

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 10/03/2017

Reviewed on 10/02/2017

1 Identification

- **Product Identifier**
- **Trade name:** 12-2-12
- **Relevant identified uses of the substance or mixture and uses advised against:**
- **Product Description** Fertilizer
- **Details of the Supplier of the Safety Data Sheet:**
- **Manufacturer/Supplier:**
Florikan ESA, LLC
6801 Energy Ct. Suite 100
Sarasota, FL 34234
Ph: 941-379-4048 ext 332
Fax: 941-377-3633
Email product info: Doug Cabe; dcabe@florikan.com
- **Emergency telephone number:** Chemtrec 1-800-424-9300 or outside USA 1-703-527-3887

www.Florikan.com**2 Hazard(s) Identification**

- **Classification of the substance or mixture:**



GHS08 Health hazard

Repr. 1 H360 May damage fertility or the unborn child.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

- **Label elements:**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**



GHS07 GHS08

- **Signal word:** Danger
- **Hazard-determining components of labeling:**
Ammonium Nitrate
Magnesium Sulphate
Talc
Ammonium phosphate monobasic
- **Hazard statements:**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H360 May damage fertility or the unborn child.
H335 May cause respiratory irritation.

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Precautionary statements:

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
- P264 Wash thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P302+P352 If on skin: Wash with plenty of water.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- 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.
- P312 Call a poison center/doctor if you feel unwell.
- P321 Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P362+P364 Take off contaminated clothing and wash it before reuse.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Unknown acute toxicity:

This value refers to knowledge of known, established toxicological or ecotoxicological values.

16.4 % of the mixture consists of component(s) of unknown toxicity.

Classification system: NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

NFPA ratings (scale 0 - 4)



HMIS-ratings (scale 0 - 4)



Hazard(s) not otherwise classified (HNOC): None known

3 Composition/Information on Ingredients

Chemical characterization: Mixtures

Description: Mixture of substances listed below with non-hazardous additions.

Dangerous Components:

CAS: 6484-52-2 RTECS: BR9050000	Ammonium Nitrate ⚠ Ox. Sol. 3, H272; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	25-50%
CAS: 10124-37-5	Calcium Nitrate ⚠ Ox. Sol. 3, H272	15-35%
CAS: 7487-88-9 RTECS: OM 4500000	Magnesium Sulphate ⚠ STOT SE 3, H335	2-12%

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CAS: 7722-76-1	Ammonium phosphate monobasic ⚠ Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320	2-12%
CAS: 14807-96-6	Talc ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320	2-12%
CAS: 13397-24-5	Gypsum (Calcium sulfate)	2-12%
CAS: 7783-20-2 RTECS: BS 4500000	Ammonium Sulfate ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	≤2.5%
CAS: 60-00-4 RTECS: AH 4375000	Edetic acid ⚠ Eye Irrit. 2A, H319	≤2.5%
CAS: 10043-35-3 RTECS: ED 4550000	Boric Acid ⚠ Repr. 1B, H360	≤2.5%

• **Additional information:**

The exact percentages of the ingredients of this mixture are considered to be proprietary and are withheld in accordance with the provisions of paragraph (i) of §1910.1200 of 29 CFR 1910.1200 Trade Secrets.

4 First-Aid Measures

• **Description of first aid measures:**

• **After inhalation:** Supply fresh air; consult doctor in case of complaints.

• **After skin contact:** If skin irritation occurs, consult a doctor.

• **After eye contact:**

If easy to do so, remove contact lenses if worn.

If eye irritation occurs, consult a doctor.

Rinse opened eye for several minutes under running water.

• **After swallowing:** If swallowed and symptoms occur, consult a doctor.

• **Information for doctor:**

• **Most important symptoms and effects, both acute and delayed:** No further relevant information available.

• **Indication of any immediate medical attention and special treatment needed:**

No further relevant information available.

5 Fire-Fighting Measures

• **Extinguishing media:**

• **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.

• **Special hazards arising from the substance or mixture:** No further relevant information available.

• **Advice for firefighters:**

• **Protective equipment:**

As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

6 Accidental Release Measures

• **Personal precautions, protective equipment and emergency procedures:** Not required.

• **Environmental precautions:** Do not allow to enter sewers/surface or ground water.

• **Methods and material for containment and cleaning up:**

Dispose of the collected material according to regulations.

