



SAFETY DATA SHEET

SDS REVISION DATE: February 2016

Product ID: GMS2105CN, GMS210515CN,
GMS2105DR, GMS210530DR

GMS Industrial Supply, Inc.
212 Denn Lane, Virginia Beach, VA 23462
(855) GRN-OGER • www.GreenOger.com

24-Hour Emergency Telephone: 1-800-424-9300 CHEMTREC

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION



Tower Trooper

Product Use: Mixture, components for Water Treatment Applications

24 Hour Emergency Response No.:
800-424-9300 CHEMTREC®

GMS Industrial Supply, Inc.
212 Denn Lane
Virginia Beach, VA. 23462

(757) 473-1467

Personal Protective Equipment(s)

GHS
Pictogram(s)

DOT
Symbol(s)

HMIS



Non
Regulated
Materials



To the best of our knowledge, this Safety Data Sheet is prepared to comply with US OSHA 29 CFR 1910.1200 and other governmental agencies both domestic and foreign. Hazard and precautionary statements are based on maximum listed concentrations of each hazardous ingredient. Unlisted ingredients are not "hazardous" per the OSHA Hazard Communication Standard (29 CFR 1910.1200) and/or other governmental agencies.

SECTION 2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

GHS Label Element
Signal Word

GHS Symbol(s)

Hazard Statements

Precautionary Statements

"DANGER"

Irritant



H303-May be harmful if swallowed
H316-Causes mild skin irritation.
H320-Causes eye irritation.

P102-Keep out of reach of children.
P233-Keep container tightly closed.
P262-Do not get in eyes, on skin or on clothing.
P264-Wash thoroughly after handling.
P281-Use personal protective equipment as required.

SECTION 3. PRODUCT INGREDIENTS

Hazardous Components	% by Wt.	CAS Number	Hazard Statements (Section 15)	Hazard Symbol(s)
Potassium Hydroxide 45%	0-10	1310-58-3	H302-Harmful if swallowed. H314-Causes severe skin burns and eye damage. H332-Harmful if inhaled. H412-Harmful to aquatic life with long lasting effects.	
1-Hydroxyethylidene-1,1-diphosphonic Acid	0-10	2809-21-4	H302-Harmful if swallowed. H314-Causes severe skin burns and eye damage. H332-Harmful if inhaled.	
Polymaleic Acid based Polymeric	0-10	26099-09-2	H302-Harmful if swallowed. H314-Causes severe skin burns and eye damage. H332-Harmful if inhaled.	
Sodium Molybdate	0-5	10102-40-6	H303-May be harmful if swallowed. H316-Causes mild skin irritation. H320-Causes eye irritation	
Non Hazardous Ingredient	70-100			
Total	100.00			

SECTION 4. FIRST AID MEASURES

Inhalation:	Remove to fresh air. If not breathing, give artificial respiration. If breathing difficult, give oxygen. Call a physician if any difficulties persist.
Eyes:	Flush eyes with a large amount of water for 15 minutes. Seek medical attention immediately if any irritation persists. After first aid, get appropriate in-plant, paramedic or community medical support.
Skin:	Wash affected areas thoroughly with soap and water for at least 15 minutes. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Seek medical attention if any irritation persists.
Ingestion	If person can swallow, give 2 glasses of water to drink. DO NOT INDUCE VOMITING! After first aid, seek appropriate in-plant, paramedic, or community medical support. Never give anything by mouth to an unconscious person.

After first aid, get appropriate in-plant, paramedic, or community medical support,

SECTION 5. FIRE FIGHTING MEASURES

Flammability Classification:	Non Flammable
Suitable Extinguishing Media:	Water fog, Alcohol foam, Carbon Dioxide, Dry Chemical
Unusual Fire or Explosion Hazards:	None known other than material can splatter above 100°C/212°F.
Hazardous Combustion Products:	Unknown but carbon monoxide may be released on burning.
Fire-Fighting Instructions:	Do not release runoff from fire control methods to sewers or waterways.
Fire-Fighting Equipment:	Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation
Small Spills:	Absorb spill with paper towel or similar absorbent; or flush to sewer or ground with large amounts of water.
Large Spills:	For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways. Absorb spill with vermiculite, oil dry or similar non-reactant absorbent. Solidified product represents no environmental hazard.
Containment:	
Cleanup:	Accumulate the absorbed materials and dispose of according to federal, state and local regulations.
Environmental Precautions:	Follow applicable OSHA/CERCLA or any other regulations (29 CFR 1910.120) as well as any state or local regulations that may apply.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling:	Use the recommended safety controls and personal protective equipment as outlined. Fully review all data before handling of the material itself. Avoid contact with skin or eyes. Avoid breathing dust or mist. Keep from contact with clothing and other combustible materials. Observe good personal hygiene and housekeeping practices. Wash thoroughly after handling.
Conditions for safe Storage:	Do not store in direct sunlight. Store in a tightly closed container. Store in a cool dry, well ventilated area. Do not store this material near any strong acids, bases, oxidizers, flammables or any other type of reactive material. Do not expose the material to temperature extremes. Do not store product above 77°F.
Regulatory Requirements:	Store materials according to all local, state and federal guidelines that are established for non-regulated chemical products.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with limit values that require monitoring at the workplace:

