

SECTION 1: Identification

1.1. Product identifier

Product form : Mixture
 Trade name : Duel
 Product code : ASC# 6519
 Product group : Trade product

1.2. Recommended use and restrictions on use

Recommended use : For use in industrial, agricultural, veterinary and food processing facilities

1.3. Supplier

Agrisan
 519-848-2453, 451 Smith Street
 P.O. Box 69
 N0G1A0 Arthur, ON - Canada

1.4. Emergency telephone number

Emergency number : 1-877-731-7194 (Monday-Friday 8:00am-4:30pm ET)
 In a medical emergency, call local POISON CENTRE

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification (GHS CA)

Skin corrosion/irritation, Category 2 H315 Causes skin irritation.
 Serious eye damage/eye irritation, Category 1 H318 Causes serious eye damage.
 Carcinogenicity, Category 2 H351 Suspected of causing cancer.

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS CA labelling

Hazard pictograms (GHS CA) :



Signal word (GHS CA) : Danger

Hazard statements (GHS CA) : H315 - Causes skin irritation.
 H318 - Causes serious eye damage.
 H351 - Suspected of causing cancer.

Precautionary statements (GHS CA) : P201 - Obtain special instructions before use.
 P202 - Do not handle until all safety precautions have been read and understood.
 P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
 P264 - Wash hands, forearms and face thoroughly after handling.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
 P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with 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.
 P310 - Immediately call a POISON CENTER or doctor.
 P321 - Specific treatment (see supplemental first aid instruction on this label).
 P363 - Wash contaminated clothing before reuse.
 P405 - Store locked up.
 P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

No additional information available

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2.4. Unknown acute toxicity (GHS CA)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Chemical name / Synonyms	Product identifier	%	Classification (GHS CA)
Tetrasodium Ethylenediaminetetracetate	Tetrasodium EDTA	(CAS-No.) 64-02-8	1-5	Eye Dam. 1, H318
Disodium metasilicate	Sodium Metasilicate Pentahydrate	(CAS-No.) 6834-92-0	1-5	Acute Tox. 4 (Oral), H302 Skin Corr. 1, H314 Eye Dam. 1, H318 STOT SE 3, H335
Trisodium Nitrotriacetate	Trisodium Nitrotriacetate	(CAS-No.) 5064-31-3	0.1-1	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Carc. 2, H351

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.
First-aid measures general : IF exposed or concerned: Get medical advice/attention.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after skin contact : Irritation.
Symptoms/effects after eye contact : Serious damage to eyes.

4.3. Immediate medical attention and special treatment, if necessary

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Unsuitable extinguishing media

No additional information available

5.3. Specific hazards arising from the hazardous product

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.4. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No additional information available

6.2. Methods and materials for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information : Dispose of materials or solid residues at an authorized site.

6.3. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection"

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Avoid contact with skin and eyes.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Appearance : Clear, colourless liquid.
- Colour : No data available
- Odour : No data available
- Odour threshold : No data available
- pH : > 11.5
- Relative evaporation rate (butylacetate=1) : No data available
- Relative evaporation rate (ether=1) : No data available
- Melting point : Not applicable
- 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) : Not applicable
- Vapour pressure : No data available
- Vapour pressure at 50 °C : No data available
- Relative density : 1.04
- Solubility : No data available
- Partition coefficient n-octanol/water (Log Pow) : No data available

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Explosive limits : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.
 Chemical stability : Stable under normal conditions.
 Possibility of hazardous reactions : No dangerous reactions known under normal conditions of use.
 Conditions to avoid : None under recommended storage and handling conditions (see section 7).
 Incompatible materials : No additional information available
 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 Hardening time: : No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
 Acute toxicity (dermal) : Not classified
 Acute toxicity (inhalation) : Not classified

