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SAFETY DATA SHEET

ZU5A/DK.GRAPHITE/GF600A33

Section 1. Identification	on	
GHS product identifier Chemical name	:	ZU5A/DK.GRAPHITE/GF600A33
CAS number Other means of identification	:	Mixture Mixture CC10135432
Product type	:	solid
		e or mixture and uses advised against
Product use	:	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. 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		
Signal word	:	No signal word.
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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	:	CC10135432

CAS number/other identifiers

Ingredient name	%	CAS number
Titanium dioxide	25 - 50	13463-67-7
Carbon black	3 - 5	1333-86-4
Silica, amorphous	1 - 3	7631-86-9

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



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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.
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 and delayed

Potential acute health effects		
Eye contact	:	No known significant effects or critical hazards.
Inhalation	:	No known significant effects or critical hazards.
Skin contact	:	No known significant effects or critical hazards.
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 att	entio	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 medical surveillance for 48 hours.
Specific treatments	:	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)



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Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media Unsuitable extinguishing media	:	In case of fire, use water spray (fog), foam, dry chemical or 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	:	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.
For emergency responders	:	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	:	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 containment and 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

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Large spill

licensed waste disposal contractor.

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.

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
Silica, amorphous	NIOSH REL (1994-06-01) TWA 6 mg/m3
Carbon black	OSHA PEL 1989 (1989-03-01) TWA 3.5 mg/m3 OSHA PEL (1993-06-30) TWA 3.5 mg/m3 NIOSH REL (1994-06-01) TWA 3.5 mg/m3
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		TWA 0.1 mgPAH/m^3
		ACGIH TLV (2010-12-06)
		TWA 3 mg/m3 Form: Inhalable fraction
Titanium dioxide		OSHA PEL 1989 (1989-03-01)
		TWA 10 mg/m3 Form: Total dust
		OSHA PEL (1993-06-30)
		TWA 15 mg/m3 Form: Total dust
		ACGIH TLV (1996-05-18)
		TWA 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
		necessary to reduce emissions to acceptable levels.
Individual protection measures		
murvidual protection measures		
Hygiene measures	:	Wash hands, forearms and face thoroughly after handling chemical
. 0		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.
Eye/face protection	:	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		
Sam 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	:	Based on the hazard and potential for exposure, select a respirator that
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meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state	:	solid [Pellets.]
Color	:	BLACK
Odor	:	Faint odor.
Odor threshold	:	Not available.
рН	:	Not available.
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- octanol/water	:	Not available.
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.
		=//0



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Conditions to avoid Incompatible materials	:	Keep away from extreme heat and oxidizing agents. 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

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure				
Remarks - Oral:	No applicable toxic	No applicable toxicity data						
Remarks - Inhalation:	No applicable toxic	city data						
Remarks - Dermal:	No applicable toxic	city data						
Carbon black								
	LD50 Oral	Rat	15,400 mg/kg	-				
Remarks - Inhalation:	No applicable toxic	No applicable toxicity data						
Remarks - Dermal:	No applicable toxic	No applicable toxicity data						
Titanium dioxide	anium dioxide							
Remarks - Oral:	No applicable toxic	No applicable toxicity data						
	LC50 Inhalation	Rat - Male	6.82 Mg/l	4 h				
	LD50 Dermal	Rabbit	> 5,000 mg/kg	-				
Conclusion/Summary Mixture Not fully tested								

Conclusion/Summary

Mixture.Not fully tested.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Silica, amorphous	Eyes - Mild irritant	Rabbit		24 hrs	-
Titanium dioxide	Skin - Mild irritant	Human		72 hrs	-

Conclusion/Summary

Skin Eyes

Mixture.Not fully tested. : Mixture.Not fully tested. :

Mixture.Not fully tested. :

Sensitization

Respiratory

Conclusion/Summary

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Skin Respiratory		Mixture.Not fully t Mixture.Not fully t		
Mutagenicity				
Conclusion/Summary	:	Mixture.Not fully t	ested.	
Carcinogenicity				
Conclusion/Summary <u>Classification</u>	:	Mixture.Not fully t	ested.	
Product/ingredient	OSHA	IARC	NTP	
name Silice amorphous		3		
Silica, amorphous Carbon black		2B		
Titanium dioxide		2B 2B		
<u>Reproductive toxicity</u> Conclusion/Summary	:	Mixture.Not fully t	ested.	
<u>Teratogenicity</u>				
Conclusion/Summary	:	Mixture.Not fully t	tested.	
Specific target organ toxicity Not available.	<u>(single expo</u>	<u>sure)</u>		
Specific target organ toxicity Not available.	r (repeated ex	<u>kposure)</u>		
Aspiration hazard Not available.				
Information on likely routes of exposure	of :	Not available.		
Potential acute health effects				
Eye contact Inhalation Skin contact Ingestion	:	No known significa No known significa	ant effects or critical hazards. ant effects or critical hazards. ant effects or critical hazards. ant effects or critical hazards.	
Symptoms related to the phys	sical chamics	al and toyicologica	l characteristics	

