

### SECTION 1: Identification

#### 1.1. Product identifier

Product form : Mixture  
Product name : MetaDi Oil-Based Diamond Suspension  
Product code : 40-6538, 40-6539, 40-6540, 40-6541, 40-6542, 40-6543, 40-6544, 40-6545, 40-6546

#### 1.2. Recommended use and restrictions on use

Recommended use : Laboratory chemicals  
Restrictions on use : None known

#### 1.3. Supplier

Buehler  
41 Waukegan Rd  
Lake Bluff, IL 60044  
T 1-847-295-6500  
[custserv@buehler.com](mailto:custserv@buehler.com)

#### 1.4. Emergency telephone number

Emergency 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

### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS CA)

Flammable liquids, Category 3 H226 Flammable liquid and vapour.  
Full text of H-statements: see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS CA labelling

Hazard pictograms (GHS CA) :



Signal word (GHS CA) : Warning

Hazard statements (GHS CA) : H226 - Flammable liquid and vapour.

Precautionary statements (GHS CA) :

- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 - Keep container tightly closed.
- P240 - Ground/bond container and receiving equipment.
- P241 - Use explosion-proof electrical/ventilating/lighting equipment.
- P242 - Use only non-sparking tools.
- P243 - Take action to prevent static discharges.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water .
- P370+P378 - In case of fire: Use media other than water to extinguish.
- P403+P235 - Store in a well-ventilated place. Keep cool

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P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 2.3. Other hazards

No additional information available

### 2.4. Unknown acute toxicity (GHS CA)

No data available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

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### 3.2. Mixtures

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Name	Chemical name / Synonyms	Product identifier	wt%	Classification (GHS CA)
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Name	Chemical name / Synonyms	Product identifier	wt%	Classification (GHS CA)
Petroleum distillates, hydrotreated light	Distillates (petroleum), hydrotreated light / Distillates, petroleum, hydrotreated light / Hydrotreated light distillate / Kerosene, hydrotreated / Petroleum distillates, hydrotreated light (A complex combination of hydrocarbons obtained by treating a petroleum fraction with hydrogen in the presence of a catalyst. It consists of hydrocarbons having carbon numbers predominantly in the range of C9-16 and boiling in the range of approximately 150-290°C.) / Odorless light petroleum hydrocarbons / Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclics, / Distillates (petroleum), hydro- treated light; Kerosine - unspecified [A complex combination of hydrocarbons obtained by treating a petroleum fraction with hydrogen in the presence of a catalyst. It	CAS-No.: 64742-47-8	65 – 95	Asp. Tox. 1, H304

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Name	Chemical name / Synonyms	Product identifier	wt%	Classification (GHS CA)
	consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 150°C to 290°C (302°F to 554°F).] / c13-14 isoparaffin / Kerosene			

Full text of hazard classes and H-statements : see section 16

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.  
First-aid measures after skin contact : Rinse skin with water/shower. Take off immediately all contaminated clothing.  
First-aid measures after eye contact : Rinse eyes with water as a precaution.  
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

#### 4.2. Most important symptoms and effects (acute and delayed)

No additional information available

#### 4.3. Immediate medical attention and special treatment, if necessary

Other medical advice or treatment : Treat symptomatically.

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

#### 5.2. Unsuitable extinguishing media

Unsuitable extinguishing media : Not determined.

#### 5.3. Specific hazards arising from the hazardous product

Fire hazard : Flammable liquid and vapour.  
Hazardous decomposition products in case of fire : Toxic fumes may be released.

