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SAFETY DATA SHEET

BR091.7 CMPD (WHITE)

Section 1. Identification		
GHS product identifier	:	BR091.7 CMPD (WHITE)
Chemical name	:	Mixture
CAS number	:	Mixture
Other means of identification	:	EM10016216
Product type	:	solid
	ance	e or mixture and uses advised against
Product use	:	Industrial applications. Plastics.
Supplier's details		POLYONE CORPORATION
		33587 Walker Road, Avon Lake, OH 44012
		1 (440) 930-1000 or 1 (866) POLYONE
Emergency telephone number (with hours of operation)	:	CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident). 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

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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	:	EM10016216

CAS number/other identifiers

Ingredient name	%	CAS number
Titanium dioxide	1 - 5	13463-67-7
Zinc oxide	1 - 5	1314-13-2

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



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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.
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 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	entio	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. Fire-fighting 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 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 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 containm	ent a	nd cleaning up
Small spill Large 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. 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.



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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	
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	
	ACGIH TLV (1996-05-18)	
	TLV-TWA: Threshold Limit Value - Time weighted average PEL:	
	Permissible Exposure Level 10 mg/m3	
Zinc oxide	OSHA PEL 1989 (1989-03-01)	
	PEL: Permissible Exposure Level 5 mg/m3 Form: Fume	
	Short Term Exposure Limit value for a 15-minute reference	
	period expressed in parts per million or in mg/m3. 10 mg/m3	
	Form: Fume	
	PEL: Permissible Exposure Level 10 mg/m3 Form: Total dust	
	PEL: Permissible Exposure Level 5 mg/m3 Form: Respirable	
	fraction	
	OSHA PEL (1993-06-30)	
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		 PEL: Permissible Exposure Level 5 mg/m3 Form: Fume PEL: Permissible Exposure Level 15 mg/m3 Form: Total dust PEL: Permissible Exposure Level 5 mg/m3 Form: Respirable fraction NIOSH REL (1994-06-01) Time Weighted Average (TWA) 5 mg/m3 Form: Dust and fumes Short Term Exposure Limit value for a 15-minute reference period expressed in parts per million or in mg/m3. 10 mg/m3 Form: Fume Exposure limit value-ceiling concentration 15 mg/m3 Form: Dust ACGIH TLV (2003-01-01) TLV-TWA: Threshold Limit Value - Time weighted average PEL: Permissible Exposure Level 2 mg/m3 Form: Respirable fraction TLV-STEL: Threshold Limit Value - Short Time Exposure Level 10 mg/m3 Form: Respirable fraction
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		
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
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Other skin protection	:	on the task being performed and the risks involved and should be approved by a specialist before handling this product. 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

Physical state	:	solid [Pellets.]
Color	:	NO PIGMENT
Odor	:	Faint odor.
Odor threshold	:	Not available.
рН	:	Not available.
Melting point	:	Not available.
Boiling point	:	Not available.
Flash point	:	Not available.
Burning time	:	Not available.
Burning rate	:	Not available.
Evaporation rate	:	Not available.
Flammability (solid, gas)	:	Not available.
Lower and upper explosive	:	Lower: Not available.
(flammable) limits		Upper: Not available.
Vapor pressure	:	Not available.
Vapor density	:	Not available.
Relative density	:	Not available.
Solubility	:	Not available.
Solubility in water	:	insoluble in water.
Partition coefficient: n- octanol/water	:	Not available.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
SADT	:	Not available.
Viscosity	:	Dynamic: Not available.
·		Kinematic: Not available.



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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

Product/ingredient name	Result	Species	Dose	Exposure
Titanium dioxide				
	LC50 Inhalation	Rat - Male	6.82 Mg/l	4 h
	LD50 Dermal	Rabbit	> 5,000 mg/kg	-
Zinc oxido	•			-

Zinc oxide Conclusion/Summary

: Mixture.Not fully tested.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Zinc oxide	Eyes - Mild	Rabbit		24 hrs	-
	irritant				
	Skin - Mild	Rabbit		24 hrs	-
	irritant				
Conclusion/Summary					
Skin	: N	lixture.Not full	y tested.		
Eyes	: N	lixture.Not full	y tested.		
Respiratory	: N	lixture.Not full	y tested.		

