1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name: MetaDi Oil-Based Suspension

Product Code(s): 40-6538, 40-6539, 40-6540, 40-6541, 40-6542, 40-6543, 40-6544, 40-6545, 40-6546

(M)SDS Number: 1353241_A

Other means of identification

Synonyms: None

Recommended use of the chemical and restrictions on use

Recommended Use: Laboratory Use Only

Uses advised against: No information available

Details of the supplier of the safety data sheet

Manufacturer: Buehler

Manufacturer Address: 41 Waukegan Rd
Lake Bluff, IL 60044
www.buehler.com

Phone number: +1 847 295 6500

E-mail Address: custserv@buehler.com

Emergency telephone number

Global Access Code: 334545
Americas: +1 760 476 3962
Middle East/Africa: +1 760 476 3959

Asia Pacific: +1 760 476 3960
Europe: +1 760 476 3961

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Aspiration toxicity: Category 1

GHS Label elements, including precautionary statements

Emergency Overview
### Signal word

**Danger**

### Hazard Statements

May be fatal if swallowed and enters airways

### Appearance

Varies

### Physical state

Suspension

### Odor

Characteristic

### Precautionary Statements - Prevention

Obtain special instructions before use

### Precautionary Statements - Response

None

### Ingestion

**If swallowed:** Immediately call a POISON CENTER or doctor/physician

**Do NOT induce vomiting**

### Precautionary Statements - Storage

Store locked up

### Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

### Hazards not otherwise classified (HNOC)

Not applicable

### Other information

No information available

### Interactions with Other Chemicals

No information available.

---

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>Trade Secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum distillates, hydrotreated light</td>
<td>64742-47-8</td>
<td>65 - 95%</td>
<td>*</td>
</tr>
<tr>
<td>Quaternerium-18 bentonite</td>
<td>68953-58-2</td>
<td>2 - 6%</td>
<td>*</td>
</tr>
<tr>
<td>Diamond</td>
<td>7782-40-3</td>
<td>0 - 1%</td>
<td>*</td>
</tr>
<tr>
<td>Quartz</td>
<td>14808-60-7</td>
<td>&lt; 0.1%</td>
<td>*</td>
</tr>
</tbody>
</table>

*The exact percentage (concentration) of composition has been withheld as a trade secret

---

### 4. FIRST AID MEASURES
First aid measures

General Advice
Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

Eye contact
Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.

Skin contact
Wash with soap and water.

Inhalation
Aspiration into lungs can produce severe lung damage. If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If breathing is difficult, (trained personnel should) give oxygen. Seek immediate medical attention/advice. Delayed pulmonary edema may occur.

Ingestion
Aspiration hazard if swallowed - can enter lungs and cause damage. Do NOT induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.

Self-protection of the first aider
Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects
Difficulty in breathing. Coughing and/or wheezing. Dizziness.

Indication of any immediate medical attention and special treatment needed

Notes to Physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical
No information available.

Explosion Data
Sensitivity to Mechanical Impact  None.

Sensitivity to Static Discharge  None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions
Ensure adequate ventilation. Use personal protective equipment as required.

Other Information
Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions
See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment
Prevent further leakage or spillage if safe to do so.

Methods for cleaning up
Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling
Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage
Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.

Incompatible Products
None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum distillates, hydrotreated light 64742-47-8</td>
<td>TWA: 5 mg/m³ STEL: 10 mg/m³ (as oil mist)</td>
<td>TWA: 5 mg/m³ (as oil mist)</td>
<td></td>
</tr>
<tr>
<td>Quartz 14808-60-7</td>
<td>TWA: 0.025 mg/m³ respirable fraction</td>
<td>TWA: 0.1 mg/m³ (vacated) IDLH: 50 mg/m³ respirable dust TWA: 0.05 mg/m³ respirable dust</td>
<td></td>
</tr>
</tbody>
</table>

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines
Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992)

