

## MATERIAL SAFETY DATA SHEET

### SECTION 1 – IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name	Free Flow	
Manufacturer's Product Code	4051	
Major Recommended Uses	For use with Bio Hygenic Bio Amp for treatment of industrial and commercial waste.	
Supplier's Details	BioHygenic CHEMSEARCH (Division of NCHA Australia Pty Ltd) 5-9 Ralph Street Alexandria NSW 2015	Office: (02) 9669 0260 Fax Number: (02) 9693 1562 Emergency Telephone Number: 0401 718 872
Date of Issue	May 2011	

### SECTION 2 – HAZARDS IDENTIFICATION

Color	White speckled tan
Physical State	Solid Tablet
Odour	Musty
Potential Health Effects	None under normal operating conditions
Principle Route of Exposure	Skin contact, Eye contact, Inhalation
Primary Routes of Entry	Inhalation
Acute Effects	
Eyes	Causes eye irritation
Skin	May cause skin irritation
Inhalation	May cause respiratory irritation seen as coughing and sneezing. Inhalation may cause central nervous system effects
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea
Chronic Effects	Kidney injury may occur
Target Organ Effects	Central nervous system, Respiratory system, Heart, Kidney, Eyes, Skin
Aggravated Medical Conditions	Neurological disorders, Respiratory disorders, Heart disease, Kidney disorders, Skin disorders
Potential Environmental Effects	See Section 12 for additional Ecological information

### SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients		
Chemical Entity	CAS No	Proportion
Carboxypeptidase, serine (wheat bran II B-subunit protein moiety reduced)	116469-86-4	1-5
Sodium bicarbonate	144-55-8	5-10
Dextrose (D-Glucose)	50-99-7	15-40
Urea	57-13-6	3-7
Pseudomonas putida	68332-91-2	<0.1
Disodium phosphate, anhydrous	7558-79-4	3-7
Monosodium phosphate, anhydrous	7558-80-7	1-5
Sodium chloride	7647-14-5	1-5
Casein	9000-71-9	3-7
Cellulose	9004-34-6	7-13
Maize starch	9005-25-8	10-30
Bacillus species	NOT APPLICABLE	<0.1

### SECTION 4 – FIRST AID MEASURES

General Advice	Avoid contact with skin, eyes and clothing. Avoid breathing dust.
Eye Contact	Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists.
Skin Contact	Wipe up with absorbent material (e.g. cloth, fleece). Wash off with soap and plenty of water. Get medical attention if irritation develops and persists. Wash contaminated clothing before re-use.
Inhalation	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
Ingestion	Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention if symptoms occur.
Notes to Physician	Treat symptomatically

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### SECTION 5 – FIRE FIGHTING MEASURES

Flash Point:	Does not flash	Method:	Not applicable
Autoignition Temperature:	No information available		
Flammability Limits in Air %:	No information available		
Suitable Extinguishing Media:	Water spray. Carbon dioxide (CO <sub>2</sub> ). Foam. Dry chemical. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.		
Specific Hazards Arising from the Chemical:	Dust may form explosive mixture in air. Material can create slippery conditions.		
Protective Equipment and Precautions for Firefighters:	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.		

### SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use personal protective equipment. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
Environmental Precautions	Do not flush into surface water or sanitary sewer system
Methods for Containment	Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13)
Methods for CleaningUp	Pick up and transfer to properly labeled containers
NeutralizingAgent	Not applicable

### SECTION 7 – HANDLING AND STORAGE

Handling:	Avoid contact with skin, eyes, and clothing. Avoid breathing the dust.
Storage:	Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place away from ignition sources.
Storage Temperature:	Minimum 1°C Maximum 25°C
Storage Conditions:	Indoor X    Outdoor    Heated    Refrigerated

### SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Component	ACGIH TLV	OSHA PEL	NIOSH
Carboxypeptidase, serine (wheat bran II Bsubunit protein moiety reduced)	No data available	No data available	No data available
Sodium bicarbonate	No data available	5 mg/m <sup>3</sup> PNOR (as solid)	No data available
Dextrose (D-Glucose)	No data available	No data available	No data available
Urea	No data available	No data available	No data available
Pseudomonas putida	3 mg/m <sup>3</sup> PNOS (as solid)	5 mg/m <sup>3</sup> PNOR (as solid)	No data available
Disodium phosphate, anhydrous	No data available	5 mg/m <sup>3</sup> PNOR (as solid)	No data available
Monosodium phosphate, anhydrous	No data available	5 mg/m <sup>3</sup> PNOR (as solid)	No data available
Sodium chloride	No data available	5 mg/m <sup>3</sup> PNOR (as solid)	No data available
Casein	No data available	No data available	No data available
Cellulose	: 10 mg/m <sup>3</sup> TWA	: 15 mg/m <sup>3</sup> TWA (total dust); 5 mg/m <sup>3</sup> TWA (respirable fraction)	: 10 mg/m <sup>3</sup> TWA (total dust); 5 mg/m <sup>3</sup> TWA (respirable dust)
Maize starch	: 10 mg/m <sup>3</sup> TWA	: 15 mg/m <sup>3</sup> TWA (total dust); 5 mg/m <sup>3</sup> TWA (respirable fraction)	: 10 mg/m <sup>3</sup> TWA (total dust); 5 mg/m <sup>3</sup> TWA (respirable dust)
Bacillus species	3 mg/m <sup>3</sup> PNOS (as solid)	5 mg/m <sup>3</sup> PNOR (as solid)	No data available

