ROYAL

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SAFETY DATA SHEET

ROYAL

Section 1. Identification		
GHS product identifier	:	ROYAL
Chemical name	:	Mixture
CAS number	:	Mixture
Other means of identification	:	CC10302625
Product type	:	solid
<u>Relevant identified uses of the subs</u> Product use	stance :	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. 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	:	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	:	COMBUSTIBLE DUSTS
GHS label elements		
Signal word Hazard statements	:	Warning May form combustible dust concentrations in air.

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Ine

:	Not applicable.
:	Not applicable.
:	Keep container tightly closed.
:	None known.
	:

Section 3. Composition/information on ingredients

Substance/mixture	:	Mixture
Chemical name	:	Mixture
Other means of identification	:	CC10302625

CAS number/other identifiers

Ingredient name	%	CAS number
Rutile (TiO2)	50 - 75	1317-80-2

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. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
Inhalation	:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health

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unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie,

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		effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. 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. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	:	Wash out mouth with water. Remove dentures if any. 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. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact Inhalation	:	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes. Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
Skin contact Ingestion	:	No known significant effects or critical hazards.
Over-exposure signs/symptoms		
Eye contact	:	Adverse symptoms may include the following: irritation redness
Inhalation	:	Adverse symptoms may include the following: respiratory tract irritation coughing
Skin contact	:	No specific data.
Ingestion	:	No specific data.

belt or waistband.

Indication of immediate medical attention and special treatment needed, if necessary

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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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media Unsuitable extinguishing media	:	Use dry chemical powder. Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.
Specific hazards arising from the chemical	:	May form explosible dust-air mixture if dispersed.
Hazardous thermal decomposition products	:	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire- exposed containers cool.
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

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For emergency responders :	spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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. Use spark-proof tools and explosion- proof equipment. 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. Use spark-proof tools and explosion- proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. 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 : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not

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Advice on general occupational hygiene	:	reuse container. 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 a segregated and approved area. 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. Eliminate all ignition sources. Separate from oxidizing materials. 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

Exposure limits	
None.	
Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment. 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.	
Wash hands, forearms and face thoroughly after handling chemical	

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Eye/face protection	 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. If operating conditions cause high dust concentrations to be produced, use dust goggles.
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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
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 [Powder.]
Color	PURPLE
Odor	: Not available.
Odor threshold	Not available.
pH	Not available.
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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	:	Not available.
Partition coefficient: n-	:	Not available.
octanol/water		
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
SADT	:	Not available.
Viscosity	:	Dynamic: Not available.
		Kinematic: Not available.

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	Stable under recommended storage and handling conditions (see Section 7).
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.
Incompatible materials	:	Reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

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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

Remarks - Oral:	No appliach	le toxicity data		
Remarks - Oral: Remarks - Inhalation:		le toxicity data		
Remarks - Dermal:		le toxicity data		
Conclusion/Summary		Mixture.Not fully	v tested	
Concrusion/Summary	•	WIIXture.ivot iun	y tested.	
Irritation/Corrosion				
Conclusion/Summary				
Skin	:	Mixture.Not full	y tested.	
Eyes	:	Mixture.Not full	y tested.	
Respiratory	:	Mixture.Not full	y tested.	
Sensitization				
Conclusion/Summary				
Skin	:	Mixture.Not full	y tested.	
Respiratory	:	Mixture.Not full	y tested.	
Mutagenicity				
Conclusion/Summary	:	Mixture.Not full	y tested.	
Carcinogenicity				
Conclusion/Summary Classification	:	Mixture.Not full	y tested.	
Product/ingredient name	OSHA	IARC	NTP	
Rutile (TiO2)		2B2B		
Reproductive toxicity				
Conclusion/Summary	:	Mixture.Not full	y tested.	
Teratogenicity				
Conclusion/Summary	:	Mixture.Not fully	y tested.	



