



FIRE RETARDANT

KOMODO PERIMETER SHIELD™

SAFETY DATA SHEET

SECTION 1 PRODUCT & COMPANY INFORMATION

1.1 Product Identifier

Product Name	KOMODO PERIMETER SHIELD™
Brand	KOMODO ULTIMATE FIRE SHIELD™
CAS #	NA / mixture

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Water soluble, fire retardant powder.
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1.3 Details of the Supplier of the Safety Data Sheet

Company	Green Polymer Systems PO BOX 320072 Los Gatos, CA 95032
Telephone	888-563-4523
Fax	408-852-3383

1.4 Emergency telephone number

Emergency #	800-424-9300 CHEMTREC
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SECTION 2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Skin irritant, eye irritant

For the full text of the H-statements mentioned in this section, see Section 16.

2.2 GHS Label Elements, including precautionary statements

Hazard Statements	WARNING
H316 : 3	Causes mild skin irritation.
H320 : 2B	Causes eye irritation.

Precautionary Statements

P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust or mist.
P264	Wash skin thoroughly if exposed.
P280	Wear eye/face protection.
P281	Use personal protection equipment as required.
P84	In case of inadequate ventilation wear respiratory protection.
P305 + P351 + P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
P332 + 313	If skin irritation occurs: get medical advice/attention.
P337 + P313	If eye irritation persists: get medical advice/attention.

2.3 Other Hazards

H303	If eye irritation persists: get medical advice/attention.
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For the full text of the H-statements mentioned in this section, see section 16.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Substances**

Formula	Mixture of water soluble organic and inorganic salts.
Hazardous Components	Wt. %
Proprietary nitrogen and phosphate blend*	> 95
Performance additives	< 5

* Components are a Company Trade Secret – Business Confidential. Green Polymer Systems is withholding the specific chemical identity under provision of the OSHA Hazard Communication Rule Trade Secrets (1910.1200(i)(1)). The specific chemical identity will be made available to health professionals in accordance with 29 CFR 1910.1200(i)(1)(2)(3)(4).

SECTION 4 FIRST AID MEASURES**4.1 Description of first aid measures**

If inhaled	Not expected to be an issue. Move person to fresh air.
In case of skin contact	Wash with soap and plenty of water. If irritation occurs, get medical advice/attention.
In case of eye contact	Flush eyes with plenty of fresh water while holding eyelids open. Remove contact lenses if worn. If eye irritation persists, get medical advice/attention.
If swallowed	Do not induce vomiting. Never give anything by mouth to an unconscious person. Flush mouth with water. If conscious give water to further dilute chemical. Consult physician.
4.2 Most important symptoms and effects, both acute and delayed	The most important known symptoms and effects are described in the labelling (see section 2.2) or in Section 11.
4.3 Indication of any immediate medical attention and special treatment needed	No data available

SECTION 5 FIRE FIGHTING MEASURES

5.1 Extinguishing media	Not combustible (use water spray, fog, foam, dry chemicals, CO, or other agents as appropriate for material in surrounding fire).
5.2 Special hazards arising from substance or mixture	Heating and/or burning may liberate small amounts of ammonia, carbon oxides, nitrogen oxides.
5.3 Advice for firefighters	Not combustible (use safety equipment which is suitable for materials in surrounding fire).
5.4 Further information	No data available

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures	Use personal protective equipment. Avoid breathing mist. Ensure adequate ventilation. Evacuate personnel from affected area. For personal protection, see Section 8.
6.2 Environmental precautions	Prevent further leakage or spillage, if safe to do so. Prevent material from entering public sewer system or any waterways. Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.
6.3 Methods and materials for containment and cleaning up.	Confine spilled liquid material and absorb with sand, sawdust, earth or other available solids. Sweep or vacuum up solid material and place in a suitable container for disposal. Avoid generating dust.
6.4 Reference to other sections	See Section 13 for further disposal info.

SECTION 7 HANDLING & STORAGE

7.1 Precautions for safe handling	Wear appropriate protective equipment. Provide adequate ventilation. See Sections 2.2 and 8.
7.2 Conditions for safe storage, including any incompatibles	Keep container tightly sealed when not in use. Use good industrial practices to avoid spills. Exposure to strong bases and/or heat may liberate ammonia.
7.3 Specified end use	Used mainly as a passive fire retardant for dry brush, grasses, and other cellulosic material in fire prone areas.

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SDS v1.3 | Date : 07/13/2017

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SECTION 8 EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control Parameters			
Components with workplace control parameters (Dry product):		ACGIH	OSHA
		10 mg/m ³ TWA inhalable particles	10 mg/m ³ TWA EV inhalable particulate
		3 mg/m ³ TWA respirable particles	3 mg/m ³ TWA EV respirable particulate
Personal Protection Equipment	Respiratory Protection	Respiratory protection not normally required while spraying liquid outdoors. If inadequate ventilation is present while spraying, wear respiratory protection approved for organic mists.	
	(Specify Type)	When handling the powder, where protection from nuisance dusts are desired, use type N95(US) or P1(EN 143) dust masks.	
	Protective Gloves	Wear impervious gloves as necessary to avoid excessive skin contact (i.e. rubber or neoprene)	
	Eye Protection	Protective glasses or goggles in dust areas.	
	Other Protective Equipment	Adequate clothing to minimize direct contact with skin.	
Engineering Measures/Controls	Local Exhaust	Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values.	
	Mechanical (General)	For outdoor application.	
	General Industrial	Do not use, and or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored. Wash hands and face carefully before eating drinking, using tobacco, applying cosmetics, or using toilet.	
	Hygiene Considerations		
	Special	NA	

