

PHT Multi

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : PHT Multi
Product code : M77862

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.3. Details of the supplier of the safety data sheet

JR Simplot Company
Boise, ID 83707
T 1-208-336-2110

1.4. Emergency telephone number

Emergency number : CHEMTREC 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Eye Dam. 1 H318

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS05

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H318 - Causes serious eye damage

Precautionary statements (GHS-US) :

P280 - Wear protective gloves/protective clothing/eye protection/face protection
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a poison center/doctor/...

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Water	(CAS No) 7732-18-5		Not classified
REAX 100M*			Not classified
zinc sulfate	(CAS No) 7733-02-0		Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318
iron(II) sulfate, heptahydrate	(CAS No) 7782-63-0		Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315
manganese(II)sulfate, monohydrate	(CAS No) 10034-96-5		Eye Irrit. 2B, H320 STOT SE 3, H335
disodium molybdate	(CAS No) 7631-95-0		Not classified

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Name	Product identifier	%	Classification (GHS-US)
sodium dioctyl sulfosuccinate	(CAS No) 577-11-7		Not classified
copper(II) sulfate, pentahydrate	(CAS No) 7758-99-8		Acute Tox. 3 (Oral), H301 Skin Irrit. 2, H315 Eye Irrit. 2B, H320 STOT SE 3, H335

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

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7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

manganese(II)sulfate, monohydrate (10034-96-5)		
USA ACGIH	ACGIH TWA (mg/m ³)	0.1 mg/m ³

iron(II) sulfate, heptahydrate (7782-63-0)		
USA ACGIH	ACGIH TWA (mg/m ³)	1 mg/m ³

disodium molybdate (7631-95-0)		
USA ACGIH	ACGIH TWA (mg/m ³)	0.5 mg/m ³

8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Respiratory protection : Wear appropriate mask.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Color : Colorless

Odor : characteristic

Odor threshold : No data available

pH : No data available

Relative evaporation rate (butyl acetate=1) : No data available

Melting point : No data available

Freezing point : No data available

Boiling point : No data available

Flash point : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapor pressure : No data available

Relative vapor density at 20 °C : No data available

Relative density : No data available

Density : 9.8 lbs/gal

Solubility : Water: Solubility in water of component(s) of the mixture :
• : > 54 g/100ml • : 23 g/100ml • : 100 g/100ml • : 42 g/100ml • : 1.5 g/100ml

Log Pow : No data available

Log Kow : No data available

Viscosity, kinematic : No data available

Viscosity, dynamic : No data available

Explosive properties : No data available

Oxidizing properties : No data available

Explosive limits : No data available

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9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

zinc sulfate (7733-02-0)	
LD50 oral rat	1000 - 2000 mg/kg (Rat)
ATE US (oral)	1000.00000000 mg/kg body weight

copper(II) sulfate, pentahydrate (7758-99-8)	
LD50 oral rat	300 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value; 482 mg/kg bodyweight; Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit; Literature study; OECD 402: Acute Dermal Toxicity)
ATE US (oral)	300.00000000 mg/kg body weight

iron(II) sulfate, heptahydrate (7782-63-0)	
LD50 oral rat	1480 mg/kg (Rat)
ATE US (oral)	1480.00000000 mg/kg body weight

disodium molybdate (7631-95-0)	
LD50 oral rat	4000 mg/kg (Rat)
LD50 dermal rat	> 2000 mg/kg (Rat)
LC50 inhalation rat (mg/l)	> 2.1 mg/l/4h (Rat; >584 mg/l/4h; Rat)
ATE US (oral)	4000.00000000 mg/kg body weight

sodium dioctyl sulfosuccinate (577-11-7)	
LD50 oral rat	> 2000 mg/kg (Rat)
LD50 dermal rabbit	> 10000 mg/kg (Rabbit)

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Causes serious eye damage.
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Based on available data, the classification criteria are not met
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure) : Not classified

