CONDUCTIVE BLACK UHMWPE

Version Number 1.0 Revision Date 05/11/2021



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SAFETY DATA SHEET

CONDUCTIVE BLACK UHMWPE

Section 1. Identification		
GHS product identifier	:	CONDUCTIVE BLACK UHMWPE
Chemical name	:	Mixture
CAS number	:	Mixture
Other means of identification	:	CC10341356
Product type	:	solid
••		
Relevant identified uses of the subs	stance	or mixture and uses advised against
Product use	:	Industrial applications. Plastics.
Supplier's details	:	AVIENT CORPORATION
		33587 Walker Road, Avon Lake, OH 44012
		1 (440) 930-1000 or 1 (844) 4AVIENT
Emergency telephone number	:	CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or
(with hours of operation)		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 CARCINOGENICITY - Category 2
GHS label elements		
Hazard pictograms	:	

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Signal word Hazard statements	:	Warning Suspected of causing cancer. May form combustible dust concentrations in air.
Precautionary statements		
Prevention	:	Not applicable. Obtain special instructions before use. Wear protective gloves. Wear protective clothing. Wear eye or face protection.
Response	:	IF exposed or concerned: Get medical advice or attention.
Storage	:	Not applicable.
Disposal	:	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	:	Keep container tightly closed.
Hazards not otherwise classified	:	None known. Not available.

Section 3. Composition/information on ingredients

Substance/mixture	:	Mixture
Chemical name	:	Mixture
Other means of identification	:	CC10341356

CAS number/other identifiers

Ingredient name	%	CAS number
Carbon black	>= 90 - 100	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.

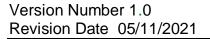
Section 4. First aid measures

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. Continue to rinse for at least 10 minutes. Get medical attention.

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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 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.
Skin contact	:	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. 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 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. 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, belt or waistband.

Most important symptoms/effects, acute and delayed

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.
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.

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

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Notes to physician Specific treatments	:	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. 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. Fire-fighting 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
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 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.
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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 containme	ent a	nd cleaning up
Small spill	:	Move containers from spill area. Use spark-proof tools and explosion- proof equipment. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, 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. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, 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	avoid exposure - obtain spec ntil all safety precautions ha n eyes or on skin or clothing avoid the creation of dust wh ources of ignition (spark or f nly with adequate ventilatio entilation is inadequate. Kee pproved alternative made fro losed when not in use. Elect rotected to appropriate stand vith hot surfaces, sparks or o neasures against electrostatic issipate static electricity dur ontainers and equipment bef	rotective equipment (see Section 8). ial instructions before use. Do not handle ve been read and understood. Do not get . Do not ingest. Avoid breathing dust. ten handling and avoid all possible lame). Prevent dust accumulation. Use n. Wear appropriate respirator when pp in the original container or an om a compatible material, kept tightly rical equipment and lighting should be lards to prevent dust coming into contact ther ignition sources. Take precautionary discharges. To avoid fire or explosion, ing transfer by grounding and bonding fore transferring material. Empty due and can be hazardous. Do not reuse
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Advice on general occupational hygiene		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. Store in a well-ventilated place. 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

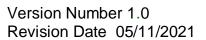
Control parameters

Occupational exposure limits

Ingredient name	Exposure limits	
Carbon black	OSHA PEL 1989 (1989-03-01) TWA 3.5 mg/m3	
	OSHA PEL (1993-06-30)	
	TWA 3.5 mg/m3	
	NIOSH REL (1994-06-01)	
	TWA 3.5 mg/m3	
	NIOSH REL (1994-06-01)	
	TWA 0.1 mgPAH/m ³	
	ACGIH TLV (2010-12-06)	
	TWA 3 mg/m3 Form: Inhalable fraction	

Appropriate engineering controls Environmental exposure controls	:	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
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		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	:	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.
Eye/face protection	:	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

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Appearance

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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
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		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

Information on toxicological effects

Product/ingredient name	Result	Species	Dose	Exposure
Carbon black				
	LD50 Oral	Rat	15,400 mg/kg	-
Conclusion/Summary	: Mixt	ture.Not fully tested.		
Irritation/Corrosion				
Conclusion/Summary Skin Eyes Respiratory	: Mix	cture.Not fully tested. cture.Not fully tested. cture.Not fully tested.		
<u>Sensitization</u>				
Conclusion/Summary Skin Respiratory		ature.Not fully tested. ature.Not fully tested.		
Mutagenicity				
Conclusion/Summary	: Mix	ture.Not fully tested.		
Carcinogenicity				
Conclusion/Summary	: Mix	ture.Not fully tested.		

