

SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product: Florissant 830
 Product No:
 Product Use: Cut Flower Conditioner
 Restrictions of Use: Refer to Section 15

New Zealand Supplier: Horticulture Ltd
 Address: 10 Firth Street
 Drury, 2113

Telephone: +64 9 294 8453
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New Zealand: **0800 764 766 (National Poison Centre)**

Date of SDS Preparation: 24 January 2023

Section 2. Hazards Identification

Classified as hazardous according to Regulation (EC) No. 1272/2008 [CLP] which meets New Zealand jurisdiction criteria as per EPA Hazardous Substances (Safety Data Sheets) Notice 2017.

EPA Approval No: Additives, Process Chemicals and Raw Materials (subsidiary) – HSR002503

Pictograms



Signal Word: **WARNING**

GHS Classification and Category	Hazard Code	Hazard Statement
Skin sensitisation Cat. 1	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment chronic Cat. 3	H412	Harmful to aquatic life with long lasting effects.

Prevention Code Prevention Statement

P103	Read label before use.
P261	Avoid breathing dust, fumes, gas, mist, vapours or spray.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective clothing as detailed in Section 8.

Response Code	Response Statement
P363	Wash contaminated clothing before reuse.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

Storage Code	Storage Statement
None allocated	

Disposal Code	Disposal Statement
P501	Triple rinse container. Cleaned packaging maybe offered for recycling or landfill in accordance with local regulations. Dispose of unwanted product as a hazardous material according to Local Regulations.

Section 3. Composition / Information on Ingredients

Ingredients	Wt%	CAS NUMBER.
Citric Acid	2.5 - <10	77-92-9
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol- ATP ATP13 3-one (3:1) 1	0.0015 - <0.025	55965-84-9

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes	Rinse eyes thoroughly with lukewarm water for at least 15 minutes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.
If on Skin	May cause an allergic skin reaction. In case of contact it is recommended to clean the affected area thoroughly with water and neutral soap. In case of changes to the skin (stinging, redness, rashes, blisters), If skin irritation or rash occurs: Get medical advice/attention.
If Swallowed	Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Rinse out the mouth and throat, as they may have been affected during ingestion. Keep the person affected at rest. Seek medical assistance if needed.
If Inhaled	Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed

Symptoms: Exposure to isothiazolinones may cause allergic skin reaction in susceptible people. Skin reactions usually occur after 24 hours or more after exposure. Sometimes mucosal irritation and respiratory problems may occur.

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable
Hazards from combustion products	As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

Suitable Extinguishing media	In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder).
Precautions for firefighters and special protective clothing	Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,) in accordance with Directive 89/654/EC. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.
HAZCHEM CODE	None allocated

Section 6. Accidental Release Measures

Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Evacuate the area and keep out those who do not have protection.

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

Section 7. Handling and Storage

Handling

- Read label before use.
- Avoid breathing dust, fumes, gas, mist, vapours or spray.
- Contaminated work clothing should not be allowed out of the workplace.
- Avoid release to the environment.
- Wear protective clothing as detailed in Section 8.
- Do not eat or drink during the process.
- Keep containers hermetically sealed.
- Avoid leakages from the container.
- Maintain order and cleanliness where dangerous products are used.
- It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on conditions and materials that should be avoided.
- Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

Storage

- Store away from incompatible materials listed in Section 10.
- Keep out of reach of children.
- Storage temp: Minimum: 4°C Maximum: 30°C
- Maximum time: 24 months.
- Avoid sources of heat, radiation, static electricity and contact with food.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA		STEL	
	ppm	mg/m ³	ppm	mg/m ³
Product Name: Florissant 830 Date of SDS: 24 January 2023	SDS Prepared by: Technical Compliance Consultants (NZ) Ltd www.techcomp.co.nz Tel: 64 9 475 5240			

No ingredients have exposure limits

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices APRIL 2022 13TH EDITION.

Engineering Controls

Ensure adequate ventilation is available.

Personal Protective Equipment



Eyes	Not required
Hands and Skin	Protective gloves against minor risks. Work clothing.
Respiratory	The use of protection equipment will be necessary if a mist forms or if the occupational exposure limits are exceeded.

