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SAFETY DATA SHEET

GREEN LM/TR

Section 1. Identification			
GHS product identifier	:	GREEN LM/TR	
Chemical name	:	Mixture	
CAS number	:	Mixture	
Other means of identification	:	CC10218029	
Product type	:	solid	
••			
Relevant identified uses of the subs	tance	or mixture and uses advised against	
Product use	:	Industrial applications. Plastics.	
		DOL VONE CORDORATION	
Supplier's details	:	POLYONE CORPORATION	
		33587 Walker Road, Avon Lake, OH 44012	
		1 (440) 930-1000 or 1 (866) POLYONE	
Emergency telephone number (with hours of operation)	:	CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident).CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident).	

Section 2. Hazards identification

This mixture has not been evaluated as a whole. Information provided on the health effects of this product is based on individual components. All ingredients are bound and potential for hazardous exposure as shipped is minimal. However, some vapors may be released upon heating and the end-user (fabricator) must take the necessary precautions (mechanical ventilation, respiratory protection, etc.) to protect employees from exposure. After handling, always wash hands thoroughly with soap and water.

OSHA/HCS status	:	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Classification of the substance or mixture	:	Not classified.

GHS label elements

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Signal word	:	No signal word.
Hazard statements	:	No known significant effects or critical hazards.
Precautionary statements		
General	:	Not applicable.
Prevention	:	Not applicable.
Response	:	Not applicable.
Storage	:	Not applicable.
Disposal	:	Not applicable.
Supplemental label elements	:	None known.
Hazards not otherwise classified	:	None known.

Section 3. Composition/information on ingredients

Substance/mixture	:	Mixture
Chemical name	:	Mixture
Other means of identification	:	CC10218029

CAS number/other identifiers

Ingredient name	%	CAS number
Titanium dioxide	5 - 10	13463-67-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact

Immediately flush eyes with plenty of water, occasionally lifting the : upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.



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Inhalation :	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Skin contact :	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion :	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
Most important symptoms/effects, acute a	and delayed
Potential acute health effects	
Eye contact:Inhalation:Skin contact:	No known significant effects or critical hazards. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. No known significant effects or critical hazards.
Skin contact : Ingestion :	No known significant effects or critical hazards.
Over-exposure signs/symptoms	
Eye contact :	No specific data.
Inhalation :	No specific data.
Skin contact :	No specific data.
Ingestion :	No specific data.
Indication of immediate medical attention	on and special treatment needed, if necessary
Notes to physician :	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under
Specific treatments :	medical surveillance for 48 hours. No specific treatment.
Protection of first-aiders :	No action shall be taken involving any personal risk or without suitable training.
See toxicological information (Section 1)	1)

Section 5. Fire-fighting measures



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Extinguishing media

Suitable extinguishing media Unsuitable extinguishing media	:	In case of fire, use water spray (fog), foam, dry chemical or $\rm CO_2$. None known.
Specific hazards arising from the chemical	:	No specific fire or explosion hazard.
Hazardous thermal decomposition products	:	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides metal oxide/oxides
Special protective actions for fire- fighters	:	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	:	Fire-fighters should wear appropriate protective equipment and self- contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel For emergency responders	:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment. If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods and materials for containme	ent a	nd cleaning up
Small spill	:	Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
Large spill	:	Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material
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and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures Advice on general occupational hygiene	:	Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	:	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Titanium dioxide	OSHA PEL 1989 (1989-03-01)
	PEL: Permissible Exposure Level 10 mg/m3 Form: Total dust
	OSHA PEL (1993-06-30)
	PEL: Permissible Exposure Level 15 mg/m3 Form: Total dust
	ACGIH TLV (1996-05-18)
	TLV-TWA: Threshold Limit Value - Time weighted average PEL:
	Permissible Exposure Level 10 mg/m3
Appropriate engineering controls :	
	exposure to airborne contaminants.
Environmental exposure controls :	Emissions from ventilation or work process equipment should be
	checked to ensure they comply with the requirements of
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environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures Eye/face protection	:	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
Skin protection		
Hand protection	:	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Body protection	:	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Other skin protection	:	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	:	Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state	solid [Pellets.]
Color	: GREEN
Odor	: Faint odor.
Odor threshold	: Not available.
pH	: Not available.

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Melting point	:	Not available.
Boiling point	:	Not available.
Flash point	:	Not available.
Burning time	:	Not available.
Burning rate	:	Not available.
Evaporation rate	:	Not available.
Flammability (solid, gas)	:	Not available.
Lower and upper explosive	:	Lower: Not available.
(flammable) limits		Upper: Not available.
Vapor pressure	:	Not available.
Vapor density	:	Not available.
Relative density	:	Not available.
Solubility	:	Not available.
Solubility in water	:	insoluble in water.
Partition coefficient: n-	:	Not available.
octanol/water		
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
SADT	:	Not available.
Viscosity	:	Dynamic: Not available.
		Kinematic: Not available.