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Conclusion/Summary Skin Respiratory	Mixture.Not fully tested.Mixture.Not fully tested.				
Mutagenicity					
Conclusion/Summary	:	М	ixture.Not fully t	ested.	
Carcinogenicity					
Conclusion/Summary <u>Classification</u>	:	М	ixture.Not fully t	ested.	
Product/ingredient name	OSHA		IARC	NTP	
Titanium dioxide			2B		
<u>Reproductive toxicity</u> Conclusion/Summary		м	ixture.Not fully t	ected	
Conclusion/Summary	•	IVI	ixture.Not fully t	esieu.	
Teratogenicity					
Conclusion/Summary	:	М	ixture.Not fully t	ested.	
Specific target organ toxicity Not available.	<u>' (single ex</u>	posu	<u>re)</u>		
Specific target organ toxicity Not available.	<u>' (repeated</u>	l expo	osure)		
Aspiration hazard Not available.					
Information on the likely rou exposure	tes of :	No	ot available.		
Potential acute health effects					
Eye contact	:	No	o known significa	ant effects or critical hazard	S.
Inhalation				ant effects or critical hazard	
Skin contact	:			ant effects or critical hazard	
Ingestion	:			ant effects or critical hazard	
Symptoms related to the phys	sical, chen	nical a	and toxicologica	l characteristics	

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Eye contact	: No specific data	
Inhalation	: No specific data	
Skin contact	: No specific data	
Ingestion	: No specific data	

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

Short term exposure		
Potential immediate effects Potential delayed effects	:	Not available. Not available.
Long term exposure		
Potential immediate effects Potential delayed effects	:	Not available. Not available.
Potential chronic health effects		
Conclusion/Summary	:	Mixture.Not fully tested.
General Carcinogenicity Mutagenicity Teratogenicity Developmental effects Fertility effects	:	No known significant effects or critical hazards. No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Zinc oxide			
	Acute LC50 2,246,000 µg/l Fresh	Fish - Fathead minnow	96 h
	40/45		



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	water		
	Acute LC50 1.1 mg/l Fresh water	Fish - Rainbow trout,donaldson trout	96 h
	Acute LC50 2.525 mg/l Fresh water	Fish - Zebra danio	96 h
	Acute LC50 3.969 mg/l Fresh water	Fish - Zebra danio	96 h
	Acute LC50 98 µg/l Fresh water	Aquatic invertebrates. Water flea	48 h
	Acute EC50 1 mg/l Fresh water	Aquatic invertebrates. Water flea	48 h
	Acute EC50 0.622 mg/l Fresh water	Aquatic invertebrates. Water flea	48 h
	Acute LC50 1.25 mg/l Fresh water	Aquatic invertebrates. Water flea	48 h
	Acute EC50 0.481 mg/l Fresh water	Aquatic invertebrates. Water flea	48 h
	Acute IC50 46 µg/l Fresh water	Aquatic plants - Green algae	72 h
	Acute IC50 63 µg/l Fresh water	Aquatic plants - Green algae	72 h
	Acute IC50 1.85 mg/l Marine water	Aquatic plants - Diatom	96 h
	Acute IC50 2.97 mg/l Marine water	Aquatic plants - Diatom	96 h
	Acute IC50 2.36 mg/l Marine water	Aquatic plants - Diatom	96 h
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Remarks - Acute - Aquatic invertebrates.:	Chemicals are not readily available as	s they are bound within the	polymer matrix.
Conclusion/Summary	: Chemicals are not readily polymer matrix.	y available as they are bour	nd within the
Persistence and degradability	<u>/</u>		
Conclusion/Summary	: Chemicals are not readily polymer matrix.	y available as they are bour	nd within the
Conclusion/Summary	: Chemicals are not readily polymer matrix.	y available as they are bour	nd within the

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Titanium dioxide		352.00	low
Zinc oxide		60,960.00	high

Mobility in soil



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Soil/water partition coefficient	:	Not available.
(KOC)		
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
		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: None of the components are listed. United States - TSCA 4(a) - Final Test Rules: Not listed United States - TSCA 4(a) - ITC Priority list: Not listed United States - TSCA 4(a) - Proposed test rules: Not listed United States - TSCA 4(a) - Proposed test rules: Not listed
	United States - TSCA 4(f) - Priority risk review: Not listed
	United States - TSCA 5(a)2 - Final significant new use rules: Not
	listed



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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 Zinc oxide 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

Citali Ali Att Stellon 112(0)	•	1 tot 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
Chemicals)		
DEA List II Chemicals (Essential	:	Not listed

US. EPA CERCLA Hazardous Substances (40 CFR 302)

not applicable

<u>SARA 311/312</u>

Classification

Not applicable.

Composition/information on ingredients



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Name	%	Classification
Titanium dioxide	1 - 5	СН
Zinc oxide	1 - 5	F, AH

SARA 313

	Product name	CAS number	%
Form R - Reporting	Zinc oxide	1314-13-2	1 - 5
requirements			
Supplier notification	Zinc oxide	1314-13-2	1 - 5

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: Titanium dioxide Zinc oxide
New York New Jersey	:	None of the components are listed. The following components are listed: Titanium dioxide Zinc oxide
Pennsylvania	:	The following components are listed: Titanium dioxide
		Zinc oxide
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		
International lists	:	 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. Japan inventory: Not determined.
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China inventory (IECSC): All components are listed or exempted.
Korea inventory: Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): Not determined.

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

<u>History</u>		
Date of printing	:	09/10/2015
Date of issue/Date of revision	:	09/09/2015
Date of previous issue	:	08/17/2012
Version	:	1.5
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)
References	:	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.