MATERIAL SAFETY DATA SHEET **GEON L4230RL BROWN 3690**

Version Number 1.1 Revision Date 03/23/2014

Product Use

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1. PRODUCT AND COMPANY IDENTIFICATION

POLYONE CORPORATION 33587 Walker Road, Avon Lake, OH 44012

Telephone Emergency telephone number	:	1 (440) 930-1000 or 1 (866) POLYONE CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident).
Product name	:	GEON L4230RL BROWN 3690
Product code	:	VC10007216
Chemical Name	:	Mixture
CAS-No.	:	Mixture

: Industrial Applications

2. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight percent
8-Oxa-3,5-dithia-4-stannatetradecanoic acid, 10-ethyl-4,4-dimethyl-7-oxo-, 2-ethylhexyl ester	57583-35-4	1 - 5
Stannane, methyltris(2- ethylhexyloxycarbonylmethylthio)-	57583-34-3	1 - 5
Styrene	100-42-5	0.1 - 1
Manganese antimony titanium brown rutile (C.I. Pigment Yellow 164)	68412-38-4	1 - 5
Calcium stearate	1592-23-0	1 - 5

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

This mixture has not been evaluated as a whole. All ingredients are bound and potential for hazardous exposure as shipped is minimal. However, some vapors may be released upon heating or processing. The end-user (fabricator) must take the necessary precautions (mechanical ventilation, respiratory protection, etc.) to protect employees from exposure. See sections 8 and 11 for special precautions. May emit Hydrogen Chloride (HCl) or Carbon Monoxide (CO) under fire conditions.

POTENTIAL HEALTH EFFECTS

Routes of Exposure:	: Inhalation, Ingestion, Skin contact
Acute exposure	
Inhalation	: Resin particles, like other inert materials, can be mechanically

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Ingestion Eyes	 irritating. May be harmful if swallowed. Resin particles, like other inert materials, are mechanically irritating to eyes. 		
Skin	: Experience shows no unusual dermatitis hazard from routine handling.		
Chronic exposure	: Refer to Section 11 for Toxicological Information.		
Medical Conditions Aggravated by Exposure:	: None known.		
	4. FIRST AID MEASURES		
Inhalation	: Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. When symptoms persist or in all cases of doubt seek medical advice.		
Ingestion	: Do not induce vomiting without medical advice. When symptoms persist or in all cases of doubt seek medical advice.		
Eyes	: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, seek medical attention.		
Skin	: Wash off with soap and plenty of water. If skin irritation persists seek medical attention.		
	5. FIREFIGHTING MEASURES		
Flash point	: not applicable		
Flammable Limits Upper explosion limit Lower explosion limit Auto-ignition temperature Suitable extinguishing media	 not applicable not applicable Not applicable Carbon dioxide blanket, Water spray, Dry powder, Foam. 		
Special Fire Fighting Procedures	: Fullface self-contained breathing apparatus (SCBA) used in positive pressure mode should be worn to prevent inhalation of airborne contaminants.		
Unusual Fire/Explosion Hazards	 May emit Hydrogen Chloride (HCl) or Carbon Monoxide (CO) under fire conditions. Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), other hazardous materials, and smoke are all possible. 		
	6. ACCIDENTAL RELEASE MEASURES		
Personal precautions	: Wear appropriate personal protection during cleanup, such as impervious gloves, boots and coveralls.		

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Environmental precautions	:	Should not be released into the environment. The product should not be allowed to enter drains, water courses or the soil.
Methods for cleaning up	:	Clean up promptly by sweeping or vacuum. Package all material in plastic, cardboard or metal containers for disposal.
		7. HANDLING AND STORAGE
Handling	:	Take measures to prevent the build up of electrostatic charge. Heat only in areas with appropriate exhaust ventilation. Processing fume condensates may contain combustible or toxic residue. Periodically clean hoods, ducts, and other surfaces to minimize accumulation of these materials.
Storage	:	Keep containers dry and tightly closed to avoid moisture absorption and contamination. Keep in a dry, cool place.
8. EXF	OSU	RE CONTROLS/PERSONAL PROTECTION
Respiratory protection	:	No personal respiratory protective equipment normally required. If dusty conditions occur wear appropriate respiratory protection.
Eye/Face Protection	:	Safety glasses with side-shields
Hand protection	:	Protective gloves
Skin and body protection	:	Long sleeved clothing
Additional Protective Measures	:	Safety shoes
General Hygiene Considerations	:	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. This product may contain residual vinyl chloride monomer (VCM) (CAS number 75-01-4) below 8.5 ppm (0.00085%). It is unlikely, under normal working conditions with adequate ventilation, that the exposure limits will be exceeded for residual VCM. However, the user should take the necessary precautions (e.g. mechanical ventilation, local exhaust ventilation, air-monitoring, respiratory protection, etc.) to ensure airborne levels of any vapors including VCM or dusts that may be released during heating or processing are below regulated levels.
Engineering measures	:	Heat only in areas with appropriate exhaust ventilation. Provide appropriate exhaust ventilation at machinery.
Exposure limit(s)		

