1. Product and Company Identification

Product Name: METASOL TK-100 DISPERSION W
Material Number: 3137930
EPA Registration Number: 39967-30

2. Hazards Identification

Emergency Overview

May cause respiratory tract irritation. Inhalation may cause nausea or dizziness. May cause eye irritation. May be harmful if swallowed.

Potential Health Effects

Primary Routes of Entry: Skin Contact, Eye Contact, Ingestion, Inhalation
Medical Conditions Aggravated by Exposure: Eye disorders

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE

Inhalation
Acute Inhalation
For Product: METASOL TK-100 DISPERSION W
May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose.

For Component: Ethylene glycol
Causes respiratory tract irritation with symptoms of coughing, sore throat and runny nose. Inhalation of the glycol component is unlikely due to the low vapor pressure. If misted or handled at elevated temperatures, high concentrations can produce irritation and/or difficulty breathing. May cause nervous system effects which can include symptoms of dizziness, incoordination, headache, numbness, and/or confusion. May induce cardiac arrhythmia (irregular heartbeat) in some individuals.
Skin
Acute Skin
For Product: METASOL TK-100 DISPERSION W
May cause slight irritation.

For Component: Thiabendazole
Not expected to be irritating.

For Component: Ethylene glycol
If sufficient amounts are absorbed, systemic toxicity may occur with symptoms similar to those described in acute inhalation. May cause slight irritation.

For Component: Trade Secret Ingredient
Slightly toxic by skin absorption. Corrosive with symptoms of reddening, itching, swelling, burning and possible permanent damage.

Eye
Acute Eye
For Product: METASOL TK-100 DISPERSION W
May cause irritation with symptoms of reddening, tearing and stinging.

For Component: Thiabendazole
May cause mechanical irritation.

For Component: Ethylene glycol
May cause slight irritation.

For Component: Trade Secret Ingredient
Corrosive with symptoms of reddening, tearing, swelling, burning and possible permanent damage. May cause corneal injury.

Ingestion
Acute Ingestion
For Product: METASOL TK-100 DISPERSION W
Slightly toxic by ingestion.

For Component: Thiabendazole
Slightly toxic by ingestion.

For Component: Ethylene glycol
May be fatal if swallowed. Symptoms of ingestion may include abdominal pain, nausea, vomiting, and diarrhea. May cause nervous system effects which can include symptoms of dizziness, incoordination, headache, numbness, and/or confusion.

For Component: Trade Secret Ingredient
Not expected to be harmful if swallowed. May cause digestive tract burns.

Chronic Ingestion
For Component: Ethylene glycol
May cause blood disorders. May cause brain damage. May cause kidney damage. May cause liver damage. May cause lung damage.

General Effects of Exposure
Chronic Effects of Exposure
For Product: METASOL TK-100 DISPERSION W
No applicable information was found concerning any adverse chronic health effects from overexposure to
this product.

**For Component: Thiabendazole**
May cause thyroid effects. May cause liver damage.

**Carcinogenicity:**
No Carcinogenic substances as defined by IARC, NTP and/or OSHA.

### 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
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<th>Components</th>
<th>CAS-No.</th>
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<tbody>
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<td>148-79-8</td>
</tr>
<tr>
<td>30 - 40%</td>
<td>Ethylene glycol</td>
<td>107-21-1</td>
</tr>
<tr>
<td>1 - 5%</td>
<td>Trade Secret Ingredient</td>
<td>CAS# is a trade secret</td>
</tr>
</tbody>
</table>

### 4. First Aid Measures

**Eye Contact**
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Use fingers to ensure that eyelids are separated and that the eye is being irrigated. Get medical attention if irritation develops.

**Skin Contact**
In case of skin contact, wash affected areas with soap and water.

**Inhalation**
If inhaled, remove to fresh air. Get medical attention if irritation develops.

**Ingestion**
If ingested, do not induce vomiting unless directed to do so by medical personnel. Get medical attention.

### 5. Fire-Fighting Measures

**Suitable Extinguishing Media:**
All extinguishing media are suitable.

**Special Fire Fighting Procedures**
Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes. Use cold water spray to cool fire-exposed containers to minimize risk of rupture.

**Unusual Fire/Explosion Hazards**
Toxic and irritating gases/fumes may be given off during burning or thermal decomposition.

### 6. Accidental release measures

**Spill and Leak Procedures**
Cleanup personnel must use appropriate personal protective equipment. Cover spill with inert material (e.
g., dry sand or earth) and collect for proper disposal.

