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SAFETY DATA SHEET

016YE2006 TPU YELLOW V2

Section 1. Identification		
GHS product identifier	:	016YE2006 TPU YELLOW V2
Chemical name	:	Mixture
CAS number	:	Mixture
Other means of identification	:	CC10207403
Product type	:	solid
••		
Relevant identified uses of the subs	tance	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	:	CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure
(with hours of operation)		or accident).CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident).
		exposure of accidenty.

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 Hazard statements	:	No signal word. 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	:	CC10207403

CAS number/other identifiers

Ingredient name	%	CAS number
Chrome yellow (Lead chromate pigment)	10 - 30	1344-37-2
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



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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	: Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.	
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 attention 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.	
for toricological information (foot	ion 11)	

See toxicological information (Section 11)



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Section 5. Fire-fighting 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 Hazardous thermal decomposition products	:	No specific fire or explosion hazard. Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides metal oxide/oxides
Special protective actions for fire- fighters Special protective equipment 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. 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.
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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.

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
Chrome yellow (Lead chromate pigment)	OSHA PEL (2006-11-27) expressed as Cr
	PEL: Permissible Exposure Level 0.005 mg/m3
	NIOSH REL (2010-09-01) expressed as Cr
	Time Weighted Average (TWA) 0.0002 mg/m3
	OSHA PEL 1989 (1989-03-01) measured as Pb
	PEL: Permissible Exposure Level 0.075 mg/m3
	ACGIH TLV (1995-05-23) measured as Pb
	TLV-TWA: Threshold Limit Value - Time weighted average PEL:
	Permissible Exposure Level 0.05 mg/m3
	ACGIH TLV (1994-09-01) expressed as Cr
	TLV-TWA: Threshold Limit Value - Time weighted average PEL:
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	Permissible Exposure Level 0.05 mg/m3
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
Appropriate engineering controls	: Good general ventilation should be sufficient to control worker
Environmental exposure controls	 exposure to airborne contaminants. 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	
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	8 · · · · 8 · · · · F · · · · · · · · ·
Hand protection	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products
Body protection	 if a risk assessment indicates this is necessary. 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.

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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

Dhygiaal state		solid [Pellets.]
Physical state	:	YELLOW
Color	:	
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-	:	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



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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

Acute toxicity

Titanium dioxide Conclusion/Summary	LC50 Inhalation LD50 Dermal : Mixt	Rat - Male Rabbit	6.82 Mg/l	4 h
Conclusion/Summary	LD50 Dermal			4 h
Conclusion/Summary		Rabbit	5 000	
Conclusion/Summary	: Mixt		> 5,000 mg/kg	-
Conclusion/Summary		ure.Not fully tested.		
Irritation/Corrosion				
Conclusion/Summary				
Skin	: Mixt	ure.Not fully tested.		
Eyes	: Mixt			
Respiratory	: Mixture.Not fully tested.			
Sensitization				
Conclusion/Summary				
Skin	: Mixt	ure.Not fully tested.		
Respiratory		ure.Not fully tested.		
Mutagenicity				
Conclusion/Summary	: Mixt	ure.Not fully tested.		
J		······································		
Carcinogenicity				



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Conclusion/Summary Classification	:	Mixture.Not ful	lly tested.
	OSHA	IARC	NTP
name			
	F	1	Known to be a human carcinogen.
chromate pigment)			
Titanium dioxide		2B	
<u>Reproductive toxicity</u>			
Conclusion/Summary	:	Mixture.Not fu	lly tested.
Teratogenicity			
Conclusion/Summary	:	Mixture.Not fu	lly tested.
Specific target organ toxicity (Not available.	single expo	osure)	
<u>Specific target organ toxicity (</u> Not available.	repeated e	<u>xposure)</u>	
Aspiration hazard Not available.			
Information on the likely route exposure	s of :	Not available.	
Potential acute health effects			
Eye contact	:	No known sign	ificant effects or critical hazards.
Inhalation	:	Exposure to dec	composition products may cause a health hazard. may be delayed following exposure.
Skin contact	:		ificant effects or critical hazards.
Ingestion	:		ificant effects or critical hazards.
Symptoms related to the physic	cal, chemic	al and toxicolog	gical characteristics
Eye contact		No specific data	a
Inhalation		No specific data	
Skin contact		No specific data	
Ingestion		No specific data	
	•	r	

Delayed and immediate effects and also chronic effects from short and long term exposure

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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

