

**SAFETY DATA SHEET**

according to Regulation (EC) No.1907/2006

Version 2.0 Revision Date 12.30.2010

Print Date 8.6.2010

**Material Safety Data Sheet****Erythrulose msds****Section 1: Identification of the Substance/Preparation and of the Company/Undertaking****Identification of the substance or preparation****ERYTHRULOSE**

<b>INCI Name</b>	:	Erythrulose
<b>Brand</b>	:	Erytan
<b>Product Number</b>	:	C01001B
<b>CAS#</b>	:	533-50-6
<b>ELINCS #</b>	:	443-800-9
<b>Origin</b>	:	Natural
<b>Use of the substance/preparation</b>	:	Colorant or self tanning agent in personal care products

**Company/undertaking identification****M.C. Biotec Inc.**

No.40 Ma Jia Street, Nanjing 210009, China

Tel: 0086-25-86620042 Fax: 0086-10-80115555 ext 441505

Email: mc@mcbiotec.com Website: www.mcbiotec.com

**Section 2: Hazards Identification**

This substance is not classified as dangerous according to Directive 67/548/EEC or Directive 1999/45/EC

**Hazard Classification**

Erythrulose is not classified as hazardous under the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].

**Health Assessment**

Under the conditions of the occupational settings described, the risk to workers is considered to be acceptable.

When used in the proposed manner the risk to the public is considered to be acceptable.

**Environmental Assessment**

On the basis of the PEC/PNEC ratio:

Erythrulose is not considered to pose a risk to the environment based on its reported use pattern.

**HMIS RATING**

HEALTH: 0

FLAMMABILITY: 1

REACTIVITY: 0

**NFPA RATING**

HEALTH: 0

FLAMMABILITY: 1

REACTIVITY: 0

For additional information on toxicity, please refer to Section 11.

**Section 3: Composition and Information on Ingredients**

**Synonyms** : L-Glycero-2-tetrolulose  
 S-1,3,4-trihydroxy-2 butanone  
 Red raspberry sugar

**Formula** : C<sub>4</sub>H<sub>8</sub>O<sub>4</sub>

**Molecular Weight** : 120,1 g/mol

A) Ingredient	INCI Name	CAS No.	EC No.	Classification	Amount*
As listed in the CTFA Dictionary	Erythrulose	533-50-6	443-800-9	---	A
B) Additives	INCI Name	CAS No.	EC No.	Classification	Amount*
Solvent	Water	---	---	---	C
Preservative	None	---	---	---	---
Others (buffers, antioxidants, colorants)	None	---	---	---	---

# CTFA Dictionary

FDA-Code (A = > 50%, B = 25-50%, C = 10-25%, D = 5-10%, E = 1-5%, F = 0.1-1%, G = < 0.1%)

<b>Hazardous Ingredients:</b> none	
<b>Materials with prescribed limits of the EC:</b> none	
<b>Section 4: First Aid Measures</b>	
<b>If inhaled</b>	: If breathed in, move person into fresh air. If not breathing give artificial respiration
<b>In case of skin contact</b>	: Wash off with soap and plenty of water.
<b>In case of eye contact</b>	: Flush eyes with water as a precaution.
<b>If swallowed</b>	: Never give anything by mouth to an unconscious person. Rinse mouth with water.
<b>Section 5: Fire Fighting Measures</b>	
<b>Flammability</b> Combustible liquid (please refer to Section 2.)	
<b>Extinguishing Media</b> Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.	
<b>Firefighting</b> Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Emits toxic fumes under fire conditions.	
<b>Section 6: Accidental Release Measures</b>	
Isolate spill area immediately. Keep unauthorized personnel away. Dam large quantities and pump them into a container for waste disposal. Use absorbent material for the remaining amount. Small quantities can be flushed with plenty of water into the sewage system.	
<b>Section 7: Handling and Storage</b>	
Avoid contact with eyes. Wash thoroughly after handling. As with all chemicals, good industrial hygiene practices should be followed when handling this material. Avoid freezing or excessive heat. Do not handle or store near an open flame, heat or other sources of ignition. Keep the container tightly closed and in a cool, well-ventilated place.	
<b>Section 8: Exposure Controls/Personal Protection</b>	

**National Exposure Standards in Australia**

None established by the Worksafe Australia.

**Exposure Limits**

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Erythrulose	none listed	none listed	none listed

**ENGINEERING CONTROLS**

No special engineering control measures necessary.

Safety shower and eye bath. Mechanical exhaust required.