• **Reference to other sections:**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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· Protective Action Criteria for Chemicals

· PAC-1:

6484-52-2	Ammonium Nitrate	6.7 mg/m ³
7778-80-5	Potassium Sulfate	20 mg/m ³
10124-37-5	Calcium Nitrate	1.2 mg/m ³
7487-88-9	Magnesium Sulphate	20 mg/m ³
7722-76-1	Ammonium phosphate monobasic	17 mg/m ³
7783-20-2	Ammonium Sulfate	13 mg/m ³
60-00-4	Edetic acid	4.1 mg/m ³
69012-64-2	Silica-Amorphous Silica fume	45 mg/m ³
7720-78-7	iron(II) sulfate	8.2 mg/m ³
10034-96-5	Manganese(II) Sulfate Monohydrate	9.2 mg/m ³
10043-35-3	Boric Acid	6 mg/m ³

· PAC-2:

6484-52-2	Ammonium Nitrate	73 mg/m ³
7778-80-5	Potassium Sulfate	220 mg/m ³
10124-37-5	Calcium Nitrate	13 mg/m ³
7487-88-9	Magnesium Sulphate	220 mg/m ³
7722-76-1	Ammonium phosphate monobasic	190 mg/m ³
7783-20-2	Ammonium Sulfate	140 mg/m ³
60-00-4	Edetic acid	45 mg/m ³
69012-64-2	Silica-Amorphous Silica fume	500 mg/m ³
7720-78-7	iron(II) sulfate	41 mg/m ³
10034-96-5	Manganese(II) Sulfate Monohydrate	15 mg/m ³
10043-35-3	Boric Acid	23 mg/m ³

· PAC-3:

6484-52-2	Ammonium Nitrate	440 mg/m ³
7778-80-5	Potassium Sulfate	1,300 mg/m ³
10124-37-5	Calcium Nitrate	79 mg/m ³
7487-88-9	Magnesium Sulphate	1,300 mg/m ³
7722-76-1	Ammonium phosphate monobasic	1,100 mg/m ³
7783-20-2	Ammonium Sulfate	840 mg/m ³
60-00-4	Edetic acid	200 mg/m ³
69012-64-2	Silica-Amorphous Silica fume	3,000 mg/m ³
7720-78-7	iron(II) sulfate	250 mg/m ³
10034-96-5	Manganese(II) Sulfate Monohydrate	90 mg/m ³
10043-35-3	Boric Acid	830 mg/m ³

7 Handling and Storage

· Handling

- **Precautions for safe handling:** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.

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- **Conditions for safe storage, including any incompatibilities:**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s):** No further relevant information available.

8 Exposure Controls/Personal Protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters:**
- **Components with occupational exposure limits:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

14807-96-6 Talc	
PEL	Long-term value: 20 mppcf ppm (containing <1% Quartz)
REL	Long-term value: 2* mg/m ³ *respirable dust; and <1% Quartz
TLV	Long-term value: 2* mg/m ³ *as respirable fraction; E
13397-24-5 Gypsum (Calcium sulfate)	
REL	Long-term value: 10* 5** mg/m ³ *Total dust; **Respirable fraction
TLV	Long-term value: 10* mg/m ³ *as inhalable fraction
10043-35-3 Boric Acid	
TLV	Short-term value: 6* mg/m ³ Long-term value: 2* mg/m ³ *as inhalable fraction

- **Additional information:** The lists that were valid during the creation of this SDS were used as basis.
- **Exposure controls:**
- **Personal protective equipment:**
- **General protective and hygienic measures:** Wash hands before breaks and at the end of work.
- **Breathing equipment:** Not required.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Select glove material based on penetration times, rates of diffusion and degradation.

- **Material of gloves:**

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The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material:** Not applicable.
- **Eye protection:** Not required.

9 Physical and Chemical Properties

• Information on basic physical and chemical properties

• General Information

• Appearance:

Form:

Granulate

Color:

Grey

• Odor:

Slight

• Odor threshold:

Not determined.

• pH-value:

Not applicable.

• Change in condition

Melting point/Melting range:

Not determined.

Boiling point/Boiling range:

≥210 °C (≥410 °F)

• Flash point:

None

• Flammability (solid, gaseous):

Not determined.

• Ignition temperature:

Not applicable

• Decomposition temperature:

Not determined.

• Auto igniting:

Product is not self-igniting.

• Danger of explosion:

Product does not present an explosion hazard.

