1. Identification

1.1. Product identifier

Product Identity: DS1
Alternate Names: DS1

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

Intended use: See Technical Data Sheet.
Application Method: See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet

Company Name: DME Co
29111 STEPHENSON HWY
MADISON HEIGHTS, MI 48071

Emergency
CHEMTREC (USA) (800) 424-9300
24 hour Emergency Telephone No.
US CHEMTREC number 1-800-424-9300
Outside the US (Canada) number 1-703-527-3887
Mexico 1-800-681-9531 (CHEMTREC)

Customer Service: DME Co
800-626-6653 (U.S.), 800-387-6600 (Canada)
or 248-398-6000 (worldwide)

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Acute Tox. 4;H302 Harmful if swallowed.
Acute Tox. 4;H312 Harmful in contact with skin.
Skin Corr. 1;H314 Causes severe skin burns and eye damage.
Eye Dam. 1;H318 Causes serious eye damage.
Skin Sens. 1;H317 May cause an allergic skin reaction.
Aquatic Chronic 3;H412 Harmful to aquatic life with long lasting effects.
Combustible Dust May form combustible dust concentrations in air.

2.2. Label elements

Danger
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H412 Harmful to aquatic life with long lasting effects.
May form combustible dust concentrations in air.

[Prevention]:
P210 Keep away from heat / sparks / open flames / hot surfaces - No smoking.
P240 Ground / bond container and receiving equipment.
P241 Use explosion-proof electrical / ventilating / light / equipment.
P261 Avoid breathing dust / fume / gas / mist / vapors / spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves / eye protection / face protection.

[Response]:
P301+312 IF SWALLOWED: Call a POISON CENTER or doctor / physician if you feel unwell.
P302+352 IF on skin: Wash with plenty of soap and water.
P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.
P304+312 If inhaled: Call a poison center or doctor / physician if you feel unwell.
P305+351+338 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 or doctor / physician.
P321 Specific treatment (see information on this label).
P330 IF SWALLOWED: Rinse mouth.
P331 Do NOT induce vomiting.
P333+313 If skin irritation or a rash occurs: Get medical advice / attention.
P363 Wash contaminated clothing before reuse.
P370+378 In case of fire: Use extinguishing media listed in section 5 of SDS for extinction.

[Storage]:
P405 Store locked up.

[Disposal]:
P501 Dispose of contents / container in accordance with local / national regulations.
3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the Controlled Products Regulations.

<table>
<thead>
<tr>
<th>Ingredient/Chemical Designations</th>
<th>Weight %</th>
<th>GHS Classification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxalic acid</td>
<td>65 - 85</td>
<td>Acute Tox. 4:H312</td>
<td>[1][2]</td>
</tr>
<tr>
<td>Synonyms: Axit oxalic, Oxalic acid</td>
<td></td>
<td>Acute Tox. 4:H302</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Combustible Dust</td>
<td></td>
</tr>
<tr>
<td>Sulphamic acid</td>
<td>7 - 13</td>
<td>Eye Irrit. 2:H319</td>
<td>[1]</td>
</tr>
<tr>
<td>Synonyms: Sulfamic acid, Sulphamic acid</td>
<td></td>
<td>Skin Irrit. 2:H315</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Aquatic Chronic 3:H412</td>
<td></td>
</tr>
<tr>
<td>Hexamethylenetetramine</td>
<td>1 - 5</td>
<td>Flam. Sol. 2:H228</td>
<td>[1]</td>
</tr>
<tr>
<td>Synonyms: Hexamethylenetetramine, Methenamine</td>
<td></td>
<td>Skin Sens. 1:H317</td>
<td></td>
</tr>
</tbody>
</table>

The actual concentration or concentration range is withheld as a trade secret.

[1] Substance with a health or environmental hazard.

*The full texts of the phrases are shown in Section 16.

Section 4. First aid measures

General
In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

Inhalation
Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious, place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

Eyes
Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

Skin
Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.

Ingestion
If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

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

Overview
No specific symptom data available. Treat symptomatically. See section 2 for further details.

Eyes
Causes serious eye damage.

Skin
Harmful in contact with skin. May cause an allergic skin reaction. Causes severe skin burns and eye damage.

Ingestion
Harmful if swallowed.

