X RS 3391-001-1

Version Number 1.1 Revision Date 12/13/2016 PolyOne

Page 1 of 14 Print Date 12/14/2016

SAFETY DATA SHEET

X RS 3391-001-1

Section 1. Identification		
CHS muchust identifier		V DS 2201 001 1
GHS product identifier	:	X RS 3391-001-1
Chemical name	:	Mixture
CAS number	:	Mixture
Other means of identification	:	EM10030004
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. 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.
		1/14

X RS 3391-001-1

Version Number 1.1 Revision Date 12/13/2016

Page 2 of 14 Print Date 12/14/2016

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	:	EM10030004

CAS number/other identifiers

Ingredient name	%	CAS number
Carbon black	0.3 - 1	1333-86-4

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	:	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

X RS 3391-001-1



Version Number 1.1 Revision Date 12/13/2016	Page 3 of 14 Print Date 12/14/2016
Skin contact	Flush contaminated skin with plenty of water. Remove contaminated
Ingestion	clothing and shoes. Get medical attention if symptoms occur. Wash out mouth with water. Remove victim to fresh air and keep at
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, acut	e and delayed
Potential acute health effects	
Eye contact	No known significant effects or critical hazards.
Inhalation	No known significant effects or critical hazards.
	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.
Over-exposure signs/symptoms	
Eye contact	No specific data.
	No specific data.
Skin contact	No specific data.
Ingestion	No specific data.
Indication of immediate medical atten	tion and special treatment needed, if necessary
Notes to physician	: Treat symptomatically. Contact poison treatment specialist
Specific treatments	immediately if large quantities have been ingested or inhaled.No specific treatment.
Specific in carrients	, 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

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.

X RS 3391-001-1



Version Number 1.1 Revision Date 12/13/2016		Page 4 of 14 Print Date 12/14/2016
Hazardous thermal decomposition products	:	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
Special protective actions for fire- fighters	:	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	:	Fire-fighters should wear appropriate protective equipment and self- contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel For emergency responders	:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment. If 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".
	:	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 containmen	nt ar	id 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

Precautions for safe handling

X RS 3391-001-1



Version Number 1.1	Page 5 of 14
Revision Date 12/13/2016	Print Date 12/14/2016

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		
Carbon black	OSHA PEL 1989 (1989-03-01)		
	PEL: Permissible Exposure Level 3.5 mg/m3		
	OSHA PEL (1993-06-30)		
	PEL: Permissible Exposure Level 3.5 mg/m3		
	NIOSH REL (1994-06-01)		
	Time Weighted Average (TWA) 3.5 mg/m3		
	Time Weighted Average (TWA)		
	ACGIH TLV (2010-12-06)		
	TLV-TWA: Threshold Limit Value - Time weighted average PEL:		
	Permissible Exposure Level 3 mg/m3 Form: Inhalable fraction		
Appropriate engineering controls	Good general ventilation should be sufficient to control worker exposure to airborne contaminants.		
Environmental exposure controls	Emissions from ventilation or work process equipment should be		
_	checked to ensure they comply with the requirements of		
	environmental protection legislation. In some cases, fume scrubbers,		
	filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.		
Individual protection measures			

X RS 3391-001-1



Version Number 1.1	Page 6 of 14
Revision Date 12/13/2016	Print Date 12/14/2016

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	:	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.

X RS 3391-001-1

Version Number 1.1 Revision Date 12/13/2016 <u>PolyOne</u>

Page 7 of 14 Print Date 12/14/2016

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.

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
Carbon black				
	LD50 Oral	Rat	15,400 mg/kg	-

X RS 3391-001-1

Version Number 1.1 Revision Date 12/13/2016 Page 8 of 14 Print Date 12/14/2016

<u>PolyOne</u>

Conclusion/Summary	: M	ixture.Not fully t	tested.	
Irritation/Corrosion				
Conclusion/Summary Skin Eyes Respiratory	: M	ixture.Not fully t ixture.Not fully t ixture.Not fully t	tested.	
Sensitization				
Conclusion/Summary Skin Respiratory		ixture.Not fully t ixture.Not fully t		
Mutagenicity				
Conclusion/Summary	: M	ixture.Not fully t	tested.	
Carcinogenicity				
Conclusion/Summary <u>Classification</u>	: M	ixture.Not fully t	tested.	
Product/ingredient name	OSHA	IARC	NTP	
Carbon black		2B		
Reproductive toxicity				
Conclusion/Summary	: M	ixture.Not fully t	tested.	
Teratogenicity				
Conclusion/Summary	: M	ixture.Not fully t	tested.	
Specific target organ toxicity Not available.	<u>(single exposu</u>	<u>re)</u>		
Specific target organ toxicity Not available.	(repeated expo	osure)		
Aspiration hazard Not available.				
Information on the likely rou exposure	tes of : No	ot available.		



