	Page: 1
SAFETY DATA SHEET	Revision Date: 08/29/2022
	Print Date: 09/11/2023
	SDS Number: 000000274457
Zalta™ MF4420 (US) FLOCCULANT ™ Trademark, Solenis or its subsidiaries or affiliates, registered in various countries 883132	Version: 2.0

SECTION 1. IDENTIFICATION

Product identifier

Trade name : Zalta™ MF4420 (US) FLOCCULANT
™ Trademark, Solenis or its subsidiaries or affiliates,
registered in various countries

Recommended use of the chemical and restrictions on use

Use of the Substance/Mixture : Flocculant

Details of the supplier of the safety data sheet Solenis Canada ULC 942 Brant St. Burlington, ON L7R 3X8 Canada EHSProductSafetyTeam@solenis.com	Emergency telephone number 1-844-SOLENIS (844-765-3647) Product Information Contact your local Solenis representative
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SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations

This material is not considered hazardous under WHMIS 2015.

GHS label elements

This material is not considered hazardous under WHMIS 2015.

Other hazards

Material can create slippery conditions.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture


Components

Chemical name	CAS-No.	Concentration (% w/w)
CITRIC ACID, MONOHYDRATE	5949-29-1	≥ 1.5 - < 5

Actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES


General advice : No hazards which require special first aid measures.

		Page: 2
SAFETY DATA SHEET		Revision Date: 08/29/2022
		Print Date: 09/11/2023
		SDS Number: 000000274457
Zalta™ MF4420 (US) FLOCCULANT ™ Trademark, Solenis or its subsidiaries or affiliates, registered in various countries 883132		Version: 2.0

If inhaled	: If breathed in, move person into fresh air. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	: First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
In case of eye contact	: Remove contact lenses. Protect unharmed eye.
If swallowed	: Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea) irritation (nose, throat, airways)
Notes to physician	: No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray Foam
Specific hazards during firefighting	: Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	: Carbon monoxide Carbon dioxide (CO ₂) Nitrogen oxides (NO _x) acid vapors Ammonia
Specific extinguishing methods	: Product is compatible with standard fire-fighting agents.
Further information	: Material can create slippery conditions. Water may cause extremely slippery conditions. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for firefighters	: In the event of fire, wear self-contained breathing apparatus.


		Page: 3
SAFETY DATA SHEET		Revision Date: 08/29/2022
		Print Date: 09/11/2023
		SDS Number: 000000274457
Zalta™ MF4420 (US) FLOCCULANT ™ Trademark, Solenis or its subsidiaries or affiliates, registered in various countries 883132		Version: 2.0

SECTION 6. ACCIDENTAL RELEASE MEASURES

- | | |
|---|--|
| Personal precautions,
protective equipment and
emergency procedures | : Material can create slippery conditions.
Avoid dust formation.
Avoid breathing dust.
Persons not wearing protective equipment should be excluded
from area of spill until clean-up has been completed.
Comply with all applicable federal, state, and local regulations. |
| Environmental precautions | : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform
respective authorities. |
| Methods and materials for
containment and cleaning up | : For small spills, quickly contain and remove the spilled
material using absorbent pads, socks, kitty litter, sawdust etc,
then appropriately dispose. Do not leave absorbents to sit
overnight, as they will become hard and difficult to remove.
The remaining residue or film can be treated with dilute
caustic (2%) or dilute liquid bleach (2–5%), allowed to soak for
up to one hour, and clean with warm water (between 49C –
54C (120F – 130 F)) or flushed to a sewer using high volumes
of water taking into account local guidelines.
Pick up and arrange disposal without creating dust.
Keep in suitable, closed containers for disposal. |

SECTION 7. HANDLING AND STORAGE

- | | |
|--|---|
| Advice on protection against
fire and explosion | : Take measures to prevent the build up of electrostatic charge.
Provide appropriate exhaust ventilation at places where dust
is formed. |
| Advice on safe handling | : Avoid spillage on floor as the product can become very
slippery.
Avoid dust formation.
Smoking, eating and drinking should be prohibited in the
application area.
For personal protection see section 8. |
| Conditions for safe storage | : Containers which are opened must be carefully resealed and
kept upright to prevent leakage.
Electrical installations / working materials must comply with
the technological safety standards. |
| Materials to avoid | : No materials to be especially mentioned. |
| Further information on
storage stability | : No decomposition if stored and applied as directed. |

		Page: 4
SAFETY DATA SHEET		Revision Date: 08/29/2022
		Print Date: 09/11/2023
		SDS Number: 000000274457
Zalta™ MF4420 (US) FLOCCULANT ™ Trademark, Solenis or its subsidiaries or affiliates, registered in various countries 883132		Version: 2.0

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures : Provide appropriate exhaust ventilation at places where dust is formed.
General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Safety glasses

Skin and body protection : Wear as appropriate:
Safety shoes
Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : Avoid breathing dust.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : granular