EngineeringMeasures	Ensure adequate ventilation, especially in confined areas.
Personal Protective Equipment	
Eye/Face Protection	Safety glasses with side-shields
Skin Protection	For prolonged or repeated contact, use protective gloves
Respiratory Protection	In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
General Hygiene Considerations	Ensure that eyewash stations and safety showers are close to the workstation location. Wash contaminated clothing before re-use

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### SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid tablet	Viscosity	Granular
Colour	White speckled tan	Odour	Musty
Appearance	Opaque	pH	8.4
Specific Gravity	0.69	Evaporation Rate	Not applicable
Percent Volatile (Volume)	0	VOC Content (%)	0
Vapor Pressure	0	Vapor Density	Not applicable
Solubility (H2O)	Appreciable	Boiling Point/Range	Not applicable

### SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability:	Stable. Hazardous polymerization does not occur
Conditions to Avoid:	Keep away from open flames, hot surfaces, and sources of ignition
Incompatible Products:	Strong oxidizing agents, Strong acids, Strong bases, sodium hypochlorite
Hazardous Decomposition Products:	Carbon oxides, Nitrogen oxides (NOx), Oxides of phosphorus, Phosphorus compounds.
Possibility of Hazardous Reactions:	None under normal processing

### SECTION 11 – TOXICOLOGICAL INFORMATION

Product Information	No information available
Component Information:	
Acute toxicity	No information available
Swallowed	No information available
Eye	No information available
Skin	No information available
Inhaled	No information available
Chronic Toxicity	No information available
Carcinogenicity	There are no known carcinogenic chemicals in this product.

### SECTION 12 – ECOLOGICAL INFORMATION

Product Information	No information available				
Component Information					
Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Carboxypeptidase, serine (wheat bran II B-subunit protein moiety reduced)	no data available	no data available	no data available	no data available	N/A
Sodium bicarbonate	EC50 = 650 mg/L Nitzschia linearis 120 h	LC50 8250-9000 mg/L Lepomis macrochirus 96h	no data available	= 2350 mg/L 48 h	N/A
Dextrose (D-Glucose)	no data available	no data available	no data available	no data available	N/A
Urea	no data available	LC50 16200-18300 mg/L Poecilia reticulata 96h	EC50 = 23914 mg/L 5 min	= 3910 mg/L 48 h > 10000 mg/L 24 h	-1.59 at 25 ° C
Pseudomonas putida	no data available	no data available	no data available	no data available	N/A
Disodium phosphate, anhydrous	no data available	no data available	no data available	no data available	N/A
Monosodium phosphate, anhydrous	no data available	no data available	no data available	no data available	N/A
Sodium chloride	no data available	LC50 4747-7824 mg/L Oncorhynchus mykiss 96 h LC50 5560-6080 mg/L Lepomis macrochirus 96 h LC50 6020-7070 mg/L Pimephales promelas 96 h LC50 6420-6700 mg/L Pimephales promelas 96 h LC50 = 12946 mg/L Lepomis macrochirus 96 h LC50 = 7050 mg/L Pimephales promelas 96h	no data available	340.7 - 469.2 mg/L 48 h = 1000 mg/L 48 h	N/A
Casein	no data available	no data available	no data available	no data available	N/A
Cellulose	no data available	no data available	no data available	no data available	N/A
Maize starch	no data available	no data available	no data available	no data available	N/A
Bacillus species	no data available	no data available	no data available	no data available	N/A

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### SECTION 12 – ECOLOGICAL INFORMATION - Continued

Persistence and Degradability	No information available
Bioaccumulation	No information available
Mobility	No information available

### SECTION 13 – DISPOSAL CONSIDERATIONS

Product Disposal	Dispose of in accordance with local regulations
Container Disposal	Empty containers should be taken for local recycling, recovery or waste disposal

### SECTION 14 – TRANSPORT INFORMATION

ADG	Not regulated
UN Code:	Not applicable

### SECTION 15 - REGULATORY INFORMATION

Poisons Scheduling:	None
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### SECTION 16 – OTHER INFORMATION

Long term animal experiments have shown that any health risks are associated with the level of aromatic and polycyclic constituents in the product. These constituents are removed during the manufacturing process to a level at which no health risks are expected as a result of normal handling.

Prepared By	Tech Services Chemist
Supersedes	Date Feb 2006
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Glossary	No information available
List of References.	No information available

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