SECTION 9 PHYSICAL PROPERTIES AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical & Chemical Properties			
a) Appearance	Whitish powder – clear to hazy liquid when diluted	k) Vapor pressure	No data available
b) Odor	None to Mild Amonia	l) Vapor density	No data available
c) Odor threshold	NA	m) Relative density	1.02–1.33–depending on mix ratio
d) pH	6.0 – 7.5 mixed concentrate	n) Water solubility	Completely soluble
e) Melting/freezing point	NA / ~30 °F	o) Partition coefficient n-octanol/water	No data available
f) Initial boiling point	~212 °F	p) Auto ignition temp	None
g) Flash point	No data available	q) Decomposition temp	No data available
h) Evaporation rate	No data available	r) Viscosity	~30–60 cP -depending on mix ratio
i) Flammability	None	s) Explosive properties	No data available
j) Upper/lower flamm limits	No data available	t) Oxidizing properties	No data available

SECTION 10 STABILITY & REACTIVITY

10.1 Reactivity	No data available
10.2 Chemical Stability	Stable under recommended storage conditions
10.3 Possibility of hazardous reactions	None known
10.4 Conditions to avoid	Moisture – Keep container sealed tightly when not in use
10.5 Incompatible materials	Strong bases and alkalis
10.6 Hazardous decomposition products	Ammonia, nitrous oxides, carbon oxides

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SECTION 11 TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects (Undiluted Chemicals)**

Acute toxicity	LD50 Oral (rat) 8471 mg/kg
Inhalation	Liquid not expected to be harmful. Use respirator if adequate ventilation is not possible to keep dust or mist exposure to reasonable levels.
Dermal	Not expected to be an issue. Wash area thoroughly with soap and water if exposed.
Skin corrosion/irritation	May cause mild skin irritation with prolonged exposure.
Serious eye damage/eye irritation	May cause mild irritation with direct contact. Wear eye protection when spraying or handling powder.
Respiratory or skin sensitization	May cause respiratory irritation with heavy exposure. Do not breathe concentrated dust or mist. Wear appropriate respirator as conditions warrant.
Germ cell mutagenicity	No data available
Carcinogenicity	
IARC	No components of this product present at levels $\geq 0.1\%$ is identified as a probable, possible, or confirmed human carcinogen by IARC.
NTP	No components of this product present at levels $\geq 0.1\%$ is identified as a probable, possible, or confirmed human carcinogen by NTP.
OSHA	No components of this product present at levels $\geq 0.1\%$ is identified as a probable, possible, or confirmed human carcinogen by OSHA.
Specific organ toxicity (single exposure)	No data available
Specific organ toxicity (repeated exposure)	No data available
Aspiration hazard	No data available
Additional Information	RTECS: YR6250000 To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12 ECOLOGICAL INFORMATION**12.1 Toxicity**

Toxicity to fish	LC50 – Fathead minnow – 155 mg/l - 96h Rainbow trout -> 85.9 mg/l - 96h OECD Test 203 Guppy -> 17,500 mg/l - 96h
Toxicity to daphnia & other aquatic invertebrates	EC50 – Daphnia Magna (Water flea) – 140 mg/l - 21d Conclusions from individual ingredient listing from manufacturers documents.
12.2 Persistence & degradability	No data available
12.3 Bioaccumulation potential	No data available
12.4 Mobility in soil	No data available
12.5 Results of PBT & vPvP assessment	Not required. Not conducted.
12.6 Other adverse effects	No data available

SECTION 13 DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods**

Product	Incinerate or bury powder in a suitable land fill where permitted by local regulations. Liquid product may be evaporated and treated the same - or contact a licensed disposal facility.
Contaminated packaging	Dispose of a unused product.

SECTION 14 TRANSPORT INFORMATION

DOT (US)	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

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SECTION 15 REGULATORY INFORMATION

SARA 302 Components	No chemicals in this product are subject to the reporting requirements of SARA Title III, section 302.
SARA 313 Components	The following components are subject to reporting levels Established by SARA Title III, section 313: None.
SARA 311/312	No SARA hazards.
California Prop. 65 Components	This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16 OTHER INFORMATION

Full text of H-statements referred to under sections 2 and 3

H316 : 3 Cause mild skin irritation.
H320 : 2B Causes eye irritation.

Hazard pictograms not required per Tables 3.2.5, 3.2.5.1, 3.3.5, 3.3.5.1 of the GHS of Classification and Labeling of Chemicals Fifth Revised Edition.

HMIS Rating	Health hazard	1
	Chronic health hazard	*
	Flammability	0
	Physical hazard	0
NFPA	Health hazard	1
	Fire hazard	0
	Reactivity hazard	0

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