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Components	Value	Exposure time	Exposure type	List:
Manganese antimony titanium brown rutile (C.I. Pigment Yellow 164)	1 mg/m3	Recommended exposure limit (REL):	Fume. as Mn	NIOSH
· · · ·	3 mg/m3	Short Term Exposure Limit (STEL):	Fume. as Mn	NIOSH
	5 mg/m3	Ceiling Limit Value:	as Mn	OSHA Z1
	5 mg/m3	Ceiling Limit Value:	as Mn	OSHA Z1A
	0.5 mg/m3	Time Weighted Average (TWA):	as Sb	ACGIH
	0.5 mg/m3	Recommended exposure limit (REL):	as Sb	NIOSH
	0.5 mg/m3	PEL:	as Sb	OSHA Z1
	0.5 mg/m3	Time Weighted Average (TWA):	as Sb	OSHA Z1A
	0.5 mg/m3	Time Weighted Average (TWA):	as Sb	MX OEL
Calcium stearate	10 mg/m3	Time Weighted Average (TWA):		ACGIH
Styrene	20 ppm	Time Weighted Average (TWA):		ACGIH
	40 ppm	Short Term Exposure Limit (STEL):		ACGIH
	50 ppm 215 mg/m3	Recommended exposure limit (REL):		NIOSH
	100 ppm 425 mg/m3	Short Term Exposure Limit (STEL):		NIOSH
	100 ppm	Time Weighted Average (TWA):		OSHA Z2
	200 ppm	Ceiling Limit Value:		OSHA Z2
	600 ppm	Maximum concentration:		OSHA Z2
	50 ppm 215 mg/m3	Time Weighted Average (TWA):		OSHA Z1A
	100 ppm 425 mg/m3	Short Term Exposure Limit (STEL):		OSHA Z1A
	50 ppm 215 mg/m3	Time Weighted Average (TWA):		MX OEL
	100 ppm 425 mg/m3	Short Term Exposure Limit (STEL):		MX OEL

9. PHYSICAL AND CHEMICAL PROPERTIES

Form Appearance Colour Odour Melting point/range Boiling Point: solid
pellets, powder
BROWN
very faint
Not determined
not applicable

Evapouration rate Specific Gravity Bulk density Vapour pressure Vapour density pH Not applicable
Not determined
Not established
not applicable
not applicable
not applicable

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	10. STABILITY AND REACTIVITY
Stability	: The product is stable if stored and handled as prescribed.
Hazardous Polymerization	: Will not occur.
Conditions to avoid	: Keep away from oxidizing agents and open flame. To avoid thermal decomposition, do not overheat.
Incompatible Materials	: Incompatible with strong acids and oxidizing agents., Avoid contact with acetal homopolymers and acetal copolymers during processing.
Hazardous decomposition products	 Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), other hazardous materials, and smoke are all possible. Prolonged heating (approximately 30 minutes or more) above 392 °F (200 °C) or short term heating at 482 °F (250 °C) may result in product decomposition and evolution of carbon monoxide and hydrogen chloride.

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.

Toxicity Overview

This product contains the following components which in their pure form have the following characteristics:

CAS-No.	Chemical Name	Effect	Target Organ
57583-35-4	8-Oxa-3,5-dithia-4-	Irritant	Eyes, Skin.
	stannatetradecanoic acid,		
	10-ethyl-4,4-dimethyl-7-		
	oxo-, 2-ethylhexyl ester		
57583-34-3	Stannane, methyltris(2-	Irritant	Eyes, Skin.
	ethylhexyloxycarbonylmet		
	hylthio)-		
100-42-5	Styrene	Irritant	Eyes, Respiratory system.
		Systemic effects	Eyes, Skin, Respiratory
			system, Liver, central nervous
			system (CNS).
68412-38-4	Manganese antimony	Irritant	Eyes, Skin.
	titanium brown rutile (C.I.		
	Pigment Yellow 164)		

