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SAFETY DATA SHEET

GEON HC 2155 WHITE 1594

Section 1. Identification	on	
GHS product identifier Chemical name CAS number Other means of identification Product type	:::::::::::::::::::::::::::::::::::::::	GEON HC 2155 WHITE 1594 Mixture Mixture VC10011717 solid
<u>Relevant identified uses of the subs</u> Product use	tance :	e or mixture and uses advised against Industrial applications. Plastics.
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).

Section 2. Hazards identification

This mixture has not been evaluated as a whole for health effects. All ingredients are bound in a PVC polymer matrix and potential for hazardous exposure as shipped is minimal. PVC resin is manufactured from Vinyl Chloride Monomer (VCM). PVC resin manufacturers take special efforts to strip residual VCM from their resins. Residual VCM in the resin is typically below 8.5 ppm. However, VCM is a known carcinogen. The end-user (fabricator) should take necessary precautions (mechanical ventilation, local exhaust, respiratory protection, etc.) to protect employees from exposure to any vapors or dusts that may be released during heating or fabrication. See Sections 8 and 11 for special precautions.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.

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Section 3. Composition/information on ingredients

Substance/mixture	:	Mixture
Chemical name	:	Mixture
Other means of identification	:	VC10011717

CAS number/other identifiers

Ingredient name	%	CAS number
Titanium dioxide	1 - 5	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.
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 and delayed

Potential acute health effects

Eye contact Inhalation Skin contact Ingestion	::	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. 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 and special treatment needed, if necessary			

Notes to physician Specific treatments	 Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. No specific treatment.
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media	:	In case of fire, use water spray (fog), foam, dry chemical or CO_2 .
Unsuitable extinguishing media	:	None known.

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Specific hazards arising from the chemical	:	No specific fire or explosion hazard.
Hazardous thermal decomposition products	:	May emit Hydrogen Chloride (HCl). Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds 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 specialized 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 Methods and materials for containme	: nt ai	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).
rectious and materials for containing	<u> 111 ai</u>	
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 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.



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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			
		NIOSH REL (1994-06-01)			
		ACGIH TLV (1996-05-18)			
		TLV-TWA: Threshold Limit Value - Time weighted average PEL: Permissible Exposure Level 10 mg/m3			
		Permissible Exposure Level 10 mg/m3			
Appropriate engineering controls	:	Good general ventilation should be sufficient to control worker 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			
		environmental protection legislation. In some cases, fume scrubbers,			
		filters or engineering modifications to the process equipment will be			
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	necessary to reduce emissions to acceptable levels.	
Individual protection measures		
Hygiene measures	Wash hands, forearms and face thoroughly after hand products, before eating, smoking and using the lavato of the working period. Appropriate techniques should remove potentially contaminated clothing. Wash cont clothing before reusing. Ensure that eyewash stations showers are close to the workstation location.	ry and at the end be used to aminated
Eye/face protection	Safety eyewear complying with an approved standard when a risk assessment indicates this is necessary to a liquid splashes, mists, gases or dusts. If contact is pos following protection should be worn, unless the asses higher degree of protection: safety glasses with side-s	void exposure to sible, the sment indicates a
Skin protection		
Hand protection	Chemical-resistant, impervious gloves complying wit standard should be worn at all times when handling c if a risk assessment indicates this is necessary.	
Body protection	Personal protective equipment for the body should be on the task being performed and the risks involved an approved by a specialist before handling this product.	d should be
Other skin protection	Appropriate footwear and any additional skin protecti should be selected based on the task being performed involved and should be approved by a specialist befor product.	on measures and the risks
Respiratory protection	Based on the hazard and potential for exposure, selec meets the appropriate standard or certification. Respin used according to a respiratory protection program to fitting, training, and other important aspects of use.	ators must be

Section 9. Physical and chemical properties

Appearance

Physical state	:	solid [Pellets.]
Color	:	WHITE
Odor	:	Not available.
Odor threshold	:	Not available.
рН	:	Not available.
Melting point	:	Not available.
Boiling point	:	Not available.
Flash point	:	Not available.

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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	:	Not available.
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	:	Avoid contact with acetal homopolymers and acetyl homopolymers during processing.
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

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Titanium dioxide				



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	LC50 Inhalation	Rat - Ma	10	6.82 Mg/l	4 h	
	LD50 Dermal	Rabbit		> 5,000 mg/kg	-	
Conclusion/Summary		ture.Not full	y tested.	,		
Irritation/Corrosion						
Product/ingredient name		Species	Score	Exposure	Observation	
Titanium dioxide	Skin - Mild I irritant	Human		72 hrs	-	
Conclusion/Summary						
Skin		ture.Not full				
Eyes		ture.Not full				
Respiratory	: Mix	ture.Not full	y tested.			
Sensitization						
Conclusion/Summary						
Skin	: Mix	ture.Not full	y tested.			
Respiratory	: Mix	ture.Not full	y tested.			
<u>Mutagenicity</u>						
Conclusion/Summary	: Mix	ture.Not full	y tested.			
Carcinogenicity						
Conclusion/Summary	: Mix	ture.Not full	y tested.			
<u>Reproductive toxicity</u>						
Conclusion/Summary	: Mix	ture.Not full	y tested.			
Teratogenicity						
Conclusion/Summary	: Mix	ture.Not full	y tested.			
Specific target organ toxic Not available.	ity (single exposure	<u>)</u>				
Specific target organ toxic Not available.	ity (repeated exposi	<u>ıre)</u>				
Aspiration hazard Not available.						

