Section 1: Identification of the Substance and of the Company

1.1 Product Identifier:
   Product Name: Malo-Plus, Malo-Multi, Malo-D, Malo-HA
   Synonyms: Lactic Acid Bacteria, Malo-Lactic Bacteria
   Revision: 03

1.2 Relevant Identified uses of the Substance and Uses Advised Against:
   Relevant Identified Uses: Starter for induction of malolactic fermentation in wine

1.3 Details of the Supplier of the Safety Data Sheet:
   Supplier: ATPGroup
   2 Madison Ave.
   Larchmont, NY 10538 USA
   Telephone: 914-834-1881
   Fax: 914-834-4611
   www.atpgroup.com

1.4 Emergency Telephone Number
   Telephone 800-424-9300 – CHEMTREC (24/7) – within USA & Canada
   +1 703-527-3887 – CHEMTREC (24/7) – International & Maritime
   914-834-1881 – ATPGroup

Section 2: Hazards Identification

2.1 Classification of the Substance:
   The product is not classified as hazardous according to the dangerous preparation directive (88/379/EG). However dust may cause sensitization on prolonged and repeated inhalation.
2.2 Label Elements:
According to EC REG. No. 1272/2008

**Hazard Pictogram:** None
**Signal Word:** None
**Hazard Statements:** None
**Precautionary Statements:** None

2.3 Other Hazards:
No information on other hazards.

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

3.1 Chemical Characteristics/Substances

**Substance description:**
Lactic Acid Bacteria

**Chemical composition:**
Lactic Acid Bacteria of the species *Oenococcus oeni*. Freeze-dried concentrated culture produced by concentration and freeze-drying of a pure fermentation of the bacteria.

**Use:**
According to the relevant enological regulations.

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**Section 4: First Aid Measures**

4.1 Description of First Aid

**Skin Contact:** Wash off immediately with soap and water.
**Eye Contact:** Rinse eyes thoroughly with plenty of water and seek medical advice.
**Ingestion:** Rinse out mouth and then drink plenty of water. If symptoms persist call a doctor.
**Inhalation:** Provide with fresh air. In case of irritation of the airways, seek medical advice.

4.2 Most Important Symptoms and Effects, both Acute and Delayed
No data available

4.3 Indication of any Immediate Medical Attention and Special Treatment Needed
No data available
Section 5: Fire-fighting Measures

5.1 Extinguishing Media

Suitable Extinguishing Media: Water spray, dry chemical, alcohol foam, or carbon dioxide.
Unsuitable Extinguishing Media for Safety Concerns: No data available

5.2 Special Hazards Arising from the Substance

Fire: None
Explosion: None
Other: None

5.3 Advice for Firefighters

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

Section 6: Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

Personnel Precautions: Avoid dust formation. Use protective anti-dust masks in areas with little ventilation.

6.2 Environmental Precautions

Dispose of waste in compliance with current local regulations.

6.3 Methods and Material for Containment and Cleaning Up

Collect the spilled material in appropriate containers for reclamation or disposal in accordance with local rules.

6.4 Reference to Other Sections

See Section 8 or 13
Section 7: Handling and Storage

7.1 Precautions for Safe Handling
Follow appropriate Good Manufacturing Practices. Avoid contact, inhalation, and ingestion. See also section 8.

7.2 Conditions for Safe Storage, Including Any Incompatibilities
Keep only in the original container, keep containers tightly closed.

7.3 Specific End Uses
See 1.2

Section 8: Exposure Controls/Personal Protection

8.1 Control Parameters
No data available

8.2 Exposure Controls
Appropriate Engineering Controls: Provide ventilation system; in general dilution ventilation is a satisfactory health hazard control for this substance. However, if conditions of use create discomfort to the worker, a local exhaust system should be considered.