Hazardous Components	CAS Number	OSHA PEL/TWA STEL	ACGIH TLV/TWA STEL	Other
Potassium Hydroxide 45%	1310-58-3	2 mg/m3	2 mg/m3	
1-Hydroxyethylidene-1,1-diphosphonic Acid	2809-21-4	None Est.	None Est.	
Polymaleic Acid based Polymeric	26099-09-2	None Est.	None Est.	
Sodium Molybdate	10102-40-6	5mg/m3 Dust	0.5mg/m3	

Engineering Controls:	
Ventilation:	Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.
Respiratory Protection:	Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or non-routine operations (cleaning spills, reactor vessel, or storage tanks), wear an SCBA. <i>Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.</i> If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.
Personal Protective Equipment (PPE):	Wear protective eyeglasses or chemical safety goggles, per OSHA eye-and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses. At a minimum wear safety glasses with side shields as well as chemically protective gloves and aprons to prevent prolonged or repeated skin contact.
Safety Stations:	Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.
Contaminated Equipment:	Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Work/Hygienic Practices Consistent use of afore-mentioned personal protective equipment is essential in preventing injuries or irritation.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid	Appearance:	Light amber color	Odor:	Characteristic odor
pH:	10-12	Vapor Pressure:	Same as water	Flammability:	Non Flammable
Specific Gravity:	1.02+/-	Vapor Density:	Same as water	Flash Point:	NIA
Water Solubility:	Complete	Evaporation Rate:	1.00	Auto Ignition Temp:	NIA
Other Solubilities:	Not Determined	Melting Point:	NA	LEL:	Not Determined
% Volatile:	90%	Freeze Point:	Approx. 32°F	UEL:	Not Determined
Boiling Point:	212°F+/-	Decomposition Temp:	Not Determined		

SECTION 10. STABILITY AND REACTIVITY

Stability: This product is stable at room temperature in closed containers under normal storage and handling conditions. However, avoid temperature extremes.

Conditions to Avoid: Excessive temperature, contact with any type of reactive chemicals

Hazardous Polymerization: Hazardous polymerization will not occur.

Chemical Incompatibilities: Avoid contact with Strong Acids, Strong Alkalis, Oxidizers or any other type of reactive material.

Hazardous Decomposition Products: There are no known hazardous decomposition products for this material unless the material is burned in which case undetermined evolution of toxic gases may occur.

SECTION 11. TOXICOLOGICAL INFORMATION

Hazardous Components	CAS No.:	LD50 of Ingredient (Specify Species & Route)	LD50 Dermal of Ingredient (Specify Species)
Potassium Hydroxide 45%	1310-58-3	365mg/kg Oral Rat	Corrosive
1-Hydroxyethylidene-1,1-diphosphonic Acid	2809-21-4	2400mg/kg Oral Rat 1800mg/kg Oral Mouse	Irritant
Polymaleic Acid based Polymeric	26099-09-2	15000mg/kg Oral Rat LC50-6.5mg/kg 1/6hr Rat	>5010mg/kg Rabbit
Sodium Molybdate	10102-40-6	4233mg/kg Oral Rat	Irritant
Primary Irritant Effects:			
Routes of Entry:	Absorbed through skin, Dermal Contact, Eye Contact, Inhalation.		
Eye Effects:	Irritation to eyes & possible burning if materials are not immediately rinsed from the eye.		
Acute Inhalation Effects:	Might produce irritation to respiratory system.		
Skin Effects:	Irritation to skin.		
Acute Oral/Ingestion Effects:	Not tested for this blend. Harmful if swallowed.		
Chronic Effects on Humans:	No specific studies have been conducted for this specific blend.		
Other Toxic Effects on Humans:	No specific studies have been conducted for this specific blend.		
Special Remarks- Human Chronic Effects:	No other information for chronic effects on humans.		
Carcinogenicity:	IARC, NTP, and OSHA do not list this product or its components as a carcinogen.		
Mutagenicity:	No mutagenic effects are known to be applicable for the formulation components of this product.		
Teratogenicity:	No studies have been performed for this specific product blend.		
Target Organ Statement:	No studies have been conducted for this specific product blend.		

