1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>PRODUCT NAME</th>
<th>FUNCTIONAL AO-510</th>
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<tbody>
<tr>
<td>CHEMICAL FAMILY</td>
<td>Antioxidant (food grade)</td>
</tr>
<tr>
<td>PRODUCT USE</td>
<td>Antioxidant for Vegetable and Mineral oils</td>
</tr>
<tr>
<td>CAS REGISTRY NUMBER</td>
<td>Proprietary</td>
</tr>
<tr>
<td>REVISION DATE</td>
<td>December 10, 2009</td>
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</tbody>
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MANUFACTURER / SUPPLIER
FUNCTIONAL PRODUCTS INC.
8282 Bavaria Road
Macedonia, Ohio 44056, USA
Tel: 330-963-3060
Fax: 330-963-3322

2. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
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<tr>
<th>SUBSTANCE / PREPARATION</th>
<th>% (w/w)</th>
<th>CAS #</th>
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No hazardous ingredients per current OSHA regulations

3. HAZARDS IDENTIFICATION

EYES: May cause irritation.
SKIN: May cause irritation and allergic skin reaction.
INGESTION: Get medical advice.
INHALATION: Treat symptomatically, move to fresh air. Get medical attention if symptoms persist.

POWDER MAY FORM AN EXPLOSIVE DUST-AIR MIXTURE

4. FIRST-AID MEASURES

INHALATION: If inhaled, remove to fresh air. Get medical attention. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

INGESTION: Immediately get medical attention. Do not induce vomiting. If vomiting occurs, keep head below hips to avoid breathing the products into the lungs.

SKIN CONTACT: Wash with soap and water. Get medical attention if irritation develops or an allergic skin reaction develops.

EYE CONTACT: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.
5. **FIRE-FIGHTING MEASURES**

HAZARDOUS COMBUSTION PRODUCTS: Carbon dioxide, carbon monoxide.
EXPLOSION HAZARDS: Powdered material may form explosive dust-air mixtures.
SENSIVITY TO STATIC: Material may accumulate a static charge which could act as an ignition source.
FLAMMABLE CLASS: Not classed as flammable but will burn.
EXTINGUISHING MEDIA: In case of fire, use foam, dry chemical or CO₂.
FIRE-FIGHTING PROCEDURES: Recommended wearing self-contained breathing apparatus and full turnout gear.

6. **ACCIDENTAL RELEASE MEASURES**

PERSONAL PRECAUTIONS: Appropriate personal protective equipment must be worn. Keep unnecessary personnel away. Ventilate area and avoid breathing dust.

ENVIRONMENTAL PRECAUTIONS AND CLEAN UP METHODS: Spills should be contained, absorbed and containerized for disposal in accord with local, state and federal regulations. Prevent entry to sewers and water-way.

7. **HANDLING AND STORAGE**

HANDLING: Avoid contact with eyes and skin. Wear appropriate gloves. Wash thoroughly after handling. Avoid breathing vapor or dust. Keep away from heat, sparks and flames.
STORAGE: Keep container tightly closed, in cool, well-ventilated and dry area. Protect from contamination.

8. **EXPOSURE CONTROLS / PERSONAL PROTECTION**

VENTILATION: Use with adequate ventilation to control dust and fumes.
HANDS: Use chemical resistant, impervious gloves.
EYES: Use safety glasses with side shields, goggles or face mask.
CLOTHING: Long sleeve shirt is recommended.
RESPIRATORY SYSTEM: Use appropriate respiratory protection if there is any potential for uncontrolled release or exposure.
9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Solid.
COLOR: white.
ODOR: characteristic
SPECIFIC GRAVITY: 1.03 (20°C).
SOLUBILITY: 0.0006 g/l (20°C).
FLASH POINT: 127°C (COC)

10. STABILITY AND REACTIVITY

STABILITY: The product is stable.
INCOMPATIBILITY: Strong oxidizing agents, strong acids, alkali solutions
CONDITIONS TO AVOID: Dust formation and excessive temperature. Decomposes above 100 °C
HAZARDOUS DECOMPOSITION: CO, CO₂, organic oxidation products.
POLYMERIZATION: Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

SKIN SENSITIZATION: Based on current information for humans, no sensitization associated with this product.
EYE IRRITATION (rabbit): Strong
DERMAL LD-50: (rabbit) > 2,000 mg/kg
ORAL LD-50: (rat) >2,930 mg/kg
CARCINOGENICITY: No carcinogenic effects known under normal conditions of use.
MUTAGENICITY: No evidence of mutagenic effects.

12. ECOLOGICAL INFORMATION

ECOLOGICAL EFFECTS INFORMATION: In the range of water solubility not toxic under test conditions.
BIOACCUMULATIVE POTENTIAL: It is expected to have a bioaccumulation potential: Light-High.
PERSISTENCE-DEGRADABILITY: Not readily biodegradable.
MOBILITY: Sinks in water. Adsorbs to soil and is not mobile.
ECO 48 HOUR-DAPHNIA MAGNA: >=0.31 mg/l
LCO 96 HOUR-BRACHYDANIO RERIO: >=0.57 mg/l
EC50 72 HOUR-SCENEDESMUS SUBSPICATUS: >=0.42 mg/l
13. **DISPOSAL CONSIDERATIONS**

**WASTE DISPOSAL**
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

14. **TRANSPORTATION INFORMATION**

- **U.S DOT BULK**: Not regulated.
- **U.S. DOT NON-BULK**: Not regulated.
- **IMDG CODE**: Not regulated.
- **ICAO**: Not regulated.

15. **REGULATORY INFORMATION**

- **EU LABELING**: Not regulated
- **WKG CLASS (GERMANY)**: 1. (Id. Nr.:724)

16. **OTHER INFORMATION**

**NFPA CODE**
Health: 2 Fire: 1 Reactivity: 0

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