

# MATERIAL SAFETY DATA SHEET

## SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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

## SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

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

## SECTION 3 – HAZARDS IDENTIFICATION

<b>EMERGENCY OVERVIEW</b> Expected to be a moderate eye irritant and mild skin irritant (citric acid).	
<b>WHMIS SYMBOL(S):</b>	NAV
<b>EFFECTS OF ACUTE EXPOSURE TO PRODUCT</b>	
<b>EYE CONTACT</b>	Expected to cause mild to moderate eye irritation
<b>SKIN CONTACT</b>	Expected to be a mild skin irritant & possible skin sensitizer
<b>INHALATION</b>	Inhalation of mists is expected to cause mild respiratory irritation
<b>INGESTION</b>	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.
<b>EFFECTS OF CHRONIC EXPOSURE TO PRODUCT</b>	
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

<b>EYE CONTACT</b>	Flush eyes thoroughly while holding both upper and lower eye lids for a minimum of 15 minutes. Obtain medical attention if irritation occurs/persists
<b>SKIN CONTACT</b>	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
<b>INHALATION</b>	Move victim to fresh air. Obtain medical if irritation occurs/persists
<b>INGESTION</b>	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**

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

**SECTION 6 – ACCIDENTAL RELEASE MEASURES**

<b>LEAK &amp; SPILL PROCEDURES</b>	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**

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

**SECTION 8 – EXPOSURE CONTROL / PERSONAL PROTECTION**

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

**SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

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

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

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

**SECTION 11 – TOXICOLOGICAL INFORMATION**

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

**SECTION 12 – ECOLOGICAL INFORMATION**

<b>ECOTOXICITY</b>	<b>Aquatic Toxicity</b> Not acutely toxic for fish (carp) or crustacean (crab)	<b>Terrestrial toxicity</b> NAV
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**FINAL FLUSH**

**SECTION 13 – DISPOSAL CONSIDERATIONS**

<b>WASTE DISPOSAL</b>	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**

<b>TDG</b>	Not regulated for transport
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<b>DOT</b>	Not regulated for transport
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**SECTION 15 – REGULATORY INFORMATION**

<b>WHMIS CLASSIFICATION</b>	D-2B (eye and skin irritant)
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<b>OSHA</b>	
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<b>SERA</b>	
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<b>TSCA</b>	
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*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.*