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Classification

Product/ingredient name	OSHA	IARC	NTP
Carbon black	_	2B	-
Reproductive toxicity Conclusion/Summary	: N	fixture.Not fully t	ested.
Teratogenicity			
Conclusion/Summary	: N	lixture.Not fully t	ested.
Specific target organ toxicity (Not available.	<u>single exposu</u>	<u>re)</u>	
Specific target organ toxicity (Not available.	repeated exp	osure)	
Aspiration hazard Not available.			
Information on the likely rout exposure	es of : N	lot available.	
Potential acute health effects			
Eye contact			ne concentrations above statutory or recommended y cause irritation of the eyes.
Inhalation	: E	xposure to airborn	he concentrations above statutory or recommended y cause irritation of the nose, throat and lungs.
Skin contact			ant effects or critical hazards.
Ingestion	: N	lo known significa	ant effects or critical hazards.
Symptoms related to the phys	ical, chemical	and toxicologica	l characteristics
Eye contact	: A	dverse symptoms	may include the following: irritation, redness
Inhalation	: A		may include the following: respiratory tract
Skin contact		o specific data.	
Ingestion	: N	o specific data.	
Delayed and immediate effects	s and also chr	onic effects from	short and long term exposure
Short term exposure			
Potential immediate effects	: N	lot available.	

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Potential delayed effects	:	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	:	Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
Carcinogenicity	:	Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
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

Product/ingredient name	Oral	Dermal	Inhalation (gases)	Inhalation (vapors)	Inhalation (dusts and mists)
CONDUCTIVE BLACK UHMWPE	15,400 mg/kg	N/A	N/A	N/A	N/A
Carbon black	15,400 mg/kg	N/A	N/A	N/A	N/A

Other 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.

Section 12. Ecological information

:

Toxicity

Product/ingredient name	Result	Species	Exposure
Carbon black			

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	Acute EC water	C50 37.563 Mg/l Fresh	Daphnia - Daphnia magna	48 h
Conclusion/Summary	:	Not available.		
Persistence and degradability				
Conclusion/Summary	:	Not available.		
Bioaccumulative potential Not available. Mobility in soil				
Soil/water partition coefficien (KOC)	it :	Not available.		
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. 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



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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

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(f) - Priority risk review: Not listed
	United States - TSCA 4(1) - 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: Not listed 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
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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		1.00 110000
DEA List I Chemicals (Precursor Chemicals)	:	Not listed
DEA List II Chemicals (Essential	:	Not listed
Chemicals)		

US. EPA CERCLA Hazardous Substances (40 CFR 302)

not applicable

SARA 311/312

Classification

: COMBUSTIBLE DUSTS CARCINOGENICITY - Category 2

Composition/information on ingredients

Name	%	Classification
Carbon black	>= 90 - 100	CARCINOGENICITY - Category 2
Octadecanoic acid, calcium salt (2:1)	> 0 - <= 0.1	COMBUSTIBLE DUSTS

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:
Pennsylvania	:	Carbon black The following components are listed: Carbon black

California Prop. 65

WARNING: This product can expose you to Carbon black, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

dosage level	Ingredient name	No significant risk level	Maximum acceptable dosage level
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Carbon black		-	-
United States inventory (TSCA 8b)	:	All components are active or exempted.	
Canada inventory	:	All components are listed or exempted.	
International regulations			
<u>Inventory list</u>			
Australia Canada China Europe inventory Japan New Zealand Philippines Republic of Korea Taiwan Turkey United States		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

		_
Key to abbreviations	:	ATE = Acute Toxicity Estimate
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BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = International Air Transport Association IBC = 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 Not available.

References

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