

MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT IDENTIFIER		Final Flush: Regular, Blueberry, Strawberry, Piña Colada		WHMIS CLASSIFICATION		D-2B	
PRODUCT USE		Media Flush Solution					
MANUFACTURERS NAME		Greenstar Plant Products Inc.		SUPPLIERS NAME			
STREET ADDRESS		9430-198 th Street		STREET ADDRESS			
CITY	Langley	PROVINCE	BC	CITY		PROVINCE	
POSTAL CODE	V1M 3C8	EMERGENCY TELEPHONE	604-882-7699	POSTAL CODE		EMERGENCY TELEPHONE	
DATE	May 4, 2010	PREPARED BY	Greenstar Plant Products Inc.		PHONE NUMBER		

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	%	CAS	LD ₅₀ OF INGREDIENT	LC ₅₀ OF INGREDIENT
Citric Acid	0.1-1	77-92-9	LD ₅₀ , 3000 mg/kg (oral, rat)	NAV
Ascorbic acid	0.1-1	50-81-7	LD ₅₀ , 3367 mg/kg (oral, rat)	NAV

SECTION 3 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW Expected to be a moderate eye irritant and mild skin irritant (citric acid).	
WHMIS SYMBOL(S):	NAV
EFFECTS OF ACUTE EXPOSURE TO PRODUCT	
EYE CONTACT	Expected to cause mild to moderate eye irritation
SKIN CONTACT	Expected to be a mild skin irritant & possible skin sensitizer
INHALATION	Inhalation of mists is expected to cause mild respiratory irritation
INGESTION	Citric acid is present in citrus fruits (lemons contain 4-8% citric acid). Ascorbic acid (vitamin C) is also a natural ingredient in citrus fruits. Ingestion of large amounts of this product may cause stomach pain and vomiting.
EFFECTS OF CHRONIC EXPOSURE TO PRODUCT	
Ascorbic acid: some evidence of reproductive toxicity and mutation in yeasts, bacteria and human somatic cells. May be a skin sensitizer	

SECTION 4 – FIRST AID MEASURES

EYE CONTACT	Flush eyes thoroughly while holding both upper and lower eye lids for a minimum of 15 minutes. Obtain medical attention if irritation occurs/persists
SKIN CONTACT	Remove contaminated clothing. Wash affected area thoroughly with soap and rinse well with water. Launder contaminated clothes before wearing. Obtain medical attention if irritation occurs/persists
INHALATION	Move victim to fresh air. Obtain medical if irritation occurs/persists
INGESTION	If ingested, do not induce vomiting - give a glass of water to dilute material. Never give anything by mouth to an unconscious person. If vomiting occurs, have victim lean forward with head down to avoid breathing in vomit, rinse mouth. Seek medical attention.

FINAL FLUSH**SECTION 5 – FIRE FIGHTING MEASURES**

FLAMMABLE	Material not flammable	IF YES, UNDER WHAT CONDITIONS?		NAP	
MEANS OF EXTINCTION	For fires involving this product, water, fog, carbon dioxide, foam or dry chemical may be used				
FLASHPOINT & METHOD	NAP	UPPER FLAMMABLE LIMIT	NAP	LOWER FLAMMABILITY LIMIT	NAP
AUTO IGNITION TEMPERATURE	NAP	SENSITIVITY TO IMPACT	NAP	SENSITIVITY TO STATIC DISCHARGE	NAP
HAZARDOUS COMBUSTION PRODUCTS	Incomplete combustion may produce irritating fumes and acrid smoke				

SECTION 6 – ACCIDENTAL RELEASE MEASURES

LEAK & SPILL PROCEDURES	Cleanup personnel should wear personal protective equipment as necessary to prevent skin/eye contact. Place into suitable container for reclamation or disposal. Damp mop any residues. Dispose of in accordance with Federal, Provincial and municipal waste regulations.
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SECTION 7 – HANDLING AND STORAGE

HANDLING PROCEDURES & EQUIPMENT	Avoid eye and skin contact. Avoid inhalation of mists or vapours.
STORAGE REQUIREMENTS	Store in original containers in a cool dry location.