#### 5.4. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Fight fire with normal precautions from a reasonable distance.  
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

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### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

No additional information available

#### 6.2. Methods and materials for containment and cleaning up

- |                         |   |
|-------------------------|---|
| Methods for cleaning up | : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters. |
| Other information       | : Dispose of materials or solid residues at an authorized site.   |

#### 6.3. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection"

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- |                               |   |
|-------------------------------|---|
| Precautions for safe handling | : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. |
| Hygiene measures              | : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.   |

#### 7.2. Conditions for safe storage, including any incompatibilities

- |                    |   |
|--------------------|---|
| Technical measures | : Ground/bond container and receiving equipment.                              |
| Storage conditions | : Store in a well-ventilated place. Keep cool. Keep container tightly closed. |

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Appropriate engineering controls

- |                                  |  |
|----------------------------------|--|
| Appropriate engineering controls | : Ensure good ventilation of the work station. |
| Environmental exposure controls  | : Avoid release to the environment.            |

#### 8.3. Individual protection measures/Personal protective equipment

##### Hand protection:

Protective gloves

##### Eye protection:

Safety glasses

##### Skin and body protection:

Wear suitable protective clothing

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### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

### Personal protective equipment symbol(s):



## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Colour	: Various colours
Odour	: Characteristic
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: 217.8 °C
Flash point	: > 34.4 °C
Auto-ignition temperature	: > 260 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 0.8
Solubility	: Insoluble.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 85 – 100 cP
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

Reactivity	: Flammable liquid and vapour.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use.
Conditions to avoid	: Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.
Incompatible materials	: Strong oxidizing agents.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hardening time:	: No additional information available



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### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified.  
Acute toxicity (dermal) : Not classified.  
Acute toxicity (inhalation) : Not classified.

##### Petroleum distillates, hydrotreated light (64742-47-8)

LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 Inhalation - Rat	> 5.2 mg/l/4h

Skin corrosion/irritation : Not classified.  
Serious eye damage/irritation : Not classified.  
Respiratory or skin sensitization : Not classified.  
Germ cell mutagenicity : Not classified.  
Carcinogenicity : Not classified.  
Reproductive toxicity : Not classified.  
STOT-single exposure : Not classified.  
STOT-repeated exposure : Not classified.  
Aspiration hazard : Not classified.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.  
Hazardous to the aquatic environment, short-term (acute) : Not classified.  
Hazardous to the aquatic environment, long-term (chronic) : Not classified.

##### Petroleum distillates, hydrotreated light (64742-47-8)

LC50 - Fish [1]	45 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
LC50 - Fish [2]	2.2 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
BCF - Fish [1]	61 – 159

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

##### Petroleum distillates, hydrotreated light (64742-47-8)

BCF - Fish [1]	61 – 159
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#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

Ozone : Not classified.

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### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
Additional information : Flammable vapours may accumulate in the container.

### SECTION 14: Transport information

In accordance with TDG / DOT / IMDG / IATA

#### 14.1. UN number

UN-No. (TDG) : UN1993  
DOT NA No : UN1993  
UN-No. (IMDG) : 1993  
UN-No. (IATA) : 1993

#### 14.2. UN proper shipping name

Proper Shipping Name (TDG) : FLAMMABLE LIQUID, N.O.S.  
Proper Shipping Name (DOT) : Flammable liquids, n.o.s.  
Proper Shipping Name (IMDG) : FLAMMABLE LIQUID, N.O.S.  
Proper Shipping Name (IATA) : Flammable liquid, n.o.s.

#### 14.3. Transport hazard class(es)

##### TDG

Transport hazard class(es) (TDG) : 3  
Hazard labels (TDG) : 3



##### DOT

Transport hazard class(es) (DOT) : 3  
Hazard labels (DOT) : 3



##### IMDG

Transport hazard class(es) (IMDG) : 3  
Danger labels (IMDG) : 3



##### IATA

Transport hazard class(es) (IATA) : 3  
Danger labels (IATA) : 3

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### 14.4. Packing group

Packing group (TDG)	: III
Packing group (DOT)	: III
Packing group (IMDG)	: III
Packing group (IATA)	: III

### 14.5. Environmental hazards

Marine pollutant : Yes (IMDG only)



Other information : No supplementary information available.