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Information on likely routes of exposure	:	Not available.
Potential acute health effects		
Eye contact Inhalation Skin contact Ingestion	:	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Symptoms related to the physical,	, chemi	cal and toxicological characteristics
Eye contact Inhalation Skin contact Ingestion	:	No specific data. No specific data. No specific data. No specific data.
Delayed and immediate effects as	well as	chronic effects from short and long-term exposure
Short term exposure		
Potential immediate effects Potential delayed effects	:	Not available. Not available.
Long term exposure		
Potential immediate effects Potential delayed effects	:	Not available. Not available.
Potential chronic health effects		
Conclusion/Summary	:	Mixture.Not fully tested.
General Carcinogenicity Mutagenicity Teratogenicity Developmental effects Fertility effects <u>Numerical measures of toxicity</u> <u>Acute toxicity estimates</u>	:::::::::::::::::::::::::::::::::::::::	No known significant effects or critical hazards. No known significant effects or critical hazards.
Not available.		

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Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure		
Titanium dioxide					
	Acute LC50 > 1,000,000 μg/l	Fish - Fish	96 h		
	Marine water				
	Acute LC50 > 1,000 mg/l Fresh	Fish - Fish	96 h		
	water				
	Acute LC50 > 1,000,000 μg/l	Fish - Fish	96 h		
	Marine water				
	Acute LC50 13 mg/l Fresh water	Aquatic invertebrates.	48 h		
		Daphnia			
	Acute LC50 6.5 mg/l Fresh water	Aquatic invertebrates.	48 h		
		Daphnia			
	Acute LC50 3 mg/l Fresh water	Aquatic invertebrates.	48 h		
		Crustaceans	40.1		
	Acute LC50 15.9 mg/l Fresh water	Aquatic invertebrates.	48 h		
		Crustaceans	40.1		
	Acute LC50 3.6 mg/l Fresh water	Aquatic invertebrates.	48 h		
	A sector L C50, 11 sec./l Excellence (area	Crustaceans	48 h		
	Acute LC50 11 mg/l Fresh water	Aquatic invertebrates. Crustaceans	48 n		
	Acute LC50 13.4 mg/l Fresh water	Aquatic invertebrates.	48 h		
	Acute LC30 13.4 llig/1 Flesh water	Crustaceans	40 11		
	Acute EC50 27.8 mg/l Fresh water	Aquatic invertebrates.	48 h		
	Acute LC50 27.6 mg/11 tesh water	Daphnia	40 11		
	Acute EC50 19.3 mg/l Fresh water	Aquatic invertebrates.	48 h		
		Daphnia	10 11		
	Acute EC50 35.306 mg/l Fresh	Aquatic invertebrates.	48 h		
	water	Daphnia			
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Remarks - Acute - Aquatic	Chemicals are not readily available a	as they are bound within the	e polymer matrix		
invertebrates.:		-	- •		
Conclusion/Summary	: Chemicals are not readily	ly available as they are bou	nd within the		
-	polymer matrix.				
Persistence and degradabili	<u>ty</u>				
a b b b			a .a. a		
Conclusion/Summary	: Chemicals are not readily available as they are bound within the				

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polymer matrix.

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Conclusion/Summary

Chemicals are not readily available as they are bound within the polymer matrix.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Titanium dioxide		-	low
	•	•	

NODI	ity in	SOIL

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Soil/water partition coefficient	:	Not available.
(KOC) 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 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	:	Consult mode specific transport rules
IMO/IMDG (maritime)	:	Consult mode specific transport rules

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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 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(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) - 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(c) - Significant adverse reaction 307 - Priority pollutants: Listed Zinc stearate Zinc oxide Vinyl chloride monomer 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 - Flammable 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 - Flammable substances: Not listed United States - Department of commerce - Precursor chemical:
		Not listed
Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)	:	Listed
Clean Air Act Section 602 Class I Substances	:	Not listed
Clean Air Act Section 602 Class II Substances	:	Not listed
DEA List I Chemicals (Precursor	:	Not listed

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Chemicals) DEA List II Chemicals (Essential : Not listed Chemicals)

US. EPA CERCLA Hazardous Substances (40 CFR 302)

not applicable

SARA 311/312

Classification

: Not applicable.

Composition/information on ingredients

Name	%	Classification
Titanium dioxide	1 - 5	СН

<u>SARA 313</u>

Not applicable.

State regulations	
Massachusetts	: None of the components are listed.
New York	None of the components are listed.
New Jersey	: The following components are listed: Titanium dioxide
Pennsylvania	Ethene, chloro-, homopolymer The following components are listed:
i chiisyivama	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	:	All components are listed or exempted.
International regulations		
International lists	:	Australia inventory (AICS): 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): All components are listed or exempted.
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Philippines inventory (PICCS): All components are listed or exempted.Taiwan Chemical Substances Inventory (TCSI): All components are listed or exempted.

Chemical Weapons Convention	:	Not listed
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

Hazardous Material Information System (U.S.A.) :

Health	*	1
Flammability		0
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868. The customer is responsible for determining the PPE code for this material.

History

History		
Date of printing	:	02/16/2017
Date of issue/Date of revision	:	02/06/2017
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 = 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		

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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 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.