Disodium metasilicate (6834-92-0)	
LD50 oral rat	1152 – 1349 mg/kg bodyweight (Rat, Male / female, Experimental value, Oral)
LD50 dermal rat	> 5000 mg/kg bodyweight (EPA OPPTS 870.1200: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
LC50 inhalation rat (mg/l)	> 2.06 mg/l (EPA OPPTS 870.1300: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours), 14 day(s))
ATE CA (oral)	1152 mg/kg bodyweight

Tetrasodium Ethylenediaminetetracetate (64-02-8)	
LD50 oral rat	> 2000 mg/kg (Rat, Oral)

Trisodium Nitritotriacetate (5064-31-3)	
LD50 oral rat	1740 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 2000 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Experimental value, Dermal)
LC50 inhalation rat (mg/l)	> 5 mg/l (4 h, Rat, Male, Experimental value, Inhalation (aerosol), 14 day(s))
ATE CA (oral)	1740 mg/kg bodyweight

Skin corrosion/irritation : Causes skin irritation.
 pH: > 11.5
 Serious eye damage/irritation : Causes serious eye damage.
 pH: > 11.5
 Respiratory or skin sensitization : Not classified
 Germ cell mutagenicity : Not classified
 Carcinogenicity : Suspected of causing cancer.
 Reproductive toxicity : Not classified
 STOT-single exposure : Not classified

Disodium metasilicate (6834-92-0)	
STOT-single exposure	May cause respiratory irritation.

: Not classified

STOT-repeated exposure

Aspiration hazard : Not classified

Symptoms/effects after skin contact : Irritation.
 Symptoms/effects after eye contact : Serious damage to eyes.

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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

Disodium metasilicate (6834-92-0)	
LC50 fish 1	210 mg/l (ISO 7346-1, 96 h, Danio rerio, Semi-static system, Fresh water, Experimental value)
EC50 Daphnia 1	1700 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)

Tetrasodium Ethylenediaminetetracetate (64-02-8)	
LC50 fish 1	121 mg/l (96 h, Lepomis macrochirus, Literature study, Soft water)
EC50 Daphnia 1	625 mg/l (24 h, Daphnia magna, Literature study)
Partition coefficient n-octanol/water (Log Pow)	-2.6

Trisodium Nitritotriacetate (5064-31-3)	
LC50 fish 1	114 mg/l (APHA, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)
EC50 Daphnia 1	98 mg/l (96 h, Gammarus sp., Flow-through system, Fresh water, Experimental value)
ErC50 (algae)	> 91.5 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, GLP)
BCF fish 1	1 – 3 (96 h, Brachydanio rerio, Fresh water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	-13.2 – -2.62 (Calculated, 25 °C)
Partition coefficient n-octanol/water (Log Koc)	1.419 (log Koc, SRC PCKOCWIN v2.0, Calculated value)

12.2. Persistence and degradability

Disodium metasilicate (6834-92-0)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

Tetrasodium Ethylenediaminetetracetate (64-02-8)	
Persistence and degradability	Not readily biodegradable in water.
Biochemical oxygen demand (BOD)	< 0.002 g O ₂ /g substance
Chemical oxygen demand (COD)	0.54 – 0.58 g O ₂ /g substance

Trisodium Nitritotriacetate (5064-31-3)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Chemical oxygen demand (COD)	0.625 g O ₂ /g substance

12.3. Bioaccumulative potential

Disodium metasilicate (6834-92-0)	
Bioaccumulative potential	Bioaccumulation: not applicable.

Tetrasodium Ethylenediaminetetracetate (64-02-8)	
Bioaccumulative potential	Not bioaccumulative.
Partition coefficient n-octanol/water (Log Pow)	-2.6

Trisodium Nitritotriacetate (5064-31-3)	
Bioaccumulative potential	Not bioaccumulative.
BCF fish 1	1 – 3 (96 h, Brachydanio rerio, Fresh water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	-13.2 – -2.62 (Calculated, 25 °C)
Partition coefficient n-octanol/water (Log Koc)	1.419 (log Koc, SRC PCKOCWIN v2.0, Calculated value)

12.4. Mobility in soil

Disodium metasilicate (6834-92-0)	
Ecology - soil	No (test) data on mobility of the substance available.

