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SAFETY DATA SHEET

TVC04605E WILSON YELLOW "5228"

Section 1. Identification	on	
GHS product identifier Chemical name CAS number	:	TVC04605E WILSON YELLOW "5228" Mixture Mixture
Other means of identification Product type	:	CC10014927 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. 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.
		Not available.

Section 3. Composition/information on ingredients

:

Substance/mixture	:	Mixture
Chemical name	:	Mixture
Other means of identification	:	CC10014927

CAS number/other identifiers

Ingredient name	%	CAS number
Titanium oxide	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.
Inhalation	:	Remove victim to fresh air and keep at rest in a position comfortable



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Skin contact : Ingestion :	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. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. 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	
Potential acute health effects	
Eye contact:Inhalation:Skin contact:Ingestion:Over-exposure signs/symptoms	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.
	No specific data
Eye contact : Inhalation :	No specific data. No specific data.
Skin contact	No specific data.
Ingestion :	No specific data.
Indication of immediate medical attenti	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)

Section 5. Firefighting measures

Extinguishing media



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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 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	:	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 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	
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contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures	:	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational	:	Eating, drinking and smoking should be prohibited in areas where this
hygiene		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 oxide	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,



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		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	:	Based on the hazard and potential for exposure, select a respirator that 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

:	solid [Pellets.]
:	YELLOW
:	Faint odor.
:	Not available.



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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.
<u>Aerosol product</u>		
Heat of combustion	:	Not available.
T 1 (1)		NT (111
Ignition distance	:	Not available.
Enclosed space ignition - Time	:	Not available.
equivalent		NT / 111
Enclosed space ignition -	:	Not available.
Deflagration density		NT
Flame height	:	Not available.
Flame duration	:	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.



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Hazardous decomposition	:	Under normal conditions of storage and use, hazardous decomposition
products		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 oxide				
Remarks - Oral:	No applicable toxic	city data		
	LC50 Inhalation	Rat - Male	6.82 Mg/l	4 h
	LD50 Dermal	Rabbit	> 5,000 mg/kg	-
Conclusion/Summary	: Mixtu	re.Not fully tested.		

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Titanium oxide	Skin - Mild	Human		72 hrs	-
	irritant				
Conclusion/Summary	•	•	•		·
Skin	: N	Mixture.Not fu	Illy tested.		
Eyes	: N	Mixture.Not fu	Illy tested.		
Respiratory	: N	Mixture.Not fu	Illy tested.		
<u>Sensitization</u>					
Conclusion/Summary					
Skin	: N	Mixture.Not fu	Illy tested.		
Respiratory	: N	Mixture.Not fu	illy tested.		
<u>Mutagenicity</u>					
Conclusion/Summary	: N	Mixture.Not fu	Illy tested.		
<u>Carcinogenicity</u>					
Conclusion/Summary	: N	Mixture.Not fu	Illy tested.		
Classification					
		0/4	_		



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Product/ingredient name	OSHA	IARC	NTP		
Titanium oxide	-	2B	-		
<u>Reproductive toxicity</u>					
Conclusion/Summary	:	Mixture.Not full	y tested.		
Teratogenicity					
Conclusion/Summary	:	Mixture.Not fully tested.			
Specific target organ toxicity (single expos	ure)			
Not available.					
Specific target organ toxicity (reneated ev	nosure)			
Not available.	<u>repeated ex</u>	<u> </u>			
Amination harand					
Aspiration hazard Not available.					
Information on likely routes o	f :	Not available.			
exposure					
Potential acute health effects					
Eye contact	:	No known signif	icant effects or critical hazards.		
Inhalation			ficant effects or critical hazards.		
Skin contact	:	No known signif	icant effects or critical hazards.		
Ingestion	:	No known signif	ficant effects or critical hazards.		
Symptoms related to the phys	ical, chemica	al and toxicologi	cal characteristics		
Eye contact	:	No specific data.			
Inhalation		No specific data.			
Skin contact		No specific data.			
Ingestion		No specific data.			
Delayed and immediate effect	s as well as c	hronic effects fr	om short and long-term exposure		
Denayed and miniculate effects	5 u5 wen d5 (in one cheets n	on short and long-term exposure		
<u>Short term exposure</u>					

Potential immediate effects	:	Not available.
Potential delayed effects	:	Not available.



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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	:	No known significant effects or critical hazard
Mutagenicity	:	No known significant effects or critical hazard
Teratogenicity	:	No known significant effects or critical hazard
Developmental effects	:	No known significant effects or critical hazard
Fertility effects	:	No known significant effects or critical hazard

Section 12. Ecological information

Acute toxicity estimates

Not available.

Toxicity

Product/ingredient name	Result	Species	Exposure	
Titanium oxide				
	Acute LC50 > 1,000 Mg/l Marine water	Fish - Fish	96 h	
Remarks - Acute - Fish:	Acute			
	Acute LC50 3 Mg/l Fresh water	Aquatic invertebrates. Crustaceans	48 h	
Remarks - Acute - Aquatic invertebrates.:	Acute			
	Acute LC50 6.5 Mg/l Fresh water	Aquatic invertebrates. Daphnia	48 h	
Remarks - Acute - Aquatic invertebrates.:	Acute			
Remarks - Acute - Aquatic plants:	** *			
Remarks - Chronic - Fish:	No applicable toxicity data			



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Remarks - Chronic -	No applicable toxicity data		
Aquatic invertebrates.:			
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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.		
Persistence and degradability			
Conclusion/Summary	: Chemicals are not readily available as they are bound within the polymer matrix.		
<u>Bioaccumulative potential</u> Not available.			
Mobility in soil			
Soil/water partition coefficie (KOC)	nt : 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



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Section 14. Transport information U.S.DOT 49CFR : Not regulated for transportation. Ground/Air/Water : Not classified as dangerous goods under transport regulations. International Air : Not classified as dangerous goods under transport regulations. International Water : Not classified as dangerous goods under transport regulations.

IMO/IMDG

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 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) - Chemical Data Reporting (CDR): Not determined 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: Not listed United States - EPA Clean air act (CAA) section 112 - Accidental release prevention - Flammable substances: Not listed



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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 Chemicals)	:	Not listed

US. EPA CERCLA Hazardous Substances (40 CFR 302)

not applicable

SARA 311/312

Classification

: Not applicable.

Composition/information on ingredients

No products were found.

Name	%	Classification
Titanium oxide	>= 5 - <= 10	CARCINOGENICITY - Category 2

Not applicable.

<u>State regulations</u> Massachusetts New York New Jersey	 None of the components are listed. None of the components are listed. The following components are listed:
Pennsylvania	Limestone Titanium oxide The following components are listed: Titanium oxide
	Limestone

California Prop. 65



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WARNING: This product can expose you to Titanium oxide, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Titanium oxide	-	-

United States inventory (TSCA 8b)	:	All components are active or exempted.
Canada inventory	:	At least one component is not listed in DSL but all such components are listed in NDSL.
International regulations		
Inventory list		
Australia Canada	:	All components are listed or exempted. At least one component is not listed in DSL but all such components are listed in NDSL.
China Europe inventory Japan New Zealand Philippines Republic of Korea Taiwan Turkey	:::::::::::::::::::::::::::::::::::::::	All components are listed or exempted. All components are listed or exempted.
United States	:	All components are active or exempted.

Section 16. Other information

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



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.

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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

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:	1.7
:	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
:	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.