### 14.6. Special precautions for user

#### TDG

UN-No. (TDG)	: UN1993
TDG Special Provisions	: 16 - (1) The technical name of at least one of the most dangerous substances that predominantly contributes to the hazard or hazards posed by the dangerous goods must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(ii)(A) of Part 3 (Documentation). The technical name must also be shown, in parentheses, on a small means of containment or on a tag following the shipping name in accordance with subsections 4.11(2) and (3) of Part 4 (Dangerous Goods Safety Marks). (2) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a shipping document or on a small means of containment when Canadian law for domestic transport or an international convention for international transport prohibits the disclosure of the technical name: (a) UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S; (b) UN1851, MEDICINE, LIQUID, TOXIC, N.O.S; (c) UN3140, ALKALOID SALTS, LIQUID, N.O.S. or ALKALOIDS, LIQUID, N.O.S; (d) UN3248, MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S; or (e) UN3249, MEDICINE, SOLID, TOXIC, N.O.S. (3) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a small means of containment: (a) UN2814, INFECTIOUS SUBSTANCE, AFFECTING HUMANS; or (b) UN2900, INFECTIOUS SUBSTANCE, AFFECTING ANIMALS, 150 - An approved ERAP is required for the dangerous goods referred to in paragraph 7.2(1)(f) of Part 7 (Emergency Response Assistance Plan). SOR-2019-101
Explosive Limit and Limited Quantity Index	: 5 L
Excepted quantities (TDG)	: E1
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	: 60 L
Emergency Response Guide (ERG) Number	: 128

#### DOT

UN-No.(DOT) : UN1993

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DOT Special Provisions (49 CFR 172.102) : B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable.  
B52 - Notwithstanding the provisions of 173.24b of this subchapter, non-reclosing pressure relief devices are authorized on DOT 57 portable tanks.  
IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).  
T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)  
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling =  $97 / (1 + a (tr - tf))$  Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.  
TP29 - A portable tank having a minimum test pressure of 1.5 bar (150.0 kPa) may be used provided the calculated test pressure is 1.5 bar or less based on the MAWP of the hazardous materials, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx) : 150  
DOT Packaging Non Bulk (49 CFR 173.xxx) : 203  
DOT Packaging Bulk (49 CFR 173.xxx) : 242  
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L  
DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

### IMDG

Special provisions (IMDG) : 223, 274, 955  
Limited quantities (IMDG) : 5 L  
Excepted quantities (IMDG) : E1  
Packing instructions (IMDG) : LP01, P001  
IBC packing instructions (IMDG) : IBC03  
Tank instructions (IMDG) : T4  
Tank special provisions (IMDG) : TP1, TP29  
EmS-No. (Fire) : F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS  
EmS-No. (Spillage) : S-E - SPILLAGE SCHEDULE Echo - FLAMMABLE LIQUIDS, FLOATING ON WATER  
Stowage category (IMDG) : A

### IATA

PCA Excepted quantities (IATA) : E1  
PCA Limited quantities (IATA) : Y344  
PCA limited quantity max net quantity (IATA) : 10L  
PCA packing instructions (IATA) : 355  
PCA max net quantity (IATA) : 60L  
CAO packing instructions (IATA) : 366  
CAO max net quantity (IATA) : 220L  
Special provisions (IATA) : A3  
ERG code (IATA) : 3L

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

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### SECTION 15: Regulatory information

#### 15.1. National regulations

##### Petroleum distillates, hydrotreated light (64742-47-8)

Listed on the Canadian DSL (Domestic Substances List)

##### Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, salts with bentonite (68953-58-2)

Listed on the Canadian DSL (Domestic Substances List)

##### Diamond (7782-40-3)

Listed on the Canadian DSL (Domestic Substances List)

#### 15.2. International regulations

##### Petroleum distillates, hydrotreated light (64742-47-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory  
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)  
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on KECL/KECI (Korean Existing Chemicals Inventory)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)

##### Quaternary ammonium compounds, bis(hydrogenated tallow alkyl)dimethyl, salts with bentonite (68953-58-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active  
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)  
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on KECL/KECI (Korean Existing Chemicals Inventory)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on NZIoC (New Zealand Inventory of Chemicals)

##### Diamond (7782-40-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active  
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on KECL/KECI (Korean Existing Chemicals Inventory)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)

### SECTION 16: Other information

Issue date : 09/09/2022  
Revision date : 09/09/2022

#### Full text of H-statements:

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.

Safety Data Sheet (SDS), Canada

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