SAFETY DATA SHEET

Version 6.19
Revision Date 06/07/2024
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : Murashige and Skoog Basal Medium

Product Number : M5519
Brand : Sigma

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

Identified uses : Laboratory chemicals, Synthesis of substances

Uses advised against : The product is being supplied under the TSCA R&D Exemption (40 CFR Section 720.36). It is the recipient's responsibility to comply with the requirements of the R&D exemption. The product may not be used for a non-exempt commercial purpose under TSCA unless appropriate consent is granted in writing by MilliporeSigma.

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich Inc.
3050 SPRUCE ST
ST. LOUIS MO 63103
UNITED STATES

Telephone : +1 314 771-5765
Fax : +1 800 325-5052

1.4 Emergency telephone

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Oxidizing solids (Category 3), H272
Eye irritation (Category 2A), H319
Reproductive toxicity (Category 1B), H360
Specific target organ toxicity - repeated exposure, Inhalation (Category 2), Respiratory Tract, H373

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal Word Danger

Hazard Statements

H272	May intensify fire; oxidizer.
H319	Causes serious eye irritation.
H360	May damage fertility or the unborn child.
H373	May cause damage to organs (Respiratory Tract) through prolonged or repeated exposure if inhaled.

Precautionary Statements

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat.
P220	Keep/Store away from clothing/ combustible materials.
P221	Take any precaution to avoid mixing with combustibles.
P260	Do not breathe dust.
P264	Wash skin thoroughly after handling.
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.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Synonyms : MS Basal Medium

Component		Classification	Concentration
Ammonium nitrate			
CAS-No. EC-No. Registration number	6484-52-2 229-347-8 01-2119490981-27-	Ox. Sol. 3; Eye Irrit. 2A; H272, H319	>= 30 - < 50 %

	XXXX		
calcium chloride			
CAS-No. EC-No. Index-No. Registration number	10043-52-4 233-140-8 017-013-00-2 01-2119494219-28-XXXX	Eye Irrit. 2A; H319	>= 5 - < 10 %
Edetate disodium dihydrate			
CAS-No. EC-No. Registration number	6381-92-6 205-358-3 01-2119486775-20-XXXX	Acute Tox. 4; STOT RE 2; H332, H373	>= 1 - < 5 %
Zinc sulfate heptahydrate			
CAS-No. EC-No. Index-No. Registration number	7446-20-0 231-793-3 030-006-00-9 01-2119474684-27-XXXX	Acute Tox. 4; Eye Dam. 1; Aquatic Acute 1; Aquatic Chronic 1; H302, H318, H400, H410 M-Factor - Aquatic Acute: 1 M-Factor - Aquatic Chronic: 1	>= 0.1 - < 1 %
boric acid			
CAS-No. EC-No. Index-No. Registration number	10043-35-3 233-139-2 005-007-00-2 01-2119486683-25-XXXX	Repr. 1B; Aquatic Acute 3; H360, H402	>= 0.1 - < 1 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice
Show this material safety data sheet to the doctor in attendance.

If inhaled
After inhalation: fresh air.

In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact
After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed
After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

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

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture
Nitrogen oxides (NOx)
Ammonia
Carbon oxides
Nitrogen oxides (NOx)
Sulfur oxides
Oxides of phosphorus
Hydrogen chloride gas
Potassium oxides
Sodium oxides
Magnesium oxide
Cobalt/cobalt oxides
Calcium oxide
Copper oxides
Not combustible.
Has a fire-promoting effect due to release of oxygen.
Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters
In the event of fire, wear self-contained breathing apparatus.

5.4 Further information
Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on protection against fire and explosion
Keep away from open flames, hot surfaces and sources of ignition.

Hygiene measures
Change contaminated clothing. Wash hands after working with substance.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions
Tightly closed. Do not store near combustible materials.
Storage stability Recommended storage temperature
2 - 8 °C
Storage class
Storage class (TRGS 510): 5.1B: Oxidizing hazardous materials

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
boric acid	10043-35-3	TWA	2 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Not classifiable as a human carcinogen		
		STEL	6 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Not classifiable as a human carcinogen		

8.2 Exposure controls

Appropriate engineering controls
Change contaminated clothing. Wash hands after working with substance.