X RS 3391-001-1

Version Number 1.1 Revision Date 12/13/2016 Page 9 of 14 Print Date 12/14/2016

Potential acute health effects

Eye contact Inhalation	:	No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	:	No known significant effects or critical hazards.
Ingestion	:	No known significant effects or critical hazards.
Ingestion	•	No known significant crieets of critical hazards.
Symptoms related to the physical, ch	<u>iemi</u>	cal and toxicological characteristics
Eye contact	:	No specific data.
Inhalation	:	No specific data.
Skin contact	:	No specific data.
Ingestion	:	No specific data.
Delayed and immediate effects and a	<u>ılso c</u>	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		
Conclusion/Summary	:	Mixture.Not fully tested.
General	:	No known significant effects or critical hazards.
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		
NT / 111		

Not available.



X RS 3391-001-1

Version Number 1.1 Revision Date 12/13/2016 Page 10 of 14 Print Date 12/14/2016

Section 12. Ecological information

Toxicity

Product/ingredient name	Result		Species	Exposure
Carbon black				
	Acute EC50 37.56	3 mg/l Fresh	Aquatic invertebrates.	48 h
	water		Daphnia	
	Acute LC50 61.54	7 mg/l Fresh	Aquatic invertebrates.	48 h
	water		Daphnia	
X RS 3391-001-1				
Remarks - Acute - Aquatic	Chemicals are not	readily available a	s they are bound within the	e polymer matrix.
invertebrates.:				
Conclusion/Summary	: Chem	icals are not readi	ly available as they are bou	nd within the
	polyn	er matrix.		
Persistence and degradability	7			
Conclusion/Summary	: Chem	icals are not readi	ly available as they are bou	nd within the
	polyn	er matrix.		
Conclusion/Summary	: Chem	icals are not readi	ly available as they are bou	nd within the
·	polyn	er matrix.		
Bioaccumulative potential				
<u>Mobility in soil</u>				
Soil/water partition coefficie	ent : Not a	vailable.		
(KOC)				
Other adverse effects	: No kr	own significant ef	fects 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
------------------	---	--



X RS 3391-001-1

Version Number 1.1 Revision Date 12/13/2016 Page 11 of 14 Print Date 12/14/2016

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: Polytetrafluoroethylene
		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(a)2 - Proposed significant new use rules: Not listed United States - TSCA 5(e) - Substances consent order: Not listed United States - TSCA 6 - Final risk management: Not listed United States - TSCA 6 - Proposed risk management: Not listed United States - TSCA 8(a) - Chemical risk rules: Not listed United States - TSCA 8(a) - Chemical risk rules: 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: Not listed

X RS 3391-001-1

R	by	One.
	~	

Version Number 1.1	Page 12 of 14
Revision Date 12/13/2016	Print Date 12/14/2016

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
Chemicals)		

US. EPA CERCLA Hazardous Substances (40 CFR 302)

not applicable

SARA 311/312

Classification

Not applicable.

:

Composition/information on ingredients

Name	%	Classification
Carbon black	0.3 - 1	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: Talc Carbon black
Pennsylvania	:	The following components are listed: Carbon black
		Talc

X RS 3391-001-1



Version Number 1.1Page 13 of 14Revision Date 12/13/2016Print Date 12/14/2016

Polytetrafluoroethylene

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	:	Not determined.
International regulations		
International lists	:	 Australia inventory (AICS): Not determined. Taiwan Chemical Substances Inventory (TCSI): Not determined. Malaysia Inventory (EHS Register): Not determined. EINECS: All components are listed or exempted. 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): Not determined. Philippines inventory (PICCS): Not determined.
Chemical Weapons Convention List Schedule I Chemicals	:	Not listed
Chemical Weapons Convention List Schedule II Chemicals	:	Not listed
Chemical Weapons Convention List Schedule III Chemicals	:	Not listed

Section 16. Other information

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

Health	*	1	
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 are not required on SDSs 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 mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868. The customer is responsible for determining the PPE code for this material.

<u>History</u>

Date of printing

12/14/2016

:

X RS 3391-001-1

Version Number 1.1 Revision Date 12/13/2016

<u>PolyOne</u>

Page 14 of 14 Print Date 12/14/2016

Date of issue/Date of revision Date of previous issue Version	:	12/13/2016 08/02/2013 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.