SECTION 8 – EXPOSURE CONTROL / PERSONAL PROTECTION

EXPOSURE LIMITS	NAP
ENGINEERING CONTROLS	General mechanical ventilation is adequate, avoid splashing.
PERSONAL PROTECTIVE EQUIPMENT	
GLOVES	Water resistant rubber (butyl), or plastic gloves (PVC)
RESPIRATOR	Should not be needed under normal conditions of use. If mists are produced, Use NIOSH approved respirator and particulate cartridges
EYE PROTECTION	Chemical goggles
FOOTWEAR	Work boots/rubber boots
CLOTHING	Long sleeve shirt and pants.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Liquid	ODOUR & APPEARANCE	Regular: blue Blueberry: dark blue Strawberry: red Piña Colada: orange	ODOUR THRESHOLD	NAP
EVAPORATION RATE	NAV	BOILING POINT	NAV	FREEZING PT	NAV
PH	2.55	COEFFICIENT OF WATER/OIL DISTRIBUTION	NAV	SOLUBILITY IN WATER	Product is a solution

FINAL FLUSH**SECTION 10 – STABILITY AND REACTIVITY**

CHEMICAL STABILITY		
√ YES	Stable under normal conditions of use	
NO	UNDER WHAT CONDTITIONS?	
INCOMPATABILITY WITH OTHER SUBSTANCES		
√ YES	INCOMPATIBLE SUBSTANCES	Avoid contact with strong bases
NO		
REACTIVE		
YES	UNDER WHAT CONDITIONS?	
√ NO	Product not reactive	
HAZARDOUS DECOMPOSITION PRODUCTS	Carbon oxides	

SECTION 11 – TOXICOLOGICAL INFORMATION

EFFECTS OF ACUTE EXPOSURE	LD ₅₀ Citric acid: 3000 mg/kg (oral, rat) LD ₅₀ Ascorbic acid: 3367 mg/kg (oral, mouse)
EFFECTS OF CHRONIC EXPOSURE	Ascorbic & citric acid have both been investigated as skin sensitizers
IRRITANCY OF PRODUCT	Expected to be an eye, skin and respiratory irritant
RESPIRATORY SENSITIZATION	NAV
SKIN SENSITIZATION	Ascorbic & citric acid have both been investigated as skin sensitizers
CARCINOGENICITY - IARC	Citric & ascorbic acid have not been evaluated by IARC
CARCINOGENICITY - ACGIH	There are no listings for citric or ascorbic acid
REPRODUCTIVE TOXICITY	Ascorbic acid: some evidence in rodents.
TERATOGENICITY	NAV
MUTAGENICITY	Ascorbic acid shows reproductive toxicity and mutation in yeasts, bacteria and human somatic cells.
EMBRYOTOXICITY	Ascorbic acid: some evidence in rodents
SYNERGISTIC PRODUCTS/EFFECTS	NAV

SECTION 12 – ECOLOGICAL INFORMATION

ECOTOXICITY	Aquatic Toxicity Not acutely toxic for fish (carp) or crustacean (crab)	Terrestrial toxicity NAV
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FINAL FLUSH

SECTION 13 – DISPOSAL CONSIDERATIONS

WASTE DISPOSAL	Dispose of in accordance with Federal, Provincial and Municipal government waste regulations. May be acceptable to dispose of in a chemical landfill site.
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SECTION 14 – TRANSPORT INFORMATION

SHIPPING INFORMATION	
TDG	Not regulated for transport
DOT	Not regulated for transport

SECTION 15 – REGULATORY INFORMATION

WHMIS CLASSIFICATION	D-2B (eye and skin irritant)	OSHA	
SERA		TSCA	

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by CPR

SECTION 16 – OTHER INFORMATION

As of the date of this document, the foregoing information is believed to be accurate and is provided in good faith to comply with applicable laws. However, no warranty or representation of law or fact, with respect to such information is intended or given.