

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

Product identifier

Product Name MetaDi Ultra Paste
Product Code(s) 40-1-6301, 40-1-6303, 40-1-6305, 40-1-6307, 40-1-6309
(M)SDS Number 1353237_A

Other means of identification

UN-No. UN3077
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 Asia Pacific: +1 760 476 3960
Middle East/Africa: +1 760 476 3959 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).

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (repeated exposure)	Category 2

GHS Label elements, including precautionary statements

Emergency Overview

Signal word	Danger	
Hazard Statements		
Causes skin irritation		
Causes serious eye damage		
May cause damage to organs through prolonged or repeated exposure		
Toxic to aquatic life with long lasting effects		
		
Appearance	Varies	Physical state Paste
		Odor Odorless

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Wear protective gloves/protective clothing/eye protection/face protection
 Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

None

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Immediately call a POISON CENTER or doctor/physician

Skin

IF ON SKIN: Wash with plenty of soap and water
 If skin irritation occurs: Get medical advice/attention

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

Chemical name	CAS No	Weight-%	Trade Secret
Water	7732-18-5	30 - 60%	*
Diamond	7782-40-3	1 - 30%	*
n-Octadecylamine	124-30-1	5 - 15%	*
Dipropylene glycol	25265-71-8	3 - 10%	*
Polyethylene glycol phenyl ether phosphate	39464-70-5	1 - 5%	*
Alcohols, C12-20, ethoxylated	68526-94-3	1 - 5%	*
BHT	128-37-0	< 1%	*

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

4. FIRST AID MEASURES

First aid measures

General Advice

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

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area. Seek immediate medical attention/advice.

Skin contact

Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, (trained personnel should) give oxygen.

Ingestion

Rinse mouth immediately and drink plenty of water.

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.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects

Burning sensation. 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

Dry chemical, CO₂, water spray or regular foam. Dike fire-control water for later disposal.

Unsuitable extinguishing media

Do not use halogenated extinguishing agents or foam. Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical

Some may burn but none ignite readily. Some may be transported hot.

Uniform Fire Code Irritant: Solid

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 Do not touch or walk through spilled material. Stop leak if you can do it without risk.

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

Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas.

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 Take up with sand, earth or other non-combustible absorbent material. With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

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

Incompatible Products Strong acids. Strong oxidizing agents. Strong bases.

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

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
BHT 128-37-0	TWA: 2 mg/m ³ inhalable fraction and vapor	(vacated) TWA: 10 mg/m ³	TWA: 10 mg/m ³

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 Tight sealing safety goggles.

Skin and body protection Wear protective gloves and protective clothing. Long sleeved clothing. Impervious gloves.

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 Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical state	Paste		
Appearance	Varies	Odor	Odorless
Color	No information available	Odor Threshold	No information available
Property	Values	Remarks	Method
pH	No data available	None known	
Melting / freezing point	75°C	None known	
Boiling point / boiling range	> 205°C	None known	
Flash Point	> 121°C	None known	
Evaporation Rate	No data available	None known	
Flammability (solid, gas)	No data available	None known	
Flammability Limit in Air			
Upper flammability limit	No data available		
Lower flammability limit	No data available		
Vapor pressure	No data available	None known	
Vapor density	No data available	None known	
Specific Gravity	No data available	None known	
Water Solubility	Insoluble		
Solubility in other solvents	No data available	None known	
Partition coefficient: n-octanol/water	No data available	None known	
Autoignition temperature	No data available	None known	
Decomposition temperature	No data available	None known	
Kinematic viscosity	No data available	None known	
Dynamic viscosity	No data available	None known	
Explosive properties	No data available		
Oxidizing properties	No data available		

Other Information

Softening Point	No data available
VOC Content (%)	No data available
Particle Size	No data available
Particle Size Distribution	

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

Strong acids. Strong oxidizing agents. Strong bases.