Personal Protective Equipment (PPE):
   Personal Respirators (NIOSH Approved): Recommended
   Skin Protection: Gloves and protective clothing to prevent contact.
   Eye Protection: Use chemical safety goggles with side shields (ref. EN 166). Maintain eye wash fountain and quick-drench facilities in work area.
   Hygiene Measures: Handle with accordance with good industrial hygiene and safety practice. Wash your hands before breaks and at the end of the workday. Keep away from food and drink. Wash work clothing and PPE periodically to remove contaminants.
Section 9: Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

- **Appearance**: Off white to cream colored powder
- **Odor**: characteristic
- **Alive Lactic Acid Bacteria**: min. \(2.0 \times 10^{11}/g\)
- **Lactic bacteria non Oenococcus oeni**: \(< 10 \times 10^4/g\)
- **Yeast and molds**: \(< 10 \times 10^3/g\)
- **Total coliforms**: absent
- **Water solubility**: 90.5%
- **Density**: 0.95
- **Odor Threshold**: No data available
- **pH**: No data available
- **Melting Point**: No data available
- **Freezing Point**: No data available
- **Boiling Point**: \(>100°C (212F)\)
- **Flash Point**: No data available
- **Flammability**: Not flammable  
  **Upper Limit**: N/A  
  **Lower Limit**: N/A
- **Explosive Properties**: Not explosive  
  **Upper Limit**: N/A  
  **Lower Limit**: N/A
- **Auto-Ignition Temperature**: No data available
- **Decomposition Temperature**: \(>100°C (212F)\)
- **Partition Coefficient: n-Octanol/water**: No data available
- **Solubility**: 90.5%
- **Density**: 0.95
- **Relative Density**: No data available
- **Vapor Density (Air=1)**: No data available
- **Evaporation Rate (BuAc=1)**: No data available
- **Vapor Pressure (mm Hg)**: No data available
- **Viscosity**: No data available
Section 10: Stability and Reactivity

Conditions to avoid:

10.1 Reactivity
No Hazardous reactions known

10.2 Chemical Stability
No Hazardous reactions known

10.3 Possibility of Hazardous Reactions
No Hazardous reactions known

10.4 Conditions to Avoid
No Hazardous reactions known

10.5 Incompatible Materials
None

10.6 Hazardous Decomposition Products
No decomposition when used per manufacturer’s instructions.

Section 11: Toxicological Information

11.1 Information on Toxicological Effects
Product is considered non hazardous (GRAS)
Skin: may cause irritation on prolonged contact.
Eye: may cause irritation on direct contact.
May cause sensitization by inhalation

Unless otherwise specified, the data required by Regulation 453/2010 / EC listed below are considered NOT APPLICABLE (N.A.)
1. Acute Toxicity
2. Skin Corrosion/Irritation
3. Serious Eye Damage/Irritation
4. Respiratory or Skin Sensitization
5. Germ Cell Mutagenicity
6. Reproductive Toxicity
7. STOT-Single Exposure
8. STOT-Repeated Exposure
9. Aspiration Hazard
10. Information on Likely Routes of Exposure
---NTP Carcinogen---

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<th>Anticipated</th>
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<td>No</td>
<td>None</td>
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</tbody>
</table>

Section 12: Ecological Information

12.1 Toxicity
No data available

12.2 Persistence and Degradability
Readily biodegradable (acc. To OECD criteria).

12.3 Bioaccumulative Potential
No data available

12.4 Mobility in Soil
No data available

12.5 Results of PBT and vPvB Assessment
No data available

Section 13: Disposal Considerations

13.1 Waste Treatment Methods
Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.
Section 14: Transport Information

Comment:
Not regulated. Not a Hazardous Material

Section 15: Regulatory Information

15.1 Standards and legislation, health legislation specific for the substance / mixture

Store the product at 4°C to maintain activity for one year.
Store the product at -18°C to maintain activity for two years.

Section 16: Other Information

The strains referenced are Non-GMO strains.
The strains are not processed with any ionizing radiation.
The products do not contain and are not processed with sewage sludge.

Revision Information: SDS Revision Date December 5th, 2017

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