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SAFETY DATA SHEET

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Section 1. Identification		
GHS product identifier Chemical name CAS number	:	GOLD SOLAR FLAIR 2.0 Mixture Mixture
Other means of identification Product type	:	CC10279252 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 (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	:	CC10279252

CAS number/other identifiers

Ingredient name	%	CAS number
Rutile (TiO2)	5 - 10	1317-80-2
Titanium dioxide	1 - 3	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.



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	Get medical attention if irritation occurs.	
Inhalation	: Remove victim to fresh air and keep at rest in a posit	ion comfortable
	for breathing. Get medical attention if symptoms occ	ur.
Skin contact	: Flush contaminated skin with plenty of water. Remov	ve contaminated
	clothing and shoes. Get medical attention if sympton	is occur.
Ingestion	: Wash out mouth with water. Remove victim to fresh	air and keep at
	rest in a position comfortable for breathing. If materi	al has been
	swallowed and the exposed person is conscious, give	small quantities
	of water to drink. Do not induce vomiting unless dire	cted to do so by
	medical personnel. Get medical attention if symptom	s occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact Inhalation Skin contact Ingestion <u>Over-exposure signs/symptoms</u>	:	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.
Eye contact	:	No specific data.
Inhalation	:	No specific data.
Skin contact	:	No specific data.
Ingestion	:	No specific data.
Indication of immediate medical atte	ntio	n and special treatment needed, if necessary
Notes to physician	:	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
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

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 Hazardous thermal	:	No specific fire or explosion hazard. Decomposition products may include the following materials:
decomposition products	•	carbon dioxide carbon monoxide 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 contain	ment 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.
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



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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
Rutile (TiO2)		
		Cood concerned wantilation should be sufficient to control worker
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



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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		
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

Physical state	:	solid [Pellets.]
Color	:	YELLOW
Odor	:	Faint odor.
Odor threshold	:	Not available.
рН	:	Not available.
Melting point	:	Not available.

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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

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



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Result	Species	Dose	Exposure
No applicable toxic	city data		
LC50 Inhalation	Rat - Male	6.82 Mg/l	4 h
LD50 Dermal	Rabbit	> 5,000 mg/kg	-
No applicable toxicity data			
No applicable toxicity data			
No applicable toxicity data			
	No applicable toxic LC50 Inhalation LD50 Dermal No applicable toxic No applicable toxic No applicable toxic	No applicable toxicity dataLC50 InhalationRat - MaleLD50 DermalRabbitNo applicable toxicity dataNo applicable toxicity dataNo applicable toxicity dataNo applicable toxicity data	No applicable toxicity data LC50 Inhalation Rat - Male 6.82 Mg/l LD50 Dermal Rabbit > 5,000 mg/kg No applicable toxicity data No applicable toxicity data

Conclusion/Summary

: Mixture.Not fully tested.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Titanium dioxide	Skin - Mild	Human		72 hrs	-
	irritant				
Conclusion/Summary					
Skin		lixture.Not fu			
Eyes		lixture.Not fu			
Respiratory	: N	lixture.Not fu	lly tested.		
<u>Sensitization</u>					
Conclusion/Summary					
Skin		lixture.Not fu			
Respiratory	: N	lixture.Not fu	lly tested.		
<u>Mutagenicity</u>					
Conclusion/Summary	: N	lixture.Not fu	lly tested.		
<u>Carcinogenicity</u>					
Conclusion/Summary	: N	lixture.Not fu	lly tested.		
<u>Classification</u>			-		
Product/ingredient name	OSHA	IARC	NTP		
Titanium dioxide		2B			
Rutile (TiO2)		2B2B			

Conclusion/Summary : Mixture.Not fully tested.

<u>PolyOne</u>

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<u>Teratogenicity</u>					
Conclusion/Summary	:	Mixture.Not fully tested.			
Specific target organ toxicity (sing Not available.	<u>de exp</u>	<u>osure)</u>			
<u>Specific target organ toxicity (repeated exposure)</u> Not available.					
Aspiration hazard Not available.					
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, chemical 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.			

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General Carcinogenicity Mutagenicity Teratogenicity Developmental effects Fertility effects 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 Mg/l Marine	Fish - Fish	96 h
	water		
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	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.:			
Rutile (TiO2)			
Remarks - Acute - Fish:	No applicable toxicity data		
Remarks - Acute - Aquatic	No applicable toxicity data		
invertebrates.:			
Remarks - Acute - Aquatic plants:	No applicable toxicity data		
Remarks - Chronic - Fish:	No applicable toxicity data		
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Remarks - Chronic -	No oppliaable toviaity date
	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.
Conclusion/Summary	: Chemicals are not readily available as they are bound within the polymer matrix.
Bioaccumulative potential 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

	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.
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United States - RCRA Acute hazardous waste "P" List: Not listed



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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.
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 notificat of the components are listed. United States - TSCA 4(a) - Final Test Rules: Not liste United States - TSCA 4(a) - ITC Priority list: Not liste United States - TSCA 4(a) - Proposed test rules: Not li United States - TSCA 4(f) - Priority risk review: Not li United States - TSCA 4(f) - Priority risk review: Not li United States - TSCA 5(a)2 - Final significant new use listed United States - TSCA 5(a)2 - Proposed significant new use listed United States - TSCA 5(e) - Substances consent order: United States - TSCA 6 - Final risk management: Not United States - TSCA 8(a) - Chemical risk rules: Not I United States - TSCA 8(a) - Dioxin/Furane precusor: I United States - TSCA 8(a) - Preliminary assessment re (PAIR): Not listed United States - TSCA 8(c) - Significant adverse reaction Not listed United States - TSCA 8(d) - Health and safety studies: United States - TSCA 8(d) - Health and safety studies: United States - EPA Clean water act (CWA) section 30 pollutants: Not listed 	d d sted isted rules: Not use rules: Not listed listed Not listed isted Not listed (CDR): Not port n (SAR): Not listed 07 - Priority
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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)	:	Not listed
Clean Air Act Section 602 Class I	:	Not listed
Substances Clean Air Act Section 602 Class II		Not listed
Substances	•	Not listed
DEA List I Chemicals (Precursor	:	Not listed
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 - 3	СН
Rutile (TiO2)	5 - 10	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: Mica Titanium dioxide
Pennsylvania	:	The following components are listed: Mica
		Rutile (TiO2)



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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		
<u>Inventory list</u>		
Australia	:	All components are listed or exempted.
Canada	:	All components are listed or exempted.
China	:	All components are listed or exempted.
Europe inventory	:	All components are listed or exempted.
Japan	:	All components are listed or exempted.
New Zealand	:	All components are listed or exempted.
Philippines	:	All components are listed or exempted.
Republic of Korea	:	All components are listed or exempted.
Taiwan	:	All components are listed or exempted.
Turkey	:	All components are listed or exempted.
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. <u>History</u>

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Date of issue/Date of revision Date of previous issue Version	:	03/08/2018 00/00/0000 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 = Internediate 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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