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	Stable under recommended storage and handling conditions (see Section 7).
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	Keep away from extreme heat and oxidizing agents.
Incompatible materials	:	Keep away from strong acids. Oxidizer.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

This mixture has not been evaluated as a whole for health effects. Exposure effects listed are based on existing health data for the individual components which comprise the mixture.

Information on toxicological effects



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Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Titanium dioxide	•		·	
	LC50 Inhalation	Rat - Male	6.82 Mg/l	4 h
	LD50 Dermal	Rabbit	> 5,000 mg/kg	-
Conclusion/Summary	: Mixtu	ure.Not fully tested.		
Irritation/Corrosion				
Conclusion/Summary				
Skin	: Mixtu	are.Not fully tested.		
Eyes		ure.Not fully tested.		
Respiratory	: Mixtu	are.Not fully tested.		
<u>Sensitization</u>				
Conclusion/Summary Skin Respiratory		rre.Not fully tested. rre.Not fully tested.		
Mutagenicity				
Conclusion/Summary	: Mixtu	are.Not fully tested.		
Carcinogenicity				
Conclusion/Summary <u>Classification</u>	: Mixtu	are.Not fully tested.		
Product/ingredient name	OSHA L	ARC NTP		
Titanium dioxide	2	В		
<u>Reproductive toxicity</u>				
Conclusion/Summary	: Mixtu	are.Not fully tested.		
Teratogenicity				
Conclusion/Summary	: Mixtu	are.Not fully tested.		
Specific target organ toxici				

Specific target organ toxicity (repeated exposure)



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Not available.

<u>Aspiration hazard</u> Not available.	
Information on the likely routes of exposure	Not available.
Potential acute health effects	
Eye contact : Inhalation :	
Skin contact : Ingestion :	
Symptoms related to the physical, cher	nical and toxicological characteristics
Eye contact :	No specific data.
Inhalation :	No specific data.
Skin contact :	No specific data.
Ingestion :	No specific data.
	o chronic effects from short and long term exposure
Short term exposure	
Potential immediate effects :	Not available.
Potential delayed effects :	Not available.
Long term exposure	
Potential immediate effects :	Not available.
Potential delayed effects :	Not available.
Potential chronic health effects	
Conclusion/Summary :	Mixture.Not fully tested.
General	No known significant effects or critical hazards.
Carcinogenicity :	8
Mutagenicity :	0
Teratogenicity :	e
Developmental effects :	e
Fertility effects :	No known significant effects or critical hazards.



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Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure	
Titanium dioxide				
	Acute LC50 > 1,000,000 μg/l	Fish - Mummichog	96 h	
	Marine water	_		
	Acute LC50 > 1,000 mg/l Fresh	Fish - Fathead minnow	96 h	
	water			
	Acute LC50 13 mg/l Fresh water	Aquatic invertebrates. Water flea	48 h	
	Acute LC50 6.5 mg/l Fresh water	Aquatic invertebrates. Water flea	48 h	
	Acute EC50 19.3 mg/l Fresh water	Aquatic invertebrates. Water flea	48 h	
	Acute EC50 27.8 mg/l Fresh water	Aquatic invertebrates. Water flea	48 h	
	Acute EC50 35.306 mg/l Fresh	Aquatic invertebrates.	48 h	
	water	Water flea		
GREEN LM/TR				
Remarks - Acute - Aquatic invertebrates.:	Chemicals are not readily available a	s they are bound within the	e polymer matrix.	
Conclusion/Summary	: Chemicals are not readily available as they are bound within the polymer matrix.			
Persistence and degradability	<u>/</u>			
Conclusion/Summary	: Chemicals are not readily available as they are bound within the polymer matrix.			
Conclusion/Summary	: Chemicals are not readily available as they are bound within the polymer matrix.			



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Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Titanium dioxide		352.00	low

Mobility in soil

Soil/water partition coefficient (KOC)	:	Not available.
Other adverse effects	:	No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods	:	The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and context with coil untreaverue device and course.
		contact with soil, waterways, drains and sewers.

United States - RCRA Acute hazardous waste "P" List: Not listed

United States - RCRA Toxic hazardous waste "U" List: Not listed

Section 14. Transport information

U.S. DOT Classification	:	Not regulated for transportation.
ICAO/IATA	:	Not classified as dangerous good under transport regulations.
IMO/IMDG (maritime)	:	Not classified as dangerous good under transport regulations.