Appropriate engineering controls
Engineering Measures

- Showers
- Eyewash stations
- Ventilation systems

**Individual protection measures, such as personal protective equipment**

- **Eye/face protection**: No special protective equipment required.
- **Skin and body protection**: No special protective equipment required.
- **Respiratory protection**: If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**Hygiene Measures**: Handle in accordance with good industrial hygiene and safety practice.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical state</strong></td>
<td>Suspension</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Appearance</strong></td>
<td>Varies</td>
<td>Odor</td>
<td>Characteristic</td>
</tr>
<tr>
<td><strong>Color</strong></td>
<td>No information available</td>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Melting / freezing point</strong></td>
<td>No data available</td>
<td></td>
<td>None known</td>
</tr>
<tr>
<td><strong>Boiling point / boiling range</strong></td>
<td>218°C °C / 424 °F</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Flash Point</strong></td>
<td>&gt; 94°C °C / 201 °F</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Evaporation Rate</strong></td>
<td>No data available</td>
<td></td>
<td>None known</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong></td>
<td>No data available</td>
<td></td>
<td>None known</td>
</tr>
<tr>
<td><strong>Flammability Limit in Air</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Upper flammability limit</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Lower flammability limit</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vapor pressure</strong></td>
<td>No data available</td>
<td></td>
<td>None known</td>
</tr>
<tr>
<td><strong>Vapor density</strong></td>
<td>No data available</td>
<td></td>
<td>None known</td>
</tr>
<tr>
<td><strong>Specific Gravity</strong></td>
<td>0.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Water Solubility</strong></td>
<td>Insoluble in water</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Solubility in other solvents</strong></td>
<td>No data available</td>
<td></td>
<td>None known</td>
</tr>
<tr>
<td><strong>Partition coefficient: n-octanol/water</strong></td>
<td>No data available</td>
<td></td>
<td>None known</td>
</tr>
<tr>
<td><strong>Autoignition temperature</strong></td>
<td>No data available</td>
<td></td>
<td>None known</td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>No data available</td>
<td></td>
<td>None known</td>
</tr>
<tr>
<td><strong>Kinematic viscosity</strong></td>
<td>No data available</td>
<td></td>
<td>None known</td>
</tr>
<tr>
<td><strong>Dynamic viscosity</strong></td>
<td>No data available</td>
<td></td>
<td>None known</td>
</tr>
<tr>
<td><strong>Explosive properties</strong></td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Oxidizing properties</strong></td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Other Information**

- **Softening Point**: No data available
- **VOC Content (%)**: No data available
- **Particle Size**: No data available
- **Particle Size Distribution**: No data available
10. STABILITY AND REACTIVITY

Reactivity
No data available.

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
None known based on information supplied.

Incompatible materials
None known based on information supplied.

Hazardous Decomposition Products
None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information
Specific test data for the substance or mixture is not available.

Inhalation
Specific test data for the substance or mixture is not available. Aspiration into lungs can produce severe lung damage. May cause pulmonary edema. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye contact
Specific test data for the substance or mixture is not available. May cause irritation.

Skin contact
Repeated exposure may cause skin dryness or cracking.

Ingestion
Specific test data for the substance or mixture is not available. Potential for aspiration if swallowed. May cause lung damage if swallowed. Aspiration may cause pulmonary edema and pneumonitis. May be fatal if swallowed and enters airways.

Component Information

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum distillates, hydrotreated light 64742-47-8</td>
<td>&gt; 5000 mg/kg (Rat)</td>
<td>&gt; 2000 mg/kg (Rabbit)</td>
<td>&gt; 5.2 mg/L (Rat) 4h</td>
</tr>
<tr>
<td>Quaternium-18 bentonite 68953-58-2</td>
<td>&gt; 5000 mg/kg (Rat)</td>
<td>-</td>
<td>&gt; 12.6 mg/L (Rat) 4 h</td>
</tr>
<tr>
<td>Quartz 14808-60-7</td>
<td>= 500 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Information on toxicological effects

Symptoms
Difficulty in breathing. Coughing and/or wheezing. Asthma-like and/or skin allergy-like symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure
Sensitization No information available.