Hazardous Decomposition Products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. Aspiration into lungs can produce severe lung damage. May cause pulmonary edema. Pulmonary edema can be fatal.
Eye contact	Specific test data for the substance or mixture is not available. (based on components). Causes serious eye damage. Severely irritating to eyes. May cause irreversible damage to eyes.
Skin contact	Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components). Prolonged contact may cause redness and irritation. Repeated exposure may cause skin dryness or cracking.
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. 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

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	> 90 mL/kg (Rat)	-	-
n-Octadecylamine 124-30-1	= 2395 mg/kg (Rat)	-	-
Dipropylene glycol 25265-71-8	= 14850 mg/kg (Rat)	> 20mL/kg (Rabbit)	-
BHT 128-37-0	= 890 mg/kg (Rat)	> 2000 mg/kg (Rat)	-

Information on toxicological effects

Symptoms Erythema (skin redness). May cause redness and tearing of the eyes. May cause blindness. Burning. 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.

Chemical name	ACGIH	IARC	NTP	OSHA
BHT 128-37-0		Group 3		

*IARC (International Agency for Research on Cancer)
Group 3 - Not Classifiable as to Carcinogenicity in Humans*

Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	Causes damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR

1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE).

Chronic Toxicity

Aspiration may cause pulmonary edema and pneumonitis. Avoid repeated exposure. Prolonged exposure may cause chronic effects. Carcinogenic potential is unknown.

Target Organ Effects

Respiratory system. Eyes. Skin. Central Vascular System (CVS). Digestive System.

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 (oral)

6,500.00 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects.

Chemical name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
n-Octadecylamine 124-30-1		96h LC50: 1.0 - 10.0 mg/L (Brachydaniorerio)	EC50 = 3 mg/L 8 h hEC50 = 3 mg/L 120 h	
Dipropylene glycol 25265-71-8		24h LC50: > 5000mg/L (Carassius auratus)	EC50 = 10000 mg/L 16 h	
BHT 128-37-0	72h EC50: = 6 mg/L (Pseudokirchneriellasu bcapitata) 72hEC50: > 0.42 mg/L (Desmodesmussubspic atus)	48h LC50: = 5 mg/L (Oryzias latipes)	EC50 = 7.82 mg/L 5 min EC50 = 8.57 mg/L 15 min EC50 = 8.98 mg/L 30 min	

Persistence and Degradability

No information available.

Bioaccumulation

Chemical name	Log Pow
n-Octadecylamine 124-30-1	6
BHT 128-37-0	4.17

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

DOT

UN-No.	UN3077
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Hazard Class	9
Packing Group	III
Description	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III
Emergency Response Guide Number	171

TDG

UN-No.	UN3077
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Hazard Class	9
Packing Group	III
Description	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III

MEX

UN-No.	UN3077
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Hazard Class	9
Packing Group	III
Description	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III

ICAO

UN-No.	UN3077
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Hazard Class	9
Packing Group	III
Description	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III

IATA

UN-No.	UN3077
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Hazard Class	9
Packing Group	III
ERG Code	9L
Description	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III

IMDG/IMO

UN-No.	UN3077
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Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Hazard Class	9
Packing Group	III
EmS-No.	F-A, S-F
Description	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III, MARINE POLLUTANT

RID

UN-No.	UN3077
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Hazard Class	9
Packing Group	III
Classification code	M7
Description	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III

ADR

UN-No.	UN3077
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Hazard Class	9
Packing Group	III
Classification code	M7
Tunnel restriction code	(E)
Description	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III

ADN

UN-No.	UN3077
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Hazard Class	9
Packing Group	III
Classification code	M7
Special Provisions	274, 335, 601
Description	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III
Hazard Labels	9
Limited Quantity	5 KG

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 does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Dipropylene glycol 25265-71-8			X		
BHT 128-37-0	X	X	X		

International Regulations

Component	Carcinogen Status	Exposure Limits
Diamond 7782-40-3 (1 - 30%)		Mexico: TWA 2 mg/m ³
BHT 128-37-0 (< 1%)		Mexico: TWA 10 mg/m ³ Mexico: STEL 20 mg/m ³

Canada

WHMIS Hazard Class

Not determined

16. OTHER INFORMATION

NFPA	Health Hazards 3	Flammability 0	Instability 0	Physical and Chemical Hazards - Personal Protection X
HMIS	Health Hazards 3 *	Flammability 0	Physical Hazard 0	

Chronic Hazard Star Legend * = Chronic Health Hazard

Prepared By Product Stewardship
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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



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End of Safety Data Sheet