• Explosion limits:

Lower:

Not determined.

Upper:

Not determined.

• Vapor pressure:

Not applicable.

• Density @ 20 °C (68 °F):

1.894 g/cm³ (15.805 lbs/gal)

• Bulk density:

1,884.9 kg/m³

• Relative density:

Not determined.

• Vapor density:

Not applicable.

• Evaporation rate:

Not applicable.

• Solubility in / Miscibility with:

Water:

Insoluble.

• Partition coefficient (n-octanol/water):

Not determined.

• Viscosity:

Dynamic:

Not applicable.

Kinematic:

Not applicable.

• Solvent content:

VOC content:

0.00 %

• Other information:

No further relevant information available.

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10 Stability and Reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological Information

- **Information on toxicological effects:**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

6484-52-2 Ammonium Nitrate

Oral	LD50	2,217 mg/kg (Rat)
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7778-80-5 Potassium Sulfate

Oral	LD50	6,600 mg/kg (Rat)
Inhalative	LC50/96 hours	680 mg/l (Pimephales)

10124-37-5 Calcium Nitrate

Oral	LD50	3,900 mg/kg mg/kg (Rat)
Dermal	LD50	>2,000 mg/kg (Rat)

7487-88-9 Magnesium Sulphate

Oral	LD50	>2,000 mg/kg (Rat)
Inhalative	LC50/4 h	>2,000 mg/l (Rabbit)
	LC50/96 hours	2,820 mg/l (Pimephales)

7722-76-1 Ammonium phosphate monobasic

Oral	LD50	5,750 mg/kg (Rat)
Dermal	LD50	7,640 mg/kg (Rabbit)

13397-24-5 Gypsum (Calcium sulfate)

Oral	LD50	>2,000 mg/kg (Rat)
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7783-20-2 Ammonium Sulfate

Oral	LD50	2,840 mg/kg (Rat)
Inhalative	LC50/96 hours	36.7 mg/l (Trout)
		433 mg/l (Water flea)

60-00-4 Edetic acid

Oral	LD50	4,500 mg/kg (Rat)
------	------	-------------------

10043-35-3 Boric Acid

Oral	LD50	2,660 mg/kg (Rat)
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- **Primary irritant effect:**
- **On the skin:** No irritating effect.
- **On the eye:** Irritating effect.

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- **Additional toxicological information:**
- **Carcinogenic categories:**
- **IARC (International Agency for Research on Cancer):**
 - Group 1 - Carcinogenic to humans
 - Group 2A - Probably carcinogenic to humans
 - Group 2B - Possibly carcinogenic to humans
 - Group 3 - Not classifiable as to its carcinogenicity to humans
 - Group 4 - Probably not carcinogenic to humans

14807-96-6	Talc	3
69012-64-2	Silica-Amorphous Silica fume	3
14807-96-6	Talc (Mg3H2(SiO3)4)	3

• **NTP (National Toxicology Program):**

None of the ingredients are listed.

• **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

12 Ecological Information

• **Toxicity:**

• **Aquatic toxicity:**

7487-88-9 Magnesium Sulphate

EC50 2,700 mg/l (Green algae)
343.56 mg/l (Water flea)

- **Persistence and degradability:** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.
- **Additional ecological information:**
- **General notes:**

Do not allow undiluted product or product that has not been neutralized to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment:**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects:** No further relevant information available.

13 Disposal Considerations

- **Waste treatment methods:**
- **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Observe all federal, state and local environmental regulations when disposing of this material.
- **Uncleaned packagings**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport Information

- **UN-Number:**
- **DOT, ADR/ADN, ADN, IMDG, IATA** Non-Regulated Material

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- **UN proper shipping name:**
- **DOT, ADR/ADN, ADN, IMDG, IATA** Non-Regulated Material
- **Transport hazard class(es):**
- **DOT, ADR/ADN, ADN, IMDG, IATA**
- **Class:** Non-Regulated Material
- **Packing group:**
- **DOT, ADR/ADN, IMDG, IATA** Non-Regulated Material
- **Environmental hazards:** Not applicable.
- **Special precautions for user:** Not applicable.
- **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** Not applicable.
- **UN "Model Regulation":** Non-Regulated Material

15 Regulatory Information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
- **SARA (Superfund Amendments and Reauthorization):**

