

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

Safety Data Sheet

DS1

SDS Revision
Date: 02/22/2019

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.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Oxalic acid CAS Number: 0000144-62-7 Synonyms: Axit oxalic, Oxalic acid	65 - 85	Acute Tox. 4;H312 Acute Tox. 4;H302 Combustible Dust	[1][2]
Sulphamic acid CAS Number: 0005329-14-6 Synonyms: Sulfamic acid, Sulphamic acid	7 - 13	Eye Irrit. 2;H319 Skin Irrit. 2;H315 Aquatic Chronic 3;H412	[1]
Hexamethylenetetramine CAS Number: 0000100-97-0 Synonyms: Hexamethylenetetramine, Methenamine	1 - 5	Flam. Sol. 2;H228 Skin Sens. 1;H317	[1]

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

[1] Substance with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

*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

		Exposure	
CAS No.	Ingredient	Source	Value
0000100-97-0	Hexamethylenetetramine	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0000144-62-7	Oxalic acid	OSHA	TWA 1 mg/m3
		ACGIH	TWA: 1 mg/m3 STEL: 2 mg/m3
		NIOSH	TWA 1 mg/m3 ST 2 mg/m3
		Supplier	No Established Limit
0005329-14-6	Sulphamic acid	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit

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
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Appearance	White Powder Solid
Odor	Odorless
Odor threshold	Not determined
pH	(8 % solution): < 1
Melting point / freezing point	Not Available

Safety Data Sheet

DS1

SDS Revision
Date: 02/22/2019

Initial boiling point and boiling range	No information available
Flash Point	Not Available
Evaporation rate (Ether = 1)	Not Available
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: Not Available Upper Explosive Limit: Not Available
Vapor pressure (Pa)	Not Available
Vapor Density	Not Available
Specific Gravity	Not Available
Solubility in Water	(water, 10 °C) ok. 87 g/l
Partition coefficient n-octanol/water (Log Kow)	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available
Viscosity (cSt)	Not applicable
Bulk Density	(25 °C): ok. 900 g/cm ³
Decomposition Temperature	185-190 °C
Sublimation temperature	157 °C

9.2. Other information

No other relevant information.

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

Safety Data Sheet DS1

SDS Revision
Date: 02/22/2019

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).

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

Carcinogen Data

CAS No.	Ingredient	Source	Value
0000100-97-0	Hexamethylenetetramine	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0000144-62-7	Oxalic acid	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0005329-14-6	Sulphamic acid	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

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

Safety Data Sheet DS1

SDS Revision
Date: 02/22/2019

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

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

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

	TDG (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	Not Regulated	Not Regulated	Not Regulated
14.2. UN proper shipping name	Not Regulated	Not Regulated	Not Regulated
14.3. Transport hazard class(es)	TDG Hazard Class: Not Applicable	IMDG: Not Applicable Sub Class: Not Applicable	Air Class: Not Applicable
14.4. Packing group	Not Applicable	Not Applicable	Not Applicable
14.5. Environmental hazards			
IMDG	Marine Pollutant: No;		
14.6. Special precautions for user	Not Applicable		

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.

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