Personal protective equipment

Eye/face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
protective clothing

Respiratory protection
Recommended Filter type: Filter type P2
The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

required when dusts are generated.
Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Control of environmental exposure
Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: solid Color: off-white
b)	Odor	No data available
c)	Odor Threshold	No data available
d)	pH	3.5 - 4.5 at 4.43 g/l
e)	Melting point/freezing point	No data available
f)	Initial boiling point and boiling range	No data available
g)	Flash point	()No data available
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	The product is not flammable.
j)	Upper/lower flammability or explosive limits	No data available
k)	Vapor pressure	No data available
l)	Vapor density	No data available
m)	Density	No data available
	Relative density	No data available
n)	Water solubility	No data available
o)	Partition coefficient: n-octanol/water	No data available
p)	Autoignition temperature	Not applicable
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	Not classified as explosive.

t) Oxidizing properties none

9.2 Other safety information
No data available

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available

10.2 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
no information available

10.5 Incompatible materials
Strong reducing agents, Strong acids, Powdered metals

10.6 Hazardous decomposition products
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Mixture

Acute toxicity
Oral: No data available
Acute toxicity estimate Inhalation - 4 h - 160 mg/l - dust/mist(Calculation method)

Symptoms: Possible symptoms:, mucosal irritations
Dermal: No data available

Acute toxicity estimate Dermal - > 5,000 mg/kg
(Calculation method)

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
Remarks: Mixture causes serious eye irritation.

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity

IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity
May harm the unborn child.
May impair fertility.

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
Mixture may cause damage to organs through prolonged or repeated exposure.
- Respiratory Tract

Aspiration hazard
No data available

11.2 Additional Information

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Liver - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence

Components

Ammonium nitrate

Acute toxicity
LD50 Oral - Rat - male and female - 2,950 mg/kg
(OECD Test Guideline 401)
Symptoms: Nausea, Vomiting, Diarrhea, Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.
LC50 Inhalation - Rat - 4 h - > 88.8 mg/l - dust/mist
Remarks: (IUCLID)
Symptoms: Symptoms may be delayed., mucosal irritations
LD50 Dermal - Rat - male and female - > 5,000 mg/kg
(OECD Test Guideline 402)

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation - 4 h
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: Irritating to eyes. - 24 h

(OECD Test Guideline 405)

Respiratory or skin sensitization
Local lymph node assay (LLNA) - Mouse
Result: negative
(OECD Test Guideline 429)
Remarks: The value is given in analogy to the following substances: Nitric acid ammonium calcium salt (1:?:?)

Germ cell mutagenicity
Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Result: negative
Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Result: negative
Test Type: Ames test
Test system: Escherichia coli/Salmonella typhimurium
Result: negative

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
Acute oral toxicity - Nausea, Vomiting, Diarrhea, Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.
Acute inhalation toxicity - Symptoms may be delayed., mucosal irritations

Specific target organ toxicity - repeated exposure

Aspiration hazard
No data available

calcium chloride

Acute toxicity
LD50 Oral - Rabbit - male - 500 - 1,000 mg/kg
(OECD Test Guideline 401)
Oral: No data available
Symptoms: After uptake of large quantities:, Stomach/intestinal disorders, Nausea
Symptoms: Possible damages:, mucosal irritations
LD50 Dermal - Rabbit - male and female - > 5,000 mg/kg
Remarks: (ECHA)
No data available

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation - 4 h
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: Moderate eye irritation

(OECD Test Guideline 405)

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
Test Type: Mutagenicity (mammal cell test): chromosome aberration.
Test system: Chinese hamster fibroblasts
Result: negative
Test Type: Ames test
Test system: S. typhimurium
Result: negative
Remarks: (Lit.)