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 13 mg/l Fresh water	Aquatic invertebrates.	48 h
		Daphnia	
	Acute LC50 6.5 mg/l Fresh water	Aquatic invertebrates.	48 h
		Daphnia	

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	Acute EC50 19.3 mg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
	Acute EC50 27.8 mg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
	Acute EC50 35.306 mg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
	Acute LC50 3 mg/l Fresh water	Aquatic invertebrates. Crustacean Order	48 h
	Acute LC50 15.9 mg/l Fresh water	Aquatic invertebrates. Crustacean Order	48 h
	Acute LC50 3.6 mg/l Fresh water	Aquatic invertebrates. Crustacean Order	48 h
	Acute LC50 11 mg/l Fresh water	Aquatic invertebrates. Crustacean Order	48 h
	Acute LC50 13.4 mg/l Fresh water	Aquatic invertebrates. Crustacean Order	48 h
016YE2006 TPU YELLOW V	2		
Remarks - Acute - Aquatic invertebrates.:	Chemicals are not readily available	as they are bound within the	e polymer matrix.
Conclusion/Summary	: Chemicals are not readi polymer matrix.	ly available as they are bou	nd within the
Persistence and degradability	<u>y</u>		
Conclusion/Summary	: Chemicals are not readi polymer matrix.	ly available as they are bou	nd within the
Conclusion/Summary	: Chemicals are not readily available as they are bound within the polymer matrix.		

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Chrome yellow (Lead		3,600.00	high
chromate pigment)			
Titanium dioxide		352.00	low

Mobility in soil

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

Section 13. Disposal considerations

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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	:	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: The following components are listed: Chrome yellow (Lead chromate pigment)
	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(e) - Substances consent order: Not listed
	United States - TSCA 6 - Final risk management: Listed Chrome
	yellow (Lead chromate pigment)
	United States - TSCA 8(a) - Chemical risk rules: Not listed

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		 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 - TSCA 8(d) - Health and safety studies: Not listed United States - TSCA 5(a)2 - Proposed significant new use rules: Not listed United States - TSCA 6 - Proposed risk management: Not listed United States - EPA Clean water act (CWA) section 307 - Priority pollutants: Listed Chrome yellow (Lead chromate pigment) 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)	:	Listed
Clean Air Act Section 602 Class I Substances	:	Not listed
Clean Air Act Section 602 Class II Substances	:	Not listed

SubstancesNot listedDEA List I Chemicals (PrecursorNot listedChemicals)Not listedDEA List II Chemicals (EssentialNot listed

US. EPA CERCLA Hazardous Substances (40 CFR 302)

not applicable

SARA 311/312

Classification

Chemicals)

Not applicable.

:

Composition/information on ingredients

Name	%	Classification
Chrome yellow (Lead chromate	10 - 30	СН



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pigment)		
Titanium dioxide	5 - 10	СН

SARA 313

	Product name	CAS number	%
Form R - Reporting	Chrome yellow (Lead	1344-37-2	10 - 30
requirements	chromate pigment)		
Supplier notification	Chrome yellow (Lead	1344-37-2	10 - 30
	chromate pigment)		

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:
		Calcium carbonate
		Titanium dioxide
New York	:	None of the components are listed.
New Jersey	:	The following components are listed:
		Chrome yellow (Lead chromate pigment)
		Calcium carbonate
		Titanium dioxide
Pennsylvania	:	The following components are listed:
		Chrome yellow (Lead chromate pigment)
		Calcium carbonate
		Titonium disside
		Titanium dioxide

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Taiwan inventory (CSNN): All components are listed or exemp Malaysia Inventory (EHS Register): Not determined.		Australia inventory (AICS): All components are listed or exempted. Taiwan inventory (CSNN): All components are listed or exempted. Malaysia Inventory (EHS Register): Not determined. EINECS: All components are listed or exempted.
Canada inventory	:	All components are listed or exempted.
United States inventory (TSCA 8b)	:	All components are listed or exempted.

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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.
Philippines inventory (PICCS): All components are listed or exempted.

Chemical Weapons Convention
List Schedule I Chemicals
Chemical Weapons Convention
List Schedule II Chemicals
Chemical Weapons Convention
List Schedule III Chemicals

Not listed Not listed

:

Not listed

Section 16. Other information

History

History		
Date of printing	:	11/24/2015
Date of issue/Date of revision	:	10/05/2015
Date of previous issue	:	10/28/2014
Version	:	1.1
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 = Internediate 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 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.