### 7. Handling and Storage

**Storage Period**
Not Established

**Handling/Storage Precautions**
Avoid breathing dust, vapor, or mist. Avoid contact with skin or clothing. Avoid contact with eyes. Use only with adequate ventilation/personal protection. Wash thoroughly after handling. Keep container closed when not in use.

### 8. Exposure Controls / Personal Protection

**Ethylene glycol (107-21-1)**

- **US. ACGIH Threshold Limit Values**
  - Ceiling Limit Value: 100 mg/m³ (Aerosol.)
- **US. ACGIH Threshold Limit Values**
  - Hazard Designation: Group A4 Not classifiable as a human carcinogen.

**Industrial Hygiene/Ventilation Measures**
General dilution and local exhaust as necessary to control airborne vapors, mists, dusts and thermal decomposition products below appropriate airborne concentration standards/guidelines.

**Respiratory Protection**
In case of insufficient ventilation wear suitable respiratory equipment.

**Hand Protection**
Permeation resistant gloves.

**Eye Protection**
Chemical safety goggles or safety glasses with side-shields.

**Skin and body protection**
Wear cloth work clothing including long pants and long-sleeved shirts.

**Additional Protective Measures**
Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and eye wash stations should be available.

### 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Form:</strong></td>
<td>Solid</td>
</tr>
<tr>
<td><strong>Appearance:</strong></td>
<td>Paste</td>
</tr>
<tr>
<td><strong>Color:</strong></td>
<td>Light, Tan</td>
</tr>
<tr>
<td><strong>Odor:</strong></td>
<td>Odorless</td>
</tr>
<tr>
<td><strong>pH:</strong></td>
<td>Not Established</td>
</tr>
<tr>
<td><strong>Boiling Point/Range:</strong></td>
<td>&gt; 100 °C (&gt; 212 °F)</td>
</tr>
</tbody>
</table>
10. Stability and Reactivity

Hazardous Reactions
Hazardous polymerization does not occur.

Stability
Stable

Materials to avoid
Oxidizing agents, Reducing agents, Strong acids

Hazardous decomposition products
By Fire and Thermal Decomposition: Carbon monoxide, Carbon oxides, nitrogen oxides (NOx), sulfur oxides, other potentially toxic fumes

11. Toxicological Information

Toxicity Data for METASOL TK-100 DISPERSION W

Acute Oral Toxicity
LD50: 3,500 - 4,200 mg/kg (Rat, Female)
LD50: > 5,000 mg/kg (Rat, Male)

Acute dermal toxicity
LD50: > 2,000 mg/kg (rabbit, Male/Female)

Skin Irritation
rabbit, Exposure Time: 4 h, Slightly irritating

Eye Irritation
rabbit, Moderately irritating

Toxicity Data for Thiabendazole

Acute Oral Toxicity
LD50: 5,070 mg/kg (Rat, Male)
LD50: 4,734 mg/kg (rat, Female)
LD50: 3,330 mg/kg (rat, Male)

Acute Inhalation Toxicity
LC50: > 500 mg/m3, dust/particulate, 4 h (Rat)

Acute dermal toxicity
LD50: > 2,000 mg/kg (rabbit)

Skin Irritation
rabbit, Non-irritating

Eye Irritation
rabbit, Non-irritating
**Sensitization**  
dermal: non-sensitizer (Guinea pig)

**Repeated Dose Toxicity**  
21day, dermal: NOAEL: 1,000 mg/kg, (rabbit, )  
14 weeks, oral: NOAEL: 25 mg/kg, LOAEL: 100 mg/kg, (rat, )  
14 weeks, oral: NOAEL: 150 mg/kg, (Dog, )

**Mutagenicity**  
Genetic Toxicity in Vitro:  
Positive and negative results were seen in various in vitro studies.

**Carcinogenicity**  
Rat, male, oral, 2 y, ad libitum  
The mechanism of effect to the thyroid is specific to the rat. Thyroid adenomas in male rats.  
rat, female, oral, ad libitum  
negative  
mouse, oral, 2 years, ad libitum  
negative

**Developmental Toxicity/Teratogenicity**  
rabbit, oral, NOAEL (teratogenicity): 150 mg/kg,  
rat, oral, NOAEL (teratogenicity): 10 mg/kg,