Section 9 Physical and Chemical Properties

Appearance	Liquid
Colour	Colourless
Odour	Odourless
Odour Threshold	Not available
pH	2.4
Boiling Point	100°C
Melting/Freezing Point	Not available
Flash Point	Not available
Flammability	Not flammable
Upper and Lower Explosive Limits	Not available
Vapour Pressure	2350 Pa @ 20°C 12380.66 Pa (12,38 kPa) @ 50°C
Density @ 20°C	1252 kg/m ³
Relative Density @ 20°C	Not available
Solubilities	Not available
Partition Coefficient:	Not available
Auto-ignition Temperature	421°C
Decomposition Temperature	Not available
Kinematic Viscosity	Not available
Particle Characteristics	Not available

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Conditions to Avoid	None known.
Hazardous Reactions	Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.
Incompatible Materials	Oxidising materials, alkalis or strong bases.
Hazardous Decomposition	Depending on the decomposition complex mixtures of chemical

Products	substances can be released: carbon dioxide (CO ₂), carbon monoxide and other organic compounds.
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Section 11 Toxicological Information

Acute Effects:

Swallowed	Not applicable.
Dermal	Not applicable.
Inhalation	Not triggered however it contains substances classified as dangerous if inhaled. Prolonged inhalation of the product is corrosive to mucous membranes and the upper respiratory tract.
Eye	Not applicable.
Skin	May cause an allergic skin reaction.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Not applicable.

Acute Toxicity Estimate (ATE mix):

	ATE mix	Ingredient(s) of unknown toxicity
Oral	>2000 mg/kg (Calculation method)	N/A
Dermal	>2000 mg/kg (Calculation method)	N/A
Inhalation	>20 mg/L (4 h) (Calculation method)	N/A

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
	Route	Dose	
Citric Acid CAS: 77-92-9 EC: 201-069-1	ID50 oral	5400 mg/kg	Mouse
	ID50 dermal	2001 mg/kg	Rat
	IC50 inhalation	>5 mg/L (4 h)	
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) CAS: 55965-84-9 EC: Non-applicable	ID50 oral	64 mg/kg	Rat
	ID50 dermal	87,12 mg/kg	Rabbit
	IC50 inhalation	0,33 mg/L (4 h)	Rat

Section 12. Ecotoxicological Information

Harmful to aquatic life with long lasting effects.

Acute Toxicity:

Identification	Concentration		Species	Genus
	Route	Dose		
Citric Acid CAS: 77-92-9 EC: 201-069-1	LC50	1516 mg/L (96 h)	<i>Lepomis macrochirus</i>	Fish
	EC50	160 mg/L (48 h)	N/A	Crustacean
	EC50	Non-applicable		
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) CAS: 55965-84-9 EC: Non-applicable	LC50	0.28 mg/L (96 h)	<i>Lepomis macrochirus</i>	Fish
	EC50	0.16 mg/L (48 h)	<i>Daphnia magna</i>	Crustacean
	EC50	0.018 mg/L (72 h)	<i>Selenastrum capricornutum</i>	Algae

Persistence and degradability:

Identification	Degradability		Biodegradability	
	Citric Acid CAS: 77-92-9 EC: 201-069-1	BOD5	Non-applicable	Concentration
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	97 %

Bioaccumulative Potential:

Identification	Bioaccumulation potential	
	Citric Acid CAS: 77-92-9 EC: 201-069-1	BCF
	Pow Log	-1.55
	Potential	Low

Mobility of Soil

Identification	Absorption/desorption		Volatility	
	Citric Acid CAS: 77-92-9 EC: 201-069-1	Koc	Non-applicable	Henry
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	2,045E-2 N/m (350,93 °C)	Moist soil	Non-applicable

Do not allow to enter waterways.

Section 13. Disposal Considerations

Disposal Method:

Triple rinse container. Cleaned packaging maybe offered for recycling or landfill in accordance with local regulations. Dispose of unwanted product as a hazardous material according to Local Regulations.

Precautions and methods to avoid:

Do not allow to enter into surface water or drains where possible.

Section 14 Transport Information

This product is NOT classified as a Dangerous Good for transport in NZ ; NZS 5433:2020 and SNZ HB 5433:2021

Section 15 Regulatory Information

Classified as hazardous according to Regulation (EC) No. 1272/2008 [CLP] which meets New Zealand jurisdiction criteria as per EPA Hazardous Substances (Safety Data Sheets) Notice 2017.

EPA Approval Code: Additives, Process Chemicals and Raw Materials (subsidiary) – HSR002503

Trigger quantities:

HSWA & EPA Controls	Trigger Quantity
Certified Handler	Not required
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	1000L
Emergency Response Plan	1000L
Secondary Containment	1000L
Restriction of Use	None

Glossary

Cat	Category
EC ₅₀	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
LC ₅₀	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD ₅₀	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2022 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2020
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer

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Please contact the New Zealand distributor, if further information is required.

Issue Date:

24 January 2023

Review Date:

24 January 2028