Mutagenic Effects No information available.

Carcinogenicity Contains no ingredient listed as a carcinogen.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz 14808-60-7</td>
<td>A2</td>
<td>Group 1</td>
<td>Known</td>
<td>X</td>
</tr>
</tbody>
</table>

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Chronic Toxicity Aspiration may cause pulmonary edema and pneumonitis.

Target Organ Effects Respiratory system. Central Vascular System (CVS).

Aspiration Hazard No information available.

Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (inhalation-dust/mist)
25.20 mg/L

12. ECOLOGICAL INFORMATION

Ecotoxicity
The environmental impact of this product has not been fully investigated.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Toxicity to Algae</th>
<th>Toxicity to Fish</th>
<th>Toxicity to Microorganisms</th>
<th>Daphnia Magna (Water Flea)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum distillates, hydrotreated light 64742-47-8</td>
<td>96h LC50: = 2.2 mg/L (Lepomis macrochirus) 96h LC50: = 2.4 mg/L (Oncorhynchus mykiss) 96h LC50: = 45 mg/L (Pimephales promelas)</td>
<td>96h LC50: = 2.2 mg/L (Lepomis macrochirus) 96h LC50: = 2.4 mg/L (Oncorhynchus mykiss) 96h LC50: = 45 mg/L (Pimephales promelas)</td>
<td>96h LC50: = 2.2 mg/L (Lepomis macrochirus) 96h LC50: = 2.4 mg/L (Oncorhynchus mykiss) 96h LC50: = 45 mg/L (Pimephales promelas)</td>
<td>96h LC50: = 4720 mg/L</td>
</tr>
</tbody>
</table>

Persistence and Degradability
No information available.

Bioaccumulation
No information available

Other adverse effects
No information available.
13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging

Dispose of contents/containers in accordance with local regulations.

14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th></th>
<th>DOT</th>
<th>Not Regulated</th>
<th>Proper Shipping Name</th>
<th>Non Regulated</th>
<th>Hazard Class</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDG</td>
<td></td>
<td>Not Regulated</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEX</td>
<td></td>
<td>Not Regulated</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICAO</td>
<td></td>
<td>Not Regulated</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>IATA</td>
<td></td>
<td>Not Regulated</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proper Shipping Name</td>
<td></td>
<td>Not Regulated</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMDG/IMO</td>
<td></td>
<td>Not Regulated</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RID</td>
<td></td>
<td>Not Regulated</td>
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<td></td>
</tr>
<tr>
<td>ADR</td>
<td></td>
<td>Not Regulated</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADN</td>
<td></td>
<td>Not Regulated</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION

International Inventories

TSCA | Complies
DSL | All components are listed either on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health Hazard | Yes
Chronic Health Hazard: Yes
Fire Hazard: No
Sudden release of pressure hazard: No
Reactive Hazard: No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>California Proposition 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz - 14808-60-7</td>
<td>Carcinogen</td>
</tr>
</tbody>
</table>

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
<th>Rhode Island</th>
<th>Illinois</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz 14808-60-7</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

International Regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>Carcinogen Status</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diamond 7782-40-3 (0 - 1%)</td>
<td></td>
<td>Mexico: TWA 2 mg/m³</td>
</tr>
<tr>
<td>Quartz 14808-60-7 (&lt; 0.1%)</td>
<td></td>
<td>Mexico: TWA = 0.1 mg/m³</td>
</tr>
</tbody>
</table>

Canada
WHMIS Hazard Class
Not determined

16. OTHER INFORMATION

NFPA
Health Hazards: 2  Flammability: 1  Instability: 0

HMIS
Health Hazards: 2  Flammability: 1  Physical Hazard: 0

Prepared By
Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Issuing Date
01-Mar-2017

Revision Date
01-Mar-2017

Revision Note
No information available

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at
the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.