**Toxicity Data for Ethylene glycol**

**Acute Oral Toxicity**  
LD50: 4,700 mg/kg (Rat)  

**Acute Inhalation Toxicity**  
LC50: > 200 mg/m3, 2 hrs (rat)  

**Acute dermal toxicity**  
LD50: 10,600 mg/kg (rabbit)  

**Skin Irritation**  
rabbit, Draize Test, Slightly irritating  

**Eye Irritation**  
rabbit, Draize Test, Slightly irritating  

**Repeated Dose Toxicity**  
16 Weeks, Inhalation: NOAEL: 3.49 mg/l, (Rat, Male/Female, daily)  

**Mutagenicity**  
Genetic Toxicity in Vitro:  
Ames: Negative results were reported in various in vitro studies. (Salmonella typhimurium, Metabolic Activation: with/without)  
Genetic Toxicity in Vivo:  
Dominant Lethal Assay: negative (rat, male, oral)  
Drosophila SLRL test: positive (Drosophila melanogaster, )  
Micronucleus Assay: negative (mouse, )

**Carcinogenicity**  
rat, oral, 2 years, daily
Did not show carcinogenic effects in animal experiments. mouse, dermal, lifetime, daily negative

**Toxicity to Reproduction/Fertility**
Fertility Screening, oral, (mouse, Male/Female) NOAEL (parental): 2,500 mg/kg, NOAEL (F1): > 750 mg/kg.
No effects on Reproductive parameters observed at doses tested.
Three generation study, oral, daily, (rat) NOAEL (parental): > 1,000 mg/kg, NOAEL (F1): > 1,000 mg/kg, NOAEL (F2): > 1,000 mg/kg.

**Developmental Toxicity/Teratogenicity**
rabbit, female, dermal, NOAEL (teratogenicity): approximately 2,000 mg/kg, NOAEL (maternal): > 1,000 mg/kg.
Fetotoxicity has been observed in animal studies. Teratogenic effects have been observed in animal studies. Rat, female, oral, NOAEL (teratogenicity): < 500 mg/kg, NOAEL (maternal): 1,000 mg/kg.
Fetotoxicity has been observed in animal studies. Teratogenic effects have been observed in animal studies.

**Toxicity Data for Thickener**
**Acute Oral Toxicity**
LD50: > 8 ml/kg (Rat)

**Skin Irritation**
rabbit, Non-irritating

**Eye Irritation**
rabbit, Non-irritating

**Toxicity Data for Trade Secret Ingredient**
**Acute Oral Toxicity**
LD50: > 5,000 mg/kg (Rat)

**Acute Inhalation Toxicity**
LC50: > 201 mg/l, 1 h (rat)

**Acute dermal toxicity**
LD50: > 2,000 mg/kg (rabbit)

**Skin Irritation**
Corrosive

**Eye Irritation**
Corrosive

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**12. Ecological Information**

**Ecological Data for Thiabendazole**

**Biodegradation**
Not readily biodegradable.

**Bioaccumulation**
Approximately 16 BCF
Acute and Prolonged Toxicity to Fish
LC50: 0.55 mg/l (Rainbow trout, 96 h)
LC50: 19 mg/l (Bluegill sunfish, 96 h)

Acute Toxicity to Aquatic Invertebrates
EC50: 0.81 mg/l (Water flea (Daphnia magna), 48 h)

Ecological Data for Ethylene glycol
Biodegradation
Aerobic, > 40%, Exposure time: 20 Days

Biological Oxygen Demand (BOD)
5 Days, 0.78 - 1.81 g/g

Chemical Oxygen Demand (COD)
1.19 - 1.29 g/g

Theoretical Biological Oxygen Demand (ThBOD)
1.26 - 1.29 g/g

Bioaccumulation
Golden orfe, Exposure time: 3 Days, 10 BCF

Acute and Prolonged Toxicity to Fish
41,000 mg/l (Coho salmon, silver salmon (Oncorhynchus kisutch), 96 hrs)
LC50: 49,000 - 57,000 mg/l (Fathead minnow (Pimephales promelas), 96 hrs)
LC50: 18,500 mg/l (Rainbow trout (Salmo gairdneri), 96 hrs)

Acute Toxicity to Aquatic Invertebrates
EC50: 46,300 - 57,600 mg/l (Water flea (Daphnia magna), 48 hrs)
EC50: 13,900 - 29,700 mg/l (Ceriodaphnia sp, 48 hrs)

Toxicity to Aquatic Plants
EC50: 6,500 - 13,000 mg/l, End Point: growth (Green algae (Selenastrum capricornutum), 96 hrs)