Section 5. Fire-fighting measures

5.1. Extinguishing media
Recommended extinguishing media; alcohol resistant foam, CO₂, powder, water spray. Do not use: water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: No hazardous decomposition data available.
Keep away from heat / sparks / open flames / hot surfaces - No smoking.
Ground / bond container and receiving equipment.
Avoid breathing dust / fume / gas / mist / vapors / spray.

5.3. Advice for fire-fighters

As with all fires, wear positive pressure, self-contained breathing apparatus, (SCBA) with a full face piece and protective clothing. Persons without respiratory protection should leave area. Wear SCBA during clean-up immediately after fire. No smoking.
Dust explosions are possible.

ERG Guide No. ---

Section 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Put on appropriate personal protective equipment (see section 8).

6.2. Environmental precautions
Do not allow spills to enter drains or waterways.
Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up
Sweep or vacuum to clean up spills. Do not use any procedure which causes dispersion of dust into the air if any possibility of ignition exists. Dispose of in accordance with local, state and federal regulations.

Section 7. Handling and storage

7.1. Precautions for safe handling
Handle containers carefully to prevent damage and spillage.
Avoid dust generation when handling product to minimize dust explosion potential.
See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities
Keep container tightly closed.
Incompatible materials: No data available.
See section 2 for further details. - [Storage]:

7.3. Specific end use(s)
No data available.
Section 8. Exposure controls and personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Ingredient</th>
<th>Source</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000100-97-0</td>
<td>Hexamethylenetetramine</td>
<td>OSHA</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier</td>
<td>No Established Limit</td>
</tr>
<tr>
<td>0000144-62-7</td>
<td>Oxalic acid</td>
<td>OSHA</td>
<td>TWA 1 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH</td>
<td>TWA: 1 mg/m3 STEL: 2 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH</td>
<td>TWA 1 mg/m3 ST 2 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier</td>
<td>No Established Limit</td>
</tr>
<tr>
<td>0005329-14-6</td>
<td>Sulphamic acid</td>
<td>OSHA</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier</td>
<td>No Established Limit</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Respiratory: If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.

Eyes: Protective safety glasses recommended.

Skin: Protective gloves recommended.

Engineering Controls: Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

Other Work Practices: Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details.

Section 9. Physical and chemical properties

Appearance: White Powder Solid
Odor: Odorless
Odor threshold: Not determined
pH: (8 % solution): < 1
Melting point / freezing point: Not Available
Section 10. Stability and reactivity

10.1. Reactivity
Hazardous Polymerization will not occur.

10.2. Chemical stability
Stable under normal circumstances.

10.3. Possibility of hazardous reactions
No data available.

10.4. Conditions to avoid
No data available.

10.5. Incompatible materials
No data available.

10.6. Hazardous decomposition products
No hazardous decomposition data available.

Section 11. Toxicological information

Acute toxicity
Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Oral LD50, mg/kg</th>
<th>Skin LD50, mg/kg</th>
<th>Inhalation Vapor LC50, mg/L/4hr</th>
<th>Inhalation Dust/Mist LC50, mg/L/4hr</th>
<th>Inhalation Gas LC50, ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxalic acid - (144-62-7)</td>
<td>375.00, Rat - Category: 4</td>
<td>20,000.00, Rabbit - Category: NA</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Sulphamic acid - (5329-14-6)</td>
<td>2,140.00, Rat - Category: 5</td>
<td>&gt;2,000.00, Rabbit - Category: 5</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Hexamethylenetramine - (100-97-0)</td>
<td>20,000.00, Rat - Category: NA</td>
<td>&gt;2,000.00, Rabbit - Category: 5</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
</tbody>
</table>

Carcinogen Data

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Ingredient</th>
<th>Source</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000100-97-0</td>
<td>Hexamethylenetramine</td>
<td>OSHA</td>
<td>Regulated Carcinogen: No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NTP</td>
<td>Known: No; Suspected: No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IARC</td>
<td>Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;</td>
</tr>
<tr>
<td>0000144-62-7</td>
<td>Oxalic acid</td>
<td>OSHA</td>
<td>Regulated Carcinogen: No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NTP</td>
<td>Known: No; Suspected: No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IARC</td>
<td>Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;</td>
</tr>
<tr>
<td>0005329-14-6</td>
<td>Sulphamic acid</td>
<td>OSHA</td>
<td>Regulated Carcinogen: No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NTP</td>
<td>Known: No; Suspected: No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IARC</td>
<td>Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;</td>
</tr>
</tbody>
</table>

Classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Category</th>
<th>Hazard Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (oral)</td>
<td>4</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>Acute toxicity (dermal)</td>
<td>4</td>
<td>Harmful in contact with skin.</td>
</tr>
<tr>
<td>Acute toxicity (inhalation)</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>1</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>1</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>Respiratory sensitization</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>1</td>
<td>May cause an allergic skin reaction.</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>
STOT-repeated exposure | --- | Not Applicable
Aspiration hazard | --- | Not Applicable

Possible routes of entry:: No data available.

**Symptoms and effects, both acute and delayed::**
No specific symptom data available.
Treat symptomatically.

**Eyes**
Causes serious eye damage.

**Skin**
Harmful in contact with skin. May cause an allergic skin reaction. Causes severe skin burns and eye damage.

**Ingestion**
Harmful if swallowed.

---

**Section 12. Ecological information**

12.1. Toxicity
Harmful to aquatic life with long lasting effects.
No additional information provided for this product. See Section 3 for chemical specific data.

**Aquatic Ecotoxicity**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>96 hr LC50 fish, mg/l</th>
<th>48 hr EC50 crustacea, mg/l</th>
<th>ErC50 algae, mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxalic acid - (144-62-7)</td>
<td>325.00, Leuciscus idus</td>
<td>162.20, Daphnia magna</td>
<td>19.14 (72 hr), Pseudokirchneriella subcapitata</td>
</tr>
<tr>
<td>Sulphamic acid - (5329-14-6)</td>
<td>70.30, Pimephales promelas</td>
<td>71.60, Daphnia magna</td>
<td>48.00 (72 hr), Desmodesmus subspicatus</td>
</tr>
<tr>
<td>Hexamethylenetetramine - (100-97-0)</td>
<td>10,000.00, Fish</td>
<td>36,000.00, Daphnia magna</td>
<td>3,000.00 (72 hr), Algae</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability
Oxalic acid undergoes biological degradation (73 %/ 30 days)

12.3. Bioaccumulative potential
Do not expect bioaccumulation.
oxalic acid log Po/w -1.7

12.4. Mobility in soil
Mobility of components of the mixture depends on the hydrophilic and hydrophobic properties and biotic and abiotic conditions of soil, including its structure, climatic conditions, seasons and soil organisms.

12.5. Results of PBT and vPvB assessment
This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects
No data available.
Section 13. Disposal considerations

13.1. Waste treatment methods
Observe all federal, state and local regulations when disposing of this substance.

Section 14. Transport information

<table>
<thead>
<tr>
<th>14.1. UN number</th>
<th>TDG (Domestic Surface Transportation)</th>
<th>IMO / IMDG (Ocean Transportation)</th>
<th>ICAO/IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not Regulated</td>
<td>Not Regulated</td>
<td>Not Regulated</td>
</tr>
<tr>
<td>14.2. UN proper shipping name</td>
<td>Not Regulated</td>
<td>Not Regulated</td>
<td>Not Regulated</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14.3. Transport hazard class(es)</th>
<th>TDG Hazard Class: Not Applicable</th>
<th>IMDG: Not Applicable</th>
<th>Air Class: Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Sub Class: Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14.4. Packing group</th>
<th>Not Applicable</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>14.5. Environmental hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMDG</td>
</tr>
<tr>
<td>Marine Pollutant: No;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14.6. Special precautions for user</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

Section 15. Regulatory information

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by those regulations.

WHMIS 1988 Classification
D2B

Canadian Domestic Substance List (DSL):
- Hexamethylenetetramine
- Oxalic acid
- Sulphamic acid

Canadian Non-Domestic Substance List (NDSL):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
Section 16. Other information

SDS Revision Date 02/22/2019

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:
H228 Flammable solid.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.

The information contained herein is furnished without warranty of any kind. The above information is believed to be correct but does not purport to be all inclusive and should be used only as a guide. Users should make independent determinations of the suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers.

End of Document