**PERSONAL PROTECTIVE EQUIPMENT**

- Eyes** : Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
- Skin** : Wear appropriate protective gloves to prevent skin exposure.
- Clothing** : Wear appropriate protective clothing to prevent skin exposure.
- Respirators** : Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149.  
Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded

**Section 9: Physical and Chemical Properties**

<b>Appearance</b>	yellow to orange-brown coloured, highly viscous liquid	
<b>Physical State</b>	Viscous Liquid	
<b>Color</b>	Yellow to orange-brown	
<b>Smell</b>	Almost odorless	
<b>Property</b>	Value	At Temperature or Pressure
<b>Formula</b>	C4H8O4	
<b>Molecular Weight</b>	120.1 AMU	
<b>pH</b>	2.0 – 5.0 (in 50 % water)	
<b>BP/BP Range</b>	>180°C (356°F), exothermic decompose	
<b>MP/MP Range</b>	< -80°C (< -112 °F), no defined point	

<b>Freezing Point</b>	N/A	
<b>Vapor Pressure</b>	1243 Pa (at 20 - 25 °C)	
<b>Saturated Vapor Conc.</b>	N/A	
<b>Relative Density</b>	1.39 (at 20 °C)	
<b>Bulk Density</b>	N/A	
<b>Volatile%</b>	N/A	
<b>VOC Content</b>	N/A	
<b>Water Content</b>	N/A	
<b>Solvent Content</b>	N/A	
<b>Evaporation Rate</b>	N/A	
<b>Viscosity</b>	approx. 350 CSt (mm <sup>2</sup> /s)	
<b>Surface Tension</b>	N/A	
<b>Octanol/Water partition coefficient</b>	N/A	
<b>Decomposition Temp.</b>	N/A	
<b>Flash Point</b>	250 °F 121 °C	Method: closed cup
<b>Explosion Limits</b>	N/A	
<b>Flammability</b>	Combustible liquid (please refer to Section 3.)	
<b>Autoignition Temp</b>	N/A	
<b>Refractive Index</b>	1.484	
<b>Optical Rotation</b>	Degree of Rotation: 20 g/l Solvent: H <sub>2</sub> O +13 - +10 (+/-1)	
<b>Solubility</b>	Soluble in water	

N/A = not available

**Section 10: Stability and Reactivity**

**Stability**

Chemical Stability: stable under recommended storage conditions

Materials to Avoid: Strong oxidizing agents.

<b>Hazardous Decomposition Products</b>	
Hazardous decomposition products formed under fire conditions. – Carbon oxides.	
<b>Hazardous Polymerization</b>	
Will not occur	
<b>Section 11: Toxicological Information</b>	
<b>General</b>	: not a hazardous material
<b>Toxicity Data</b>	: Acute toxicity: LD50 rat oral: >2000 mg/kg for 16% Erythrulose
<b>Chronic Exposure</b>	: No specific hazard known.
<b>NOEL (Rat Oral)</b>	: 1000 mg/kg bw/day
<b>Phototoxic and</b>	: no
<b>Photoallergic Potential</b>	
<b>IARC</b>	: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
<b>Mutagenicity</b>	: Non mutagenic in AMES test
<b>Inhalation</b>	: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.
<b>Eye Contact</b>	: May cause irritation. Irrigate eye with water for at least 15 to 20 minutes. Seek medical attention if symptoms persist.
<b>Skin Contact</b>	: Not expected to be a skin irritant
<b>Ingestion</b>	: No specific hazard known.
<b>Section 12: Ecological Information</b>	
<b>Ecotoxicity</b>	
Fish toxicity	: not toxic to Carp.
Aquatic invertebrates	: not toxic to daphnia
Aquatic plants	: not toxic to freshwater algae
<b>Persistence and degradability</b>	: Readily biodegradable
<b>Mobility</b>	: No
<b>Additional information</b>	: No

**Environmental fate** : No

**(exposure)**

**Bioaccumulative potential** : No

### Section 13: Disposal Considerations

#### Disposal

After neutralization, flush with copious amounts of water into the sewage system. Dispose of in accordance with all local, state and federal regulations.

#### Special Precautions for land fill or incineration

No Data Available

#### Contaminated packaging

Dispose of as unused product.

### Section 14: Transport Information

#### General

Not a hazardous material

#### DOT

Proper Shipping Name: None

Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

#### IATA

Non-Hazardous for Air Transport: Non-hazardous for air transport.

#### ADR/RID

Not dangerous goods

#### IMDG

Not dangerous goods

### Section 15: Regulatory Information

#### United States Regulatory Information

SARA LISTED: No

#### Canada Regulatory Information

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS

contains all the information required by the CPR.

DSL: No

NDSL: No

**EU-Labeling Name**

Not listed. ( The product does not need to be labeled in accordance with EC Directive 67/548/EEC or Directive 1999/45/EC or respective national laws)

**JCID Approval No**

Not approved

**NICNAS**

Not listed

**ELINCS**

443-800-9 [European List of Notified Chemical Substances].

**Section 16: Other Information**

**Further information**

*The information above is based on our present knowledge. However, no representation, warranty or guarantee of any kind, express or implied, is made as to its accuracy, reliability or completeness and we assume no responsibility for any loss, damage or expense, direct or consequential, arising out of use. Users should make their own investigations to determine the suitability of the information for their particular purposes.*

© M.C.BIOTEC Inc.