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Specific target organ toxicity (sing Not available.	gle exp	osure)
Specific target organ toxicity (rep	eated	exposure)
Not available.		
Aspiration hazard Not available.		
Information on likely routes of exposure	:	Not available.
Potential acute health effects		
Eye contact	:	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
Inhalation	:	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
Skin contact	:	No known significant effects or critical hazards.
Ingestion	:	No known significant effects or critical hazards.
Symptoms related to the physical,	<u>chemi</u>	cal and toxicological characteristics
Eye contact	:	Adverse symptoms may include the following: irritation
Inhalation	:	redness Adverse symptoms may include the following: respiratory tract irritation coughing
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	:	Not available.
Potential delayed effects	:	Not available.
Long term exposure		
Potential immediate effects	:	Not available.
Potential delayed effects	:	Not available.
Potential chronic health effects		

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Conclusion/Summary	:	Mixture.Not fully tested.
General	:	Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
Carcinogenicity	:	No known significant effects or critical hazards.
Mutagenicity	:	No known significant effects or critical hazards.
Teratogenicity	:	No known significant effects or critical hazards.
Developmental effects	:	No known significant effects or critical hazards.
Fertility effects	:	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	78,003.1 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Rutile (TiO2)			
Remarks - Acute - Fish:	No applicable toxicity data		
Remarks - Acute - Aquatic	No applicable toxicity data		
invertebrates.:			
Remarks - Acute - Aquatic	No applicable toxicity data		
plants:			
Remarks - Chronic - Fish:	No applicable toxicity data		
Remarks - Chronic -	No applicable toxicity data		
Aquatic invertebrates.:			
Conclusion/Summary	: Not available.		

Conclusion/Summary

Not available.

Persistence and degradability

Conclusion/Summary

Not available. :

Bioaccumulative potential

Not available.

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<u>Mobility in soil</u>

Soil/water partition coefficient:Not available.(KOC):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. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. 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	:	Consult mode specific transport rules
International Water IMO/IMDG	:	Consult mode specific transport rules

Section 15. Regulatory information

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Chemicals)

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United States - TSCA 12(b) - Chemical export notification: None **U.S. Federal regulations** : of the components are listed. United States - TSCA 4(a) - Final Test Rules: Not listed United States - TSCA 4(a) - ITC Priority list: Not listed United States - TSCA 4(a) - Proposed test rules: Not listed United States - TSCA 4(f) - Priority risk review: Not listed United States - TSCA 5(a)2 - Final significant new use rules: Not listed United States - TSCA 5(a)2 - Proposed significant new use rules: Not listed United States - TSCA 5(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) - 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 - EPA Clean water act (CWA) section 307 - Priority pollutants: Listed Phthalocyanine Blue United States - EPA Clean water act (CWA) section 311 -Hazardous substances: Not listed United States - EPA Clean air act (CAA) section 112 - Accidental release prevention - Flammable substances: Not listed United States - EPA Clean air act (CAA) section 112 - Accidental release prevention - 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** Not listed :

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US. EPA CERCLA Hazardous Substances (40 CFR 302)

not applicable

SARA 311/312

Classification

COMBUSTIBLE DUSTS

Composition/information on ingredients

Name	%	Classification
Rutile (TiO2)	>= 50 - <= 75	CARCINOGENICITY - Category 2

<u>SARA 313</u>

Not applicable.

State regulations Massachusetts None of the components are listed. : New York None of the components are listed. : The following components are listed: **New Jersey** : Mica Phthalocyanine Blue The following components are listed: Pennsylvania : Rutile (TiO2) Mica

:

Phthalocyanine Blue

California Prop. 65

WARNING: This product can expose you to Rutile (TiO2), 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
Rutile (TiO2)	No.	No.

United States inventory (TSCA 8b)	:	All components are listed or exempted.
Canada inventory	:	All components are listed or exempted.

International regulations

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Inventory list

:	All components are listed or exempted.
:	All components are listed or exempted.
:	All components are listed or exempted.
:	All components are listed or exempted.
:	All components are listed or exempted.
:	All components are listed or exempted.
:	All components are listed or exempted.
:	All components are listed or exempted.
:	All components are listed or exempted.
:	All components are listed or exempted.
:	All components are listed or exempted.

Section 16. Other information

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

Health	/	0
Flammability		3
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	:	05/11/2019
Date of issue/Date of revision	:	05/10/2019
Date of previous issue	:	05/08/2019
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 = 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

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Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations Not available.

References

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.

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