SECTION 12. ECOLOGICAL INFORMATION

Hazardous Components	CAS No.:	LC:50	EC:50
Potassium Hydroxide 45%	1310-58-3	80mg/l 48hr Daphnia Magna 179mg/l 96hr Fathead Minnow	60mg/l 48hr Daphnia Magna 61mg/l 96hr Algae
1-Hydroxyethylidene-1,1-diphosphonic Acid	2809-21-4	>300mg/l 96hr Fish	>500mg/l 48hr Daphnia Magna IC50=300mg/l 72hr Algae
Polymaleic Acid based Polymeric	26099-09-2	3.8 mg/l 96hr Lepomis Macrochirus	19mg/l 48h Daphnia Magna EC50 - 0.3mg/l 96hr Algae
Sodium Molybdate	10102-40-6	800 mg/l 96 hr Rainbow Trout	No data available at publication
Special Remarks-Products of biodegradation:	The Component(s) of this product are not subject to rapid biodegradation.		

SECTION 13. WASTE DISPOSAL CONSIDERATIONS

Disposal Regulatory Requirements: Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable federal, state and local regulations.

Container Cleaning and Disposal: Triple rinse the empty containers with water before disposal to reconditioned or land fill or garbage.

SECTION 14. TRANSPORTATION INFORMATION

Proper Shipping Name:	NON REGULATED MATERIALS				DOT/GHS Shipping Label Symbol(s):	
Contains:						
Hazard Class:	Marine Pollutant	UN Number:	Packing Group:	ERG Number:	None	None
Non Hazardous	No	NA	NA	NA		
Special Shipping Notations:	None					

Note: Transportation information provided is for reference only. Client is urged to consult CFR 49, Parts 100-177, IMDG, IATA, EU, United Nations, TDG and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

SECTION 15. REGULATORY INFORMATION

Hazard Symbol(s):**Hazard Statements:**

H303-May be harmful if swallowed.

H316-Causes mild skin irritation.

H320-Causes eye irritation

Safety Phrases:

S3/7/9/49-Keep only in the original container tightly closed in a cool well-ventilated place.

S24/25-Avoid contact with skin and eyes.

S26-In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39-Wear suitable protective clothing, gloves and eye/face protection.

S62-If swallowed do not induce vomiting: seek medical advice immediately and show this container or label.

EPA Regulations:**RCRA Hazardous Waste Number:**

Product blend is not listed (40 CFR 261.33)

RCRA Hazardous Waste Classification (40 CFR 261.):

Product blend is not classified.

CERCLA Hazardous Substance (40 CFR 302.4):

Product blend is unlisted specific per RCRA, Sec. 3001; CWA, Sec. 311 (b) (4); CWA, Sec. 307 (a),

CAA, Sec. 112 CERCLA Reportable Quantity (RQ):**Contains: Potassium Hydroxide 1,000 lb****SARA 313 Codes:** This product may be subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and 40CFR372.

Not listed

SARA Toxic Chemical (40CFR 372.65):

Not listed

Sara 302/304 Extremely Hazardous Substance (40CFR 355)

Not listed

Sara 313 SARA EHS (Extremely Hazardous Substance) (40 CFR 355):

Not listed

Threshold Planning Quantity (TPQ):

Not listed

OSHA Regulations:**Air Contaminant (20 CFR 1910.1000, Table Z-1, Z-1-A):**

Not listed.

OSHA Specifically Regulated Substance (29 CFR 1910.):

Not Listed

State Regulations: As a product blend, the materials are generally not listed. Check with your local state regulatory board for more detailed information regarding the specific components of this product.**National Regulations:** All components of this product are listed in the U.S. Environmental Protection Agencies, Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

All components of this product are listed on the Canadian Non-Domestic Substances List (NDSL).

SECTION 16. OTHER INFORMATION

Prepared by: Technical Department

This information is based on our current knowledge and is intended to describe the product for the purpose of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. No warranty is expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. Our company assumes no responsibility for personal injury or property damage to the vendee, users or third parties caused by the material. Such vendees or users assume all risks associated with the use of this material.

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