Toxicity to Microorganisms
EC50: 10,000 mg/l, (Pseudomonas putida, 16 hrs)
EC50: 621 mg/l, (Photobacterium phosphoreum, 30 min)

Ecological Data for Trade Secret Ingredient
Acute and Prolonged Toxicity to Fish
LC50: > 100 mg/l (Rainbow trout (Salmo gairdneri), 96 h)

Acute Toxicity to Aquatic Invertebrates
EC50: > 100 mg/l (Water flea (Daphnia magna), 48 h)

Toxicity to Aquatic Plants
EC50: > 100 mg/l, (other: algae, 72 h)

13. Disposal considerations

Waste Disposal Method
Waste disposal should be in accordance with existing federal, state, provincial, and/or local environmental control laws.
Empty Container Precautions
Recondition or dispose of empty container in accordance with governmental regulations. Do not reuse empty container without proper cleaning.

14. Transport information

Land transport (DOT)
Proper Shipping Name: Environmentally hazardous substances, solid, n.o.s. (contains Ethylene glycol, )
Hazard Class or Division: 9
UN/NA Number: UN3077
Packaging Group: III
Hazard Label(s): Class 9

RSPA/DOT Regulated Components:
Ethylene glycol

Reportable Quantity: 14,641 lb

Sea transport (IMDG)
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains Ethylene glycol, )
Hazard Class or Division: 9
UN-No: UN3077
Packaging Group: III
Hazard Label(s): Miscellaneous

Air transport (ICAO/IATA)
Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s. (contains Ethylene glycol, )
Hazard Class or Division: 9
UN-No: UN3077
Packaging Group: III
Hazard Label(s): Miscellaneous

Additional Transportation Information
When in individual containers of less than the Product RQ, this material ships as non-regulated.

15. Regulatory Information

United States Federal Regulations

OSHA Hazcom Standard Rating: Hazardous

US. Toxic Substances Control Act: This product is excluded from TSCA Regulation under FIFRA Section 3 (2)(B)(ii) when used as a pesticide.

FIFRA Status: This product is registered with the EPA under FIFRA.
EPA Registration number: 39967-30

US. EPA CERCLA Hazardous Substances (40 CFR 302):
Components
Ethylene glycol  Reportable quantity: 5,000 lbs

SARA Section 311/312 Hazard Categories:
Acute Health Hazard

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III
Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):
Components
None

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III
Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required:
Components
Thiabendazole
Ethylene glycol

US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes
and Appendix VIII Hazardous Constituents (40 CFR 261):
If discarded in its purchased form, this product would not be a hazardous waste either by listing or by
characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time
of disposal, whether a material containing the product or derived from the product should be classified as a
hazardous waste. (40 CFR 261.20-24)

State Right-To-Know Information
The following chemicals are specifically listed by individual states; other product specific health and safety
data in other sections of the MSDS may also be applicable for state requirements. For details on your
regulatory requirements you should contact the appropriate agency in your state.

Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:

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<tr>
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</tr>
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<td>&gt;=1%</td>
<td>Solvent</td>
<td>CAS# is a trade secret</td>
</tr>
<tr>
<td>&gt;=1%</td>
<td>Thickener</td>
<td>CAS# is a trade secret</td>
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<td>&gt;=1%</td>
<td>Trade Secret Ingredient</td>
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New Jersey Environmental Hazardous Substances List and/or New Jersey RTK Special Hazardous
Substances Lists:

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California Prop. 65:
To the best of our knowledge, this product does not contain any of the listed chemicals, which the state of
California has found to cause cancer, birth defects or other reproductive harm.

16. Other Information

NFPA 704M Rating

<table>
<thead>
<tr>
<th>Health</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>1</td>
</tr>
<tr>
<td>Reactivity</td>
<td>0</td>
</tr>
</tbody>
</table>
Other
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

HMIS Rating
<p>| | |</p>
<table>
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<tr>
<td>Flammability</td>
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</tr>
<tr>
<td>Physical Hazard</td>
<td>0</td>
</tr>
</tbody>
</table>

0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe
* = Chronic Health Hazard

LANXESS Corporation’s method of hazard communication is comprised of Product Labels and Material Safety Data Sheets. HMIS and NFPA ratings are provided by LANXESS Corporation as a customer service.

Contact Person: Product Safety Department
Telephone: (800) LANXESS
MSDS Number: R306263
Version Date: 07/02/2008
Report Version: 5.10

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