• **Section 355 (extremely hazardous substances):**

7720-78-7 iron(II) sulfate

• **Section 313 (Specific toxic chemical listings):**

6484-52-2	Ammonium Nitrate
10124-37-5	Calcium Nitrate
7783-20-2	Ammonium Sulfate
10034-96-5	Manganese(II) Sulfate Monohydrate

• **TSCA (Toxic Substances Control Act):**

6484-52-2	Ammonium Nitrate
7778-80-5	Potassium Sulfate
10124-37-5	Calcium Nitrate
7487-88-9	Magnesium Sulphate
7722-76-1	Ammonium phosphate monobasic
14807-96-6	Talc
7783-20-2	Ammonium Sulfate
7757-93-9	Calcium Phosphate, dibasic
60-00-4	Edetic acid
69012-64-2	Silica-Amorphous Silica fume
7778-18-9	Calcium Sulfate anhydrous
14807-96-6	Talc (Mg ₃ H ₂ (SiO ₃) ₄)
7720-78-7	iron(II) sulfate
15708-41-5	EDTA feric sodium complex
10043-35-3	Boric Acid

• **California Proposition 65:**

• **Chemicals known to cause cancer:**

None of the ingredients are listed.

• **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

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· Chemicals known to cause reproductive toxicity for males:		
None of the ingredients are listed.		
· Chemicals known to cause developmental toxicity:		
None of the ingredients are listed.		
· New Jersey Right-to-Know List:		
6484-52-2	Ammonium Nitrate	
10124-37-5	Calcium Nitrate	
14807-96-6	Talc	
13397-24-5	Gypsum (Calcium sulfate)	
60-00-4	Edetic acid	
69012-64-2	Silica-Amorphous Silica fume	
7778-18-9	Calcium Sulfate anhydrous	
14807-96-6	Talc (Mg ₃ H ₂ (SiO ₃) ₄)	
7720-78-7	iron(II) sulfate	
· New Jersey Special Hazardous Substance List:		
6484-52-2	Ammonium Nitrate	R3
14807-96-6	Talc	CA
14807-96-6	Talc (Mg ₃ H ₂ (SiO ₃) ₄)	CA
· Pennsylvania Right-to-Know List:		
6484-52-2	Ammonium Nitrate	
14807-96-6	Talc	
13397-24-5	Gypsum (Calcium sulfate)	
7783-20-2	Ammonium Sulfate	
60-00-4	Edetic acid	
7778-18-9	Calcium Sulfate anhydrous	
14807-96-6	Talc (Mg ₃ H ₂ (SiO ₃) ₄)	
7720-78-7	iron(II) sulfate	
· Pennsylvania Special Hazardous Substance List:		
6484-52-2	Ammonium Nitrate	E
7783-20-2	Ammonium Sulfate	E
60-00-4	Edetic acid	E
7720-78-7	iron(II) sulfate	E
· Carcinogenic categories:		
· EPA (Environmental Protection Agency):		
10034-96-5	Manganese(II) Sulfate Monohydrate	D
10043-35-3	Boric Acid	I (oral)
· TLV (Threshold Limit Value established by ACGIH):		
14807-96-6	Talc	A4
14807-96-6	Talc (Mg ₃ H ₂ (SiO ₃) ₄)	A4
10043-35-3	Boric Acid	A4
· NIOSH-Ca (National Institute for Occupational Safety and Health):		
None of the ingredients are listed.		

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• **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

• **Hazard pictograms:**



GHS07 GHS08

• **Signal word:** Danger

• **Hazard-determining components of labeling:**

Ammonium Nitrate

Magnesium Sulphate

Talc

Ammonium phosphate monobasic

• **Hazard statements:**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H360 May damage fertility or the unborn child.

H335 May cause respiratory irritation.

• **Precautionary statements:**

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

P264 Wash thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 If on skin: Wash with plenty of water.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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.

P312 Call a poison center/doctor if you feel unwell.

P321 Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

P362+P364 Take off contaminated clothing and wash it before reuse.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

• **National regulations:**

None of the ingredients are listed.

• **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other Information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

• **Date of preparation / last revision:** 10/03/2017 / -

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· **Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety and Health
OSHA: Occupational Safety & Health Administration
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Ox. Sol. 3: Oxidizing solids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B
Repr. 1: Reproductive toxicity – Category 1
Repr. 1B: Reproductive toxicity – Category 1B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

· *** Data compared to the previous version altered.**

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