Colour : white, light yellow

Odour : No data available

Odour Threshold : No data available


pH : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : No data available

Flash point : No data available


Evaporation rate : No data available

 SOLENIS <small>Strong bonds. Trusted solutions.</small>		Page: 5
SAFETY DATA SHEET		Revision Date: 08/29/2022
		Print Date: 09/11/2023
		SDS Number: 000000274457
Zalta™ MF4420 (US) FLOCCULANT ™ Trademark, Solenis or its subsidiaries or affiliates, registered in various countries 883132		Version: 2.0

Flammability (solid, gas)	: No data available
	Not combustible Dust
Self-ignition	: No data available
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Relative density	: No data available
Density	: No data available
Bulk density	: 500 - 750 g/l
Solubility(ies)	
Water solubility	: soluble
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Decomposition temperature	: No data available
Viscosity	
Viscosity, dynamic	: 800 - 1,100 mPa.s (20 °C)
Viscosity, kinematic	: No data available
Oxidizing properties	: No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No decomposition if stored and applied as directed.
Chemical stability	: Stable under recommended storage conditions.
Possibility of hazardous reactions	: Product will not undergo hazardous polymerization.
Conditions to avoid	: Heat, flames and sparks.
	Keep away from heat, flame, sparks and other ignition

 Strong bonds. Trusted solutions.		Page: 6
SAFETY DATA SHEET		Revision Date: 08/29/2022
		Print Date: 09/11/2023
		SDS Number: 000000274457
Zalta™ MF4420 (US) FLOCCULANT ™ Trademark, Solenis or its subsidiaries or affiliates, registered in various countries 883132		Version: 2.0

sources.

Incompatible materials : Acids
Chlorine
Metals
nitrates
Strong bases
Strong oxidizing agents
strong reducing agents

Hazardous decomposition products : Carbon monoxide
Carbon dioxide (CO₂)
Nitrogen oxides (NO_x)
acid vapors
Ammonia

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified based on available information.

Components:

CITRIC ACID, MONOHYDRATE:

Acute oral toxicity : LD50 (Rat): 3 g/kg

Skin corrosion/irritation

Not classified based on available information.

Components:

CITRIC ACID, MONOHYDRATE:

Result : Slightly irritating to skin

Serious eye damage/eye irritation

Not classified based on available information.


Product:

Remarks : Unlikely to cause eye irritation or injury.
Product dust may be irritating to eyes, skin and respiratory system.

Components:

CITRIC ACID, MONOHYDRATE:

Result : Severely irritating to eyes

 Strong bonds. Trusted solutions.		Page: 7
SAFETY DATA SHEET		Revision Date: 08/29/2022
		Print Date: 09/11/2023
		SDS Number: 000000274457
Zalta™ MF4420 (US) FLOCCULANT ™ Trademark, Solenis or its subsidiaries or affiliates, registered in various countries 883132		Version: 2.0

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

Components:

CITRIC ACID, MONOHYDRATE:

Assessment : May cause respiratory irritation.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

CITRIC ACID, MONOHYDRATE:


Toxicity to fish : LC50 (Carassius auratus (goldfish)): 440 - 706 mg/l
Exposure time: 96 h

Persistence and degradability

No data available

Bioaccumulative potential

No data available

		Page: 8
SAFETY DATA SHEET		Revision Date: 08/29/2022
		Print Date: 09/11/2023
		SDS Number: 000000274457
Zalta™ MF4420 (US) FLOCCULANT ™ Trademark, Solenis or its subsidiaries or affiliates, registered in various countries 883132		Version: 2.0

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.

Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.


National Regulations

TDG

Not regulated as a dangerous good

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

		Page: 9
SAFETY DATA SHEET		Revision Date: 08/29/2022
		Print Date: 09/11/2023
		SDS Number: 000000274457
Zalta™ MF4420 (US) FLOCCULANT ™ Trademark, Solenis or its subsidiaries or affiliates, registered in various countries 883132		Version: 2.0

SECTION 15. REGULATORY INFORMATION

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

TCSI	: On the inventory, or in compliance with the inventory
TSCA	: All substances listed as active on the TSCA inventory
AICS	: On the inventory, or in compliance with the inventory
DSL	: All components of this product are on the Canadian DSL
ENCS	: On the inventory, or in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory

Canadian lists

No substances are subject to a Significant New Activity Notification.


SECTION 16. OTHER INFORMATION

Further information

Revision Date : 08/29/2022

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National

		Page: 10
SAFETY DATA SHEET		Revision Date: 08/29/2022
		Print Date: 09/11/2023
		SDS Number: 000000274457
Zalta™ MF4420 (US) FLOCCULANT ™ Trademark, Solenis or its subsidiaries or affiliates, registered in various countries 883132		Version: 2.0

Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Sources of key data used to compile the Safety Data Sheet

Key literature references and sources of data

SOLENIS Internal data

SOLENIS internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. This SDS has been prepared by the Solenis Environmental Health and Safety Department.

CA / EN