

² FDA – Code (A = >50 %, B = 25 -50%, C = 10 – 25%, D = 5 -10%, E = 1 -5 %, F = 0,1 -1, G = <0,1%)

3. HAZARD IDENTIFICATION

This product is a pure vegetable butter which is not considered to present any hazard during normal use. Non Dangerous, Non Hazardous product, usually accepted as a safe commodity (GRAS) in accordance to the food, drugs and cosmetics legislation.

Risks Classification	NFPA 04	HMIS
H = Health	0	0
F = Flammability	0	0
R = Reactivity	0	0
S/R = Special recommendations	NW	NW

CODES RISKS	4 -EXTREME	3 – HIGH	2 - MODERATE	1 – LIGHT	0 – NO RISKS	N/W – USE NO WATER
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4. FIRST AID

Inhalation	At ambient/normal handling temperature (0 – 38 deg. C), no adverse effects due to inhalation of vapor are expected. But excessive exposure to the oil vapor may affect the breathing system. If inhalation occurred, expose the individual to fresh air.
Skin contact	No adverse effects due to skin contact expected. Wash skin with soap and copious amount of water for at least 15 minutes. Sensible individuals may present dermatology alterations after long exposition to the oil.
Eye contact	Rinse with water, if wearing contact lenses, remove them. Wash eyes with clean and cool water for at least 10 minutes while pulling eyelids up. In case of irritation seek medical advice.
Ingestion	Nontoxic in small doses. For sizeable amount, seek medical assistance. Effects appear more severe in individuals with kidney problems. For No adverse effects due to ingestion are expected.

5. FIRE – FIGHTING MEASURES

Classification	Combustible Liquid Class III – B
Ignition point	Above 288°C – Method used Cleveland Cup
Extinguishing media	CO ₂ (Carbon Dioxide), dry chemical powder or appropriate foam. Do not use a direct stream of water to extinguish.
Extinguishing media not applicable	Water.
Fire and explosion hazards	<p>Combustible material, low hazard. The product can form flammable mixtures or can burn only on heating above the flash point. However, minor contamination by hydrocarbons of higher volatility may increase the hazard. Leakage or conditions resulting in impregnation of this oil with some porous materials such as rags, paper, insulation or clay may cause spontaneous combustion.</p> <p>Special fire-fighting procedures: Water fog or spray, to cool fire-exposed surfaces (e.g. containers) and to protect personnel, should only be used by personnel trained in firefighting. Do avoid the use of water directly over the flames; it could disperse the oil and thus the fire. Cut off "fuel", depending on circumstances, either allows the fire to burn out under controlled conditions or use foam or dry chemical powder to extinguish the fire. Respiratory and eye protection required for firefighting personnel exposed to fumes or smoke.</p>
Ignition risks and unusual explosions	Textile sheets and paper sheets imbibed with the product may spontaneously heat and burn.
Hazardous combustion products/ Other hazards not classified	Fire can cause thick and black smoke. As a result of thermal decomposition, dangerous products can form: Smoke, carbon monoxide and carbon dioxide. / Keep away from sources of ignition – no smoking. Exposure to combustion or decomposition products can be harmful to your health
Protection of Firefighters	Use adequate eye and skin protection; water suitable self-contained breathing apparatus.
Other recommendations	Use water to cool tanks, cisterns, or containers to the heat source or fire. Take into consideration the wind direction. Prevent the products used to fight the fire from going into drains, sewers or waterways.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	None Known
Environmental Precautions	Prevent the contamination of drains, surface or subterranean waters, and the ground. In case of large spills or if the product contaminates lakes, rivers or sewers, inform the responsible authorities according to local legislation.
Methods of Cleaning Up	Pick up the spill with non-combustible absorbent materials (soil, sand, vermiculite, diatomite, etc.). Store the product and the absorbent in an appropriate container. The contaminated area should be immediately cleaned.

7. SAFETY OPERATION GUIDELINES

Environmental and occupational exhibition limits were not determined, but the following cautions should be followed for individual protection: Avoid contact with eyes, skin and clothing, avoid prolonged or repeated exposure, approved respirator, resistant gloves, chemical safety goggles, keep container closed, keep away from heat and open flame and store in a cool dry place. Evaluate necessary based on application. Slip proof shoes may be worn where spills may occur.

8. HANDLING AND STORAGE

Handling	Keep the container tightly closed and isolated from heat sources, sparks and fire. Prevent the contact with skin or eyes. For personal protection avoid contact with eyes, skin and clothing, avoid prolonged or repeated exposure, approved respirator, resistant gloves, chemical safety goggles, keep container closed, keep away from heat and open flame and store in a cool dry place.
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Storage	Store according to local legislation. Store containers in a dry and well – ventilated place, far from sources of heat and direct solar light, with humidity below 50% RH, temperature below 28°C. Keep far away from ignition points. Keep away from oxidizers agents and from highly acidic or alkaline materials. Do not smoke. Prevent the entry of non-authorized persons. Once the containers are open, they must be carefully closed and placed vertically to prevent spills.
Suitable Packaging Materials	Opaque, tightly sealed container.

9. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures	Ensure ventilation or local exhaust if formation of vapor occurs
Hygiene measures	Good industrial hygiene should be followed
Occupational Exposure Limits	No occupational exposure limits have been established.
Personal Protection Equipment	Normal protection should be observed as for handling all chemicals

10. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Aspect at 25 °C	Solid
Color	White to beige
Odor	Not deodorized
pH	No data
Boiling Point (°C)	No data
Density at 25 °C (g/cm³)	0,945
Refraction value at 40°C (Zeiss)	No data
Iodine value (g₂/100g)	12,00
Saponification value (mgKOH/g)	235
Peroxide value (meq/1000g)	Máx. 10,00
Acid value (mgKOH/g)	≤ 10,00
Solubility in water	Insoluble
Fatty acid distribution	No data
Others (%)	No data
Partition coefficient	No data
Fusion point	No data

11. STABILITY AND REACTIVY

Stability Conditions to avoid/ Chemical stability	Stable under normal conditions / Stable under the recommended handling and storage conditions (see section 8)
Incompatible materials	Avoid contact with strong oxidants such as strong oxidizing agents, strong acids, acid chlorides and acid anhydrides.
Hazardous decomposition products	Carbon monoxide and carbon dioxide may be formed in the event of incomplete combustion. Product does not decompose at ambient temperature

12. TOXICOLOGICAL INFORMATION

Effects of over exposure inhalation : skin contact	No hazard normal industrial use.
Primary cutaneous irritation	Not considered irritating.
Repeated cutaneous irritation	Not considered irritating.

Maximized cutaneous sensitization	Not considered sensitizer
Repeated cutaneous photoirritation	Not considered photo irritating
Maximized cutaneous photosensibilization	Not considered photosensitizer
Phototoxicity	Not considered phototoxic
Eye contact	-
Ocular irritation 7 days	-
Toxicity data	-
Oral, rat, LD 50	-
Dermal, rat, LD 50	-

13. ECOLOGICAL INFORMATION

Comment	None
Ecotoxicity	None

This assessment is based on general information for vegetable oils. The oil will largely on the soil surface, and in water, will remain largely on the water surface. No harmful effects to terrestrial or aquatic habitats would be expected. This product is expected to be biodegradable.

14. DISPOSAL CONSIDERATIONS

Methods of Disposal	Dispose in a accordance with local, state and federal regulations
EU Code of Disposal	Dispose in accordance with local regulations.

15. TRANSPORT INFORMATION

Usual shipping containers Road tankers, liquid containers, drums.

Transport temperature (°C) 10 – 25 °C

Transport sea/air
 IMO – *International Maritime Organization. International Maritime Dangerous Goods Code (IMDG Code)* . DPC – *Diretoria de Portos e Costas (transportes em águas Brasileiras)*. NORMAM (Normas de Autoridade Maritima). NORMAM 01/DPC: *Embarcações Empregadas na Navegação em Mar aberto*. NORMAM 02/DPC: *Embarcações Empregadas na Navegação interior*.

International Civil Aviation Organization – Doc 9284 – NA/905. IATA – International Air Transport Association – Dangerous Goods Regulation (DRG).

ANAC – *Agencia Nacional de Aviação Civil – Resolução n°129 de 8 de dezembro de 2009*. RBAC n°175 – *Regulamento Brasileiro da Aviação civil – transportes de artigos perigosos em aeronaves civis*.

IS n°175 – 001 – *Instrução Suplementar – IS*.

ICAO – *International Civil Aviation Organization – Doc 9284 – NA/905*

IATA – *International Air Transport Association – Dangerous Goods Regulation (DGR)*.

Transport land Resolution n° 420 February, 12th 2004 of Agencia nacional de transporte terrestres (ANTT).

16. REGULATORY INFORMATION

EC Regulations	N/A
EC Classifications	N/A
Label Name	Tucuma Butter

Risk Phrases	None
None Hazard Symbols	None

17. OTHER INFORMATION

Product type/uses	Glycerides of fatty acids
Source of key data	The recommendations presented in this Material Safety Data Sheet (MSDS) were compiled from actual test data, when available, comparison with similar products, component information from suppliers and from recognized codes of good practice.

The information and recommendations contained herein are, to the best of our knowledge and belief, accurate and reliable as of the date issued, but are offered without guarantee or warranty.

They relate to the specific material designated and may process.

Conditions of use the material are under the control of the user, therefore, it is user's responsibility to satisfy himself as to the suitability and completeness of such information for this own particular use.

This data sheet was prepared in accordance with directive 88/379/EEC 2 – directive 91/155/CEE
EU labeling : INCI name according amending Decision 96/335/EC of 09 February 2006 establishing an inventory and a common nomenclature of ingredients employed in cosmetic products.