Symptoms related to the physical, chemical and toxicological characteristics



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Eye contact	: No specific data	•
Inhalation	: No specific data	•
Skin contact	: No specific data	•
Ingestion	: 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	:::::::::::::::::::::::::::::::::::::::	No known significant effects or critical hazards. No known significant effects or critical hazards.
Numerical measures of toxicity		

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

osure	Expo	Species	Result	Product/ingredient name
				Silica, amorphous
			No applicable toxicity data	Remarks - Acute - Fish:
			No applicable toxicity data	Remarks - Acute - Aquatic



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invertebrates.:							
Remarks - Acute - Aquatic	No applicable toxicity data						
plants:	no application tonion, data						
Remarks - Chronic - Fish:	No applicable toxicity data						
Remarks - Chronic -	No applicable toxicity data						
Aquatic invertebrates.:							
Carbon black							
Remarks - Acute - Fish:	No applicable toxicity data						
	Acute EC50 37.563 Mg/l Fresh	Aquatic invertebrates.	48 h				
	water	Daphnia					
Remarks - Acute - Aquatic	Acute						
invertebrates.:							
Remarks - Acute - Aquatic	No applicable toxicity data						
plants:							
Remarks - Chronic - Fish:	No applicable toxicity data						
Remarks - Chronic -	No applicable toxicity data						
Aquatic invertebrates.:							
Titanium dioxide							
	Acute LC50 > 1,000 Mg/l Marine	Fish - Fish	96 h				
	water						
Remarks - Acute - Fish:	Acute						
	Acute LC50 3 Mg/l Fresh water Aquatic invertebrates. 48 h						
	e	Crustaceans					
Remarks - Acute - Aquatic	Acute	•	•				
invertebrates.:							
	Acute LC50 6.5 Mg/l Fresh water	Aquatic invertebrates.	48 h				
		Daphnia					
Remarks - Acute - Aquatic	Acute						
invertebrates.:							
Remarks - Acute - Aquatic	No applicable toxicity data						
plants:							
Remarks - Chronic - Fish:	No applicable toxicity data						
Remarks - Chronic -	No applicable toxicity data						
Aquatic invertebrates.:							
ZU5A/DK.GRAPHITE/GF600)A33						
Remarks - Acute - Aquatic	Chemicals are not readily available as they are bound within the polymer matrix.						
invertebrates.:							
Conclusion/Summary	: Chemicals are not readily available as they are bound within the						
	polymer matrix.	polymer matrix.					
.							
Persistence and degradability	<u>v</u>						
		l					
Conclusion/Summary		ly available as they are bou	na within the				
	polymer matrix.						

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Conclusion/Summary	:	Chemicals are not readily available as they are bound within the polymer matrix.
Bioaccumulative potential Not available.		
<u>Mobility in soil</u>		
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 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 49CFR Ground/Air/Water	:	Not regulated for transportation.
International Air ICAO/IATA	:	Not classified as dangerous goods under transport regulations.

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International Water IMO/IMDG : Not classified as dangerous goods 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 United States - TSCA 4(a) - ITC Priority list: Not listed United States - TSCA 4(a) - Proposed test rules: 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) - 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 - TSCA 8(d) - Health and safety studies: Not listed United States - EPA Clean water act (CWA) section 307 - Priority pollutants: Listed Rutile, antimony chromium buff 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 - Toxic substances: Not listed United States - Department of commerce - Precursor chemical: Not listed
Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) Clean Air Act Section 602 Class I	:	Listed Not listed
Substances Clean Air Act Section 602 Class II	:	Not listed



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Substances:Not listedDEA List I Chemicals (Precursor:Not listedDEA List II Chemicals (Essential:Not listedChemicals):Not listed

US. EPA CERCLA Hazardous Substances (40 CFR 302)

not applicable

SARA 311/312

Classification

Not applicable.

:

Composition/information on ingredients

Name	%	Classification
Silica, amorphous	1 - 3	AH
Carbon black	3 - 5	СН
Titanium dioxide	25 - 50	СН

SARA 313

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
		Carbon black
		Iron oxide
Pennsylvania	:	The following components are listed: Titanium dioxide
		Carbon black
		Iron oxide
		Silica, amorphous

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

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United States inventory (TSCA 8b)	:	All components are listed or exempted.
Canada inventory	:	Not determined.
International regulations		
<u>Inventory list</u>		
Australia	:	All components are listed or exempted.
Canada	-	Not determined.
China	:	All components are listed or exempted.
Europe inventory	:	At least one component is not listed in EINECS but all such components are listed in ELINCS. Please contact your supplier for information on the inventory status of this material.
Japan	:	Not determined.
New Zealand	:	All components are listed or exempted.
Philippines	:	Not determined.
Republic of Korea	:	Not determined.
Taiwan	:	All components are listed or exempted.
Turkey	:	Not determined.
United States	:	All components are listed or exempted.

Section 16. Other information

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

Health	/	0
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 and the associated label are not required on SDSs or products leaving a facility 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 trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual. History

Date of printing	:	11/26/2018
Date of issue/Date of revision	:	09/14/2018
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Version	:	1.6
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

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.