Section 15. Regulatory information

U.S. Federal regulations	:	 United States - TSCA 12(b) - Chemical export notification: None of the components are listed. United States - TSCA 4(a) - Final Test Rules: Not listed

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United States - TSCA 4(a) - ITC Priority list: Not listed United States - TSCA 4(a) - Proposed test rules: Not listed United States - TSCA 4(f) - Priority risk review: Not listed United States - TSCA 5(a)2 - Final significant new use rules: Not listed United States - TSCA 5(a)2 - Proposed significant new use rules: Not listed United States - TSCA 5(e) - Substances consent order: Not listed United States - TSCA 6 - Final risk management: Not listed United States - TSCA 6 - Proposed risk management: Not listed United States - TSCA 8(a) - Chemical risk rules: Not listed United States - TSCA 8(a) - Dioxin/Furane precusor: Not listed United States - TSCA 8(a) - Chemical Data Reporting (CDR): Not determined United States - TSCA 8(a) - Preliminary assessment report (PAIR): Not listed United States - TSCA 8(c) - Significant adverse reaction (SAR): Not listed United States - TSCA 8(d) - Health and safety studies: Not listed United States - EPA Clean water act (CWA) section 307 - Priority pollutants: Listed Copper hydroxide phosphate (Cu2(OH)(PO4)) Phthalocyanine green United States - EPA Clean water act (CWA) section 311 -Hazardous substances: Not listed United States - EPA Clean air act (CAA) section 112 - Accidental release prevention - Flammable substances: Not listed United States - EPA Clean air act (CAA) section 112 - Accidental release prevention - Toxic substances: Not listed United States - Department of commerce - Precursor chemical: Not listed

Clean Air Act Section 112(b)	:	Not listed
Hazardous Air Pollutants (HAPs)		
Clean Air Act Section 602 Class I	:	Not listed
Substances		
Clean Air Act Section 602 Class II	:	Not listed
Substances		
DEA List I Chemicals (Precursor	:	Not listed
Chemicals)		
DEA List II Chemicals (Essential	:	Not listed
Chemicals)	Ĩ	
Chemicals)		



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US. EPA CERCLA Hazardous Substances (40 CFR 302)

not applicable

SARA 311/312

Classification

Not applicable.

:

Composition/information on ingredients

Name	%	Classification
Titanium dioxide	5 - 10	СН

<u>SARA 313</u>

	Product name	CAS number	%
Form R - Reporting	Copper hydroxide phosphate	12158-74-6	10 - 30
requirements	(Cu2(OH)(PO4))		
Supplier notification	Copper hydroxide phosphate	12158-74-6	10 - 30
	(Cu2(OH)(PO4))		

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations		
Massachusetts	: The following components are listed: Titanium dioxide	
New York	: None of the components are listed.	
New Jersey	: The following components are listed: Copper hydroxide phosphate (Cu2(OH)(PO4)) Phthalocyanine green Titanium dioxide	
Pennsylvania	: The following components are listed: Copper hydroxide phosphate (Cu2(OH)(PO4))	
	Phthalocyanine green	
	Titanium dioxide	

California Prop. 65 WARNING: This product contains a chemical known to the State of California to cause cancer.				
United States inventory (TSCA 8b)	:	All components are listed or exempted.		
Canada inventory	:	At least one component is not listed in DSL but all such components		
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are listed in NDSL.

International regulations

Australia inventory (AICS): Not determined. **International lists** : Taiwan inventory (CSNN): All components are listed or exempted. Malaysia Inventory (EHS Register): Not determined. EINECS: All components are listed or exempted. Japan inventory: Not determined. China inventory (IECSC): All components are listed or exempted. Korea inventory: All components are listed or exempted. New Zealand Inventory of Chemicals (NZIoC): Not determined. Philippines inventory (PICCS): Not determined. Not listed **Chemical Weapons Convention** : List Schedule I Chemicals **Chemical Weapons Convention** Not listed • List Schedule II Chemicals **Chemical Weapons Convention** : Not listed List Schedule III Chemicals

Section 16. Other information

<u>History</u>		
Date of printing	:	05/09/2015
Date of issue/Date of revision	:	05/08/2015
Date of previous issue	:	00/00/0000
Version	:	1.0
Key to abbreviations	:	ATE = Acute Toxicity Estimate
•		BCF = Bioconcentration Factor
		GHS = Globally Harmonized System of Classification and Labelling of
		Chemicals
		IATA = International Air Transport Association
		IBC = Intermediate Bulk Container
		IMDG = International Maritime Dangerous Goods
		LogPow = logarithm of the octanol/water partition coefficient
		MARPOL $73/78$ = International Convention for the Prevention of Pollution
		From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine
		pollution)
		UN = United Nations
References	:	Not available.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the abovenamed supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or



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completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. Particularly this information may not be valid for such material used in conjunction with any other materials or in any process, unless specified in the text.