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
Acute oral toxicity - After uptake of large quantities:, Stomach/intestinal disorders, Nausea
Acute inhalation toxicity - Possible damages:, mucosal irritations

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Edetate disodium dihydrate

Acute toxicity
LD50 Oral - Rat - male and female - 2,800 mg/kg
(OECD Test Guideline 401)
Remarks: The value is given in analogy to the following substances: Ethylenedinitrilotetraacetic acid disodium salt
Inhalation: No data available
Dermal: No data available

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation
(OECD Test Guideline 404)
Remarks: (ECHA)
The value is given in analogy to the following substances: Ethylenedinitrilotetraacetic acid disodium salt

Serious eye damage/eye irritation
Eyes - Rabbit
Result: No eye irritation
(OECD Test Guideline 405)
Remarks: (ECHA)
The value is given in analogy to the following substances: Ethylenedinitrilotetraacetic acid disodium salt

Respiratory or skin sensitization
Maximization Test - Guinea pig
Result: negative
(OECD Test Guideline 406)
Remarks: (ECHA)
The value is given in analogy to the following substances: Ethylenedinitrilotetraacetic acid disodium salt

Germ cell mutagenicity
Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Result: negative
Remarks: (ECHA)
The value is given in analogy to the following substances: Ethylenedinitrilotetraacetic acid trisodium salt
Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Result: negative
Remarks: (ECHA)
The value is given in analogy to the following substances: Ethylenedinitrilotetraacetic acid disodium saltThe value is given in analogy to the following substances: Ethylenedinitrilotetraacetic acid trisodium salt

Test Type: Ames test
Result: negative
Remarks: (ECHA)
The value is given in analogy to the following substances: Ethylenedinitrilotetraacetic acid trisodium salt
Method: OECD Test Guideline 474
Species: Mouse
Remarks: (ECHA)
The value is given in analogy to the following substances: Ethylenedinitrilotetraacetic acid disodium salt

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
Inhalation - May cause damage to organs through prolonged or repeated exposure.
- Respiratory Tract

Aspiration hazard
No data available

Zinc sulfate heptahydrate

Acute toxicity
LD50 Oral - Mouse - male - 926 mg/kg
(OECD Test Guideline 401)
Inhalation: No data available
LD50 Dermal - Rat - male and female - > 2,000 mg/kg
(OECD Test Guideline 402)

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation - 4 h
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: Causes serious eye damage.
(OECD Test Guideline 405)

Respiratory or skin sensitization
Local lymph node assay (LLNA) - Mouse
Result: negative
Remarks: (ECHA)

Germ cell mutagenicity
Test Type: Ames test
Test system: Salmonella typhimurium
Result: negative
Remarks: (ECHA)
Species: Mouse - male and female - Red blood cells (erythrocytes)
Result: negative
Remarks: (ECHA)

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

boric acid

Acute toxicity
LD50 Oral - Rat - male and female - 3,450 mg/kg
Remarks: (ECHA)

LC50 Inhalation - Rat - male and female - 4 h - > 2.12 mg/l - dust/mist
(OECD Test Guideline 403)
LD50 Dermal - Rabbit - male and female - > 2,000 mg/kg
Remarks: (ECHA)

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation - 24 h
Remarks: (ECHA)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: No eye irritation - 24 h
(OECD Test Guideline 405)

Respiratory or skin sensitization
Buehler Test - Guinea pig
Result: negative
(OECD Test Guideline 406)

Germ cell mutagenicity
Test Type: sister chromatid exchange assay
Test system: Chinese hamster ovary cells
Result: negative
Remarks: (ECHA)
Test Type: Ames test
Test system: S. typhimurium
Result: negative
Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Result: negative
Test Type: Mutagenicity (mammal cell test):
Test system: Chinese hamster ovary cells
Result: negative
Method: OECD Test Guideline 474
Species: Mouse - male and female
Result: negative

Carcinogenicity
No data available

Reproductive toxicity
May damage fertility.
May damage the unborn child.

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure

Aspiration hazard
No data available

SECTION 12: Ecological information

12.1 Toxicity

Mixture
No data available

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties
No data available

12.7 Other adverse effects
No data available

Components

Ammonium nitrate

Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 490 mg/l - 48 h Remarks: (ECHA) The value is given in analogy to the following substances: potassium nitrate
Toxicity to algae	static test ErC50 - diatoms - > 1,700 mg/l - 10 Days Remarks: (ECHA) The value is given in analogy to the following substances: potassium nitrate
Toxicity to bacteria	EC50 - activated sludge - > 1,000 mg/l - 3 h (OECD Test Guideline 209) Remarks: The value is given in analogy to the following substances: sodium nitrate

calcium chloride

Toxicity to fish	static test LC50 - Pimephales promelas (fathead minnow) - 4,630 mg/l - 96 h (US-EPA)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 2,400 mg/l - 48 h (OECD Test Guideline 202)