Tetrasodium Ethylenediaminetetracetate (64-02-8)	
Partition coefficient n-octanol/water (Log Pow)	-2.6

Trisodium Nitritotriacetate (5064-31-3)	
Ecology - soil	Highly mobile in soil.

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Trisodium Nitrilotriacetate (5064-31-3)	
Partition coefficient n-octanol/water (Log Koc)	1.419 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Partition coefficient n-octanol/water (Log Pow)	-13.2 – -2.62 (Calculated, 25 °C)

12.5. Other adverse effects

Ozone : Not classified

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

14.1. Basic shipping description

In accordance with TDG

Transportation of Dangerous Goods

UN-No. (TDG) : UN3266
Packing group : II - Medium Danger
TDG Primary Hazard Classes : 8 - Class 8 - Corrosives
Transport document description : UN3266 CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (SODIUM METASILLICATE PENTAHYDRATE), 8, II
Proper Shipping Name (Transportation of Dangerous Goods) : CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. SODIUM METASILLICATE PENTAHYDRATE
Hazard labels (TDG) : 8 - Corrosive substances



TDG Special Provisions : 16 - (1) The technical name of at least one of the most dangerous substances that predominantly contributes to the hazard or hazards posed by the dangerous goods must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(ii)(A) of Part 3 (Documentation). The technical name must also be shown, in parentheses, on a small means of containment or on a tag following the shipping name in accordance with subsections 4.11(2) and (3) of Part 4 (Dangerous Goods Safety Marks).
(2) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a shipping document or on a small means of containment when Canadian law for domestic transport or an international convention for international transport prohibits the disclosure of the technical name:
(a) UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S;
(b) UN1851, MEDICINE, LIQUID, TOXIC, N.O.S;
(c) UN3140, ALKALOID SALTS, LIQUID, N.O.S. or ALKALOIDS, LIQUID, N.O.S;
(d) UN3248, MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S; or
(e) UN3249, MEDICINE, SOLID, TOXIC, N.O.S.
(3) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a small means of containment:
(a) UN2814, INFECTIOUS SUBSTANCE, AFFECTING HUMANS; or
(b) UN2900, INFECTIOUS SUBSTANCE, AFFECTING ANIMALS.

Explosive Limit and Limited Quantity Index : 1 L
Excepted quantities (TDG) : E2
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index : 1 L

14.2. Transport information/DOT

No additional information available

14.3. Air and sea transport

IMDG

UN-No. (IMDG) : 3266
Proper Shipping Name (IMDG) : CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
Transport document description (IMDG) : UN 3266 CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S., 8, II
Class (IMDG) : 8 - Corrosive substances

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Packing group (IMDG) : II - substances presenting medium danger

IATA

UN-No. (IATA) : 3266
Proper Shipping Name (IATA) : Corrosive liquid, basic, inorganic, n.o.s.
Transport document description (IATA) : UN 3266 Corrosive liquid, basic, inorganic, n.o.s., 8, II
Class (IATA) : 8 - Corrosives
Packing group (IATA) : II - Medium Danger

SECTION 15: Regulatory information

15.1. National regulations

Disodium metasilicate (6834-92-0)

Listed on the Canadian DSL (Domestic Substances List)

Tetrasodium Ethylenediaminetetracetate (64-02-8)

Listed on the Canadian DSL (Domestic Substances List)

Trisodium Nitrilotriacetate (5064-31-3)

Listed on the Canadian DSL (Domestic Substances List)

15.2. International regulations

Disodium metasilicate (6834-92-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Tetrasodium Ethylenediaminetetracetate (64-02-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Trisodium Nitrilotriacetate (5064-31-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

SECTION 16: Other information

Revision date : June 30, 2025

Other information : Prepared by Agrisan Inc.

Full text of H-statements:

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.

SDS Canada (GHS)

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.