LC50 / LD50

This product contains the following components which, in their pure form, have the following toxicity data:

CAS-No. Chemical Name	Route	Value	Species
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57583-34-3	Stannane, methyltris(2- ethylhexyloxycarbonylmet hylthio)-	Oral LD50	920 mg/kg	rat
100-42-5	Styrene	LC50	12 gm/m3	rat
		Oral LD50	2,650 mg/kg	rat
1592-23-0	Calcium stearate	Oral LD50	> 10 gm/kg	rat

Carcinogenicity

This product contains the following components which, in their pure form, have the following carcinogenicity data:

CAS-No.	Chemical Name	OSHA	IARC	NTP
100-42-5	Styrene	no	2B	no

IARC Carcinogen Classifications:

1 - The component is carcinogenic to humans.

2A - The component is probably carcinogenic to humans.

2B - The component is possibly carcinogenic to humans.

NTP Carcinogen Classifications:

1 - The component is known to be a human carcinogen.

2 - The component is reasonably anticipated to be a human carcinogen.

Additional Health Hazard Information:

Styrene 100-42-5 Irritating to eyes, skin, and respiratory tract with many CNS effects such as narcosis, cramps and respiratory tract paralysis.

12. ECOLOGICAL INFORMATION

Persistence and degradability	: Not readily biodegradable.
Environmental Toxicity	: Adverse ecological impact is not known or expected under normal use.
Bioaccumulation Potential	: no data available
Additional advice	: not applicable
	13. DISPOSAL CONSIDERATIONS
Product	: Like most thermoplastic plastics the product can be recycled. Where possible recycling is preferred to disposal or incineration. The generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations.
Contaminated packaging	: Recycling is preferred when possible. The generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal,

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	14. TRAN	NSPORT I	NFORM	IATION			
U.S. DOT Classification	: Not reg	ulated for the	ransport	ation.			
ICAO/IATA	: Not reg	ulated for the	ransport	ation.			
IMO/IMDG (maritime)	: Not reg	ulated for the	ransport	ation.			
	15. REGU	LATORY	INFOR	MATIO	N		
US Regulations:							
-	Classif						
OSHA Status		ed as hazar	dous das	sed on co	mponen	ts.	
TSCA Status		nponents of Inventory.	f this pro	oduct are	listed or	or exei	npt from the
US. EPA CERCLA Hazardo	us Substances (4	40 CFR 302	2)				
not applicable							
65							
SARA Title III Section 302	Extremely Haza	rdous Subst	tance				
Unless specific chemicals are	e identified unde	er this section	on, this p	product is	s Not Ap	plicable	under this regulat
-			-		_	-	-
SARA Title III Section 313	Coxic Chemical	s:					
Unless specific chemicals are	e identified unde	er this section					
	Chemical Name MANGANESE COMPOUNDSMANGANESE			CAS-No. 68412-38-4		Weight percent 1.00 - 5.00	
Chemical Name	INDSMANGAN	NESE					
Chemical Name MANGANESE COMPOU COMPOUNDSANTIMON							
Chemical Name MANGANESE COMPOU				00-42-5		0.10 -	1.00
Chemical Name MANGANESE COMPOU COMPOUNDSANTIMON				00-42-5		0.10 -	1.00
Chemical Name MANGANESE COMPOU COMPOUNDSANTIMON STYRENESTYRENE Canadian Regulations:	NY COMPOUN	DS		00-42-5		0.10 -	1.00
Chemical Name MANGANESE COMPOU COMPOUNDSANTIMON STYRENESTYRENE	NY COMPOUN	DS (NPRI)			Weigh	t	1.00 NPRI ID#
Chemical Name MANGANESE COMPOU COMPOUNDSANTIMON STYRENESTYRENE Canadian Regulations: National Pollutant Re	NY COMPOUN	DS (NPRI)	1		Weigh percen 1.00 -	t t	

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		1.00 - 5.00
Phthalocyanine blue	147-14-8	0.10 - 1.00
Styrene	100-42-5	0.10 - 1.00

WHMIS Classification : D2B

WHMIS Ingredient Disclosure List

CAS-No.
68412-38-4
57583-34-3
100-42-5

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DSL

All components of this product are on the Canadian Domestic Substances List (DSL) or are exempt.

National Inventories:

	16. OTHER INFORMATION	
Philippines PICCS	: Not determined	
Korea KECI	: Not determined	
Japan ENCS	: Not determined	
Europe EINECS	: Listed	
China IECS	: Not determined	
Australia AICS	: Not determined	

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.