Toxicity to algae	EC50 - Pseudokirchneriella subcapitata - 2,900 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity)	EC50 - Daphnia magna (Water flea) - 610 mg/l - 21 d

Edetate disodium dihydrate

Toxicity to fish	semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 100 mg/l - 96 h (OECD Test Guideline 203) Remarks: (ECHA) The value is given in analogy to the following substances: Sodium feredetate
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 140 mg/l - 48 h (DIN 38412) Remarks: (ECHA) The value is given in analogy to the following substances: Ethylenedinitrilotetraacetic acid disodium salt NOEC - Daphnia magna (Water flea) - 25 mg/l - 21 d Remarks: (ECHA) The value is given in analogy to the following substances: Ethylenedinitrilotetraacetic acid disodium salt
Toxicity to algae	static test - Pseudokirchneriella subcapitata (green algae) - > 60 mg/l - 72 h (OECD Test Guideline 201) Remarks: (ECHA) The value is given in analogy to the following substances: Sodium feredetate
Toxicity to bacteria	NOEC - activated sludge - > 640 mg/l - 3 h (OECD Test Guideline 209) Remarks: (ECHA) The value is given in analogy to the following substances: Sodium feredetate

Zinc sulfate heptahydrate

Toxicity to fish	static test LC50 - Pimephales promelas (fathead minnow) - 0.330 mg/l - 96 h Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 1.4 mg/l - 48 h (OECD Test Guideline 202)

Toxicity to algae	EC50 - Chlorella vulgaris (Fresh water algae) - 64.8 mg/l - 72 h Remarks: (IUCLID)
Toxicity to bacteria	static test EC50 - activated sludge - 5.2 mg/l - 3 h (OECD Test Guideline 209)
Toxicity to fish(Chronic toxicity)	flow-through test NOEC - Salmo trutta - 0.056 mg/l - 116 d (OECD Test Guideline 210)
Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity)	semi-static test NOEC - Shrimp - 0.0318 mg/l - 7 d (US-EPA)

boric acid

Toxicity to fish	static test LC50 - Pimephales promelas (fathead minnow) - 79.7 mg/l - 96 h (US-EPA)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 133 mg/l - 48 h Remarks: (ECOTOX Database)
Toxicity to algae	static test EC50 - Pseudokirchneriella subcapitata (green algae) - 52.4 mg/l - 74.5 h (OECD Test Guideline 201)

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

SECTION 14: Transport information

DOT (US)

UN number: 1477 Class: 5.1 Packing group: III
Proper shipping name: Nitrates, inorganic, n.o.s.
Reportable Quantity (RQ):

Poison Inhalation Hazard: No

IMDG
UN number: 1477 Class: 5.1 Packing group: III EMS-No: F-A, S-Q
Proper shipping name: NITRATES, INORGANIC, N.O.S.

IATA
UN number: 1477 Class: 5.1 Packing group: III
Proper shipping name: Nitrates, inorganic, n.o.s.

SECTION 15: Regulatory information

CERCLA Reportable Quantity

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Reactivity Hazard
Acute Health Hazard
Chronic Health Hazard

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

potassium nitrate	7757-79-1	>= 30 - < 50 %
Ammonium nitrate	6484-52-2	>= 30 - < 50 %

US State Regulations

Massachusetts Right To Know

potassium nitrate	7757-79-1
Ammonium nitrate	6484-52-2

Pennsylvania Right To Know

potassium nitrate	7757-79-1
Ammonium nitrate	6484-52-2
Ferrous sulfate heptahydrate	7782-63-0
Manganese Sulfate Monohydrate	10034-96-5
Zinc sulfate heptahydrate	7446-20-0

Maine Chemicals of High Concern

Product does not contain any listed chemicals

Vermont Chemicals of High Concern

Disodium molybdate dihydrate	10102-40-6
Cobalt dichloride hexahydrate	7791-13-1

Washington Chemicals of High Concern

Cobalt dichloride hexahydrate	7791-13-1

The ingredients of this product are reported in the following inventories:

TSCA : All substances listed as active on the TSCA inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16: Other information

Further information

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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