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Specific target organ toxicity (repeated exposure)	: Not classified Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified Based on available data, the classification criteria are not met
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

zinc sulfate (7733-02-0)	
LC50 fish 1	1.7 mg/l (96 h; <i>Poecilia reticulata</i>)
EC50 Daphnia 1	1 mg/l (24 h; <i>Daphnia magna</i>)
LC50 fish 2	2.4 mg/l 96 h; <i>Salmo gairdneri</i> (<i>Oncorhynchus mykiss</i>)
EC50 Daphnia 2	0.56 mg/l (48 h; <i>Daphnia magna</i>)
Threshold limit algae 1	136 µg/l (72 h; <i>Selenastrum capricornutum</i> ; Growth rate)
Threshold limit algae 2	24 µg/l (3 days; <i>Selenastrum capricornutum</i> ; Growth rate)

copper(II) sulfate, pentahydrate (7758-99-8)	
LC50 fish 1	1.5 mg/l (24 h; <i>Lepomis macrochirus</i> ; Toxicity test)
EC50 Daphnia 1	0.109 - 0.798 mg/l (48 h; <i>Daphnia magna</i> ; Anhydrous form)
LC50 fish 2	0.17 mg/l (24 h; <i>Salmo gairdneri</i> (<i>Oncorhynchus mykiss</i>); Anhydrous form)
TLM fish 1	3.8 ppm 24 h; <i>Salmo gairdneri</i> (<i>Oncorhynchus mykiss</i>)
Threshold limit algae 1	0.01 - 0.28,72 h; <i>Selenastrum capricornutum</i> ; Anhydrous form
Threshold limit algae 2	0.368 mg/l (72 h; <i>Pseudokirchneriella subcapitata</i> ; Anhydrous form)

manganese(II)sulfate, monohydrate (10034-96-5)	
LC50 fish 1	2850 mg/l (96 h; <i>Colisa fasciatus</i> ; Anhydrous form)
EC50 Daphnia 1	8.28 mg/l (48 h; <i>Daphnia magna</i> ; Anhydrous form)
LC50 fish 2	33.8 mg/l (96 h; <i>Pimephales promelas</i> ; Anhydrous form)
EC50 Daphnia 2	10 mg/l (24 h; <i>Daphnia magna</i> ; Anhydrous form)
Threshold limit algae 1	25.7 mg/l (<i>Phaeodactylum</i> ; Anhydrous form)

iron(II) sulfate, heptahydrate (7782-63-0)	
LC50 fish 1	925 mg/l (96 h; <i>Poecilia reticulata</i>)
EC50 Daphnia 1	7.2 mg/l (48 h; <i>Daphnia magna</i> ; Metal ion)
LC50 fish 2	> 200 mg/l (48 h; <i>Leuciscus idus</i>)
EC50 Daphnia 2	152 mg/l (48 h; <i>Daphnia magna</i> ; Anhydrous form)

disodium molybdate (7631-95-0)	
LC50 fish 1	> 1000 mg/l (96 h; <i>Oncorhynchus kisutch</i> ; Dihydrate)
EC50 Daphnia 1	330 mg/l (48 h; <i>Daphnia magna</i> ; Dihydrate)
LC50 fish 2	7600 mg/l 96 h; <i>Salmo gairdneri</i> (<i>Oncorhynchus mykiss</i>)
Threshold limit algae 1	4.6 mg/l (72 h; <i>Selenastrum capricornutum</i> ; Nominal concentration)
Threshold limit algae 2	12.5 mg/l (72 h; <i>Scenedesmus subspicatus</i> ; Dihydrate)

sodium dioctyl sulfosuccinate (577-11-7)	
LC50 fish 1	37 mg/l (96 h; <i>Lepomis macrochirus</i>)
EC50 Daphnia 1	36 mg/l (48 h; <i>Daphnia magna</i>)
LC50 fish 2	28 mg/l (96 h; <i>Oncorhynchus mykiss</i>)

12.2. Persistence and degradability

PHT Multi	
Persistence and degradability	Not established.

Water (7732-18-5)	
Persistence and degradability	Not established.

REAX 100M	
Persistence and degradability	Not established.

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zinc sulfate (7733-02-0)	
Persistence and degradability	Biodegradability: not applicable. Not established.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

copper(II) sulfate, pentahydrate (7758-99-8)	
Persistence and degradability	Biodegradability: not applicable. No (test)data on mobility of the substance available. Not established.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

manganese(II)sulfate, monohydrate (10034-96-5)	
Persistence and degradability	Biodegradability: not applicable. Not established.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

iron(II) sulfate, heptahydrate (7782-63-0)	
Persistence and degradability	Biodegradability in water: no data available. Biodegradability in soil: no data available. Adsorbs into the soil. Not established.

disodium molybdate (7631-95-0)	
Persistence and degradability	Biodegradability: not applicable. Photolysis in water. Not established.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

sodium dioctyl sulfosuccinate (577-11-7)	
Persistence and degradability	Readily biodegradable in water. Photodegradation in water.

12.3. Bioaccumulative potential

PHT Multi	
Bioaccumulative potential	Not established.

Water (7732-18-5)	
Bioaccumulative potential	Not established.

REAX 100M	
Bioaccumulative potential	Not established.

zinc sulfate (7733-02-0)	
BCF fish 1	59 - 242 (Cyprinus carpio; Test duration: 8 weeks)
Bioaccumulative potential	Bioaccumable. Not established.

copper(II) sulfate, pentahydrate (7758-99-8)	
Bioaccumulative potential	Bioaccumable. Not established.

manganese(II)sulfate, monohydrate (10034-96-5)	
Bioaccumulative potential	Not established.

iron(II) sulfate, heptahydrate (7782-63-0)	
Bioaccumulative potential	Not bioaccumulative. Not established.

disodium molybdate (7631-95-0)	
BCF fish 1	4.9 (28 days; Oncorhynchus tshawytscha)
BCF other aquatic organisms 1	164.3 (Mollusca)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500). Not established.

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sodium dioctyl sulfosuccinate (577-11-7)	
BCF fish 1	< 0.9/<9.3,Cyprinus carpio; Test duration: 6 weeks
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

copper(II) sulfate, pentahydrate (7758-99-8)	
Ecology - soil	Toxic to flora.

12.5. Other adverse effects

Effect on ozone layer	: No additional information available
Effect on the global warming	: No known ecological damage caused by this product.
Other information	: Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT
Not regulated for transport

Additional information

Other information : No supplementary information available.

ADR

Transport document description :

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed on the Toxic Substances Control Act (TSCA) inventory except for:

copper(II) sulfate, pentahydrate	CAS No 7758-99-8	
manganese(II)sulfate, monohydrate	CAS No 10034-96-5	
iron(II) sulfate, heptahydrate	CAS No 7782-63-0	

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

zinc sulfate (7733-02-0)	
Listed on United States SARA Section 313	
RQ (Reportable quantity, section 304 of EPA's List of Lists) :	1000 lb

copper(II) sulfate, pentahydrate (7758-99-8)	
Not listed on the United States TSCA (Toxic Substances Control Act) inventory	

manganese(II)sulfate, monohydrate (10034-96-5)	
Not listed on the United States TSCA (Toxic Substances Control Act) inventory	

iron(II) sulfate, heptahydrate (7782-63-0)	
Not listed on the United States TSCA (Toxic Substances Control Act) inventory Not listed on SARA Section 313 (Specific toxic chemical listings)	
RQ (Reportable quantity, section 304 of EPA's List of Lists) :	1000 lb

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15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

15.2.2. National regulations

No additional information available

15.3. US State regulations

zinc sulfate (7733-02-0)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

iron(II) sulfate, heptahydrate (7782-63-0)

U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H-phrases: see section 16:

Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2B	Serious eye damage/eye irritation Category 2B
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H301	Toxic if swallowed
H302	Harmful if swallowed
H315	Causes skin irritation
H318	Causes serious eye damage
H320	Causes eye irritation
H335	May cause respiratory irritation

SDS US (GHS HazCom 2012)

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