SAFETY DATA SHEET

United Nuclear

Scientific Equipment & Supplies

1. Product and Company Identification

Product identifier Other means of identification Recommended use Recommended restrictions Supplier Anthracite Coal Not available Water Treatment Filter Media None known. United Nuclear Scientific 125 N. 8th Street Klamath Falls, OR 97601 Phone (541) 205-6855 Emergency Phone: 1-800-255-3924 (VelocityEHS)

2. Hazards Identification

	2. Hazards identification		
Physical hazards	Not classified.		
Health hazards	Specific target organ toxicity, repeated exposure	Category 2	
Environmental hazards	Not classified.		
OSHA defined hazards	Combustible dust		
Label elements	•		
Signal word	Warning		
Hazard statement		May form combustible dust concentrations in air. May cause damage to organs through prolonged or repeated exposure.	
Precautionary statement			
Prevention	Keep away from heat/sparks/open flames/hot surfaces No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Do not breathe dust. Prevent dust accumulation to minimize explosion hazard.		
	Get medical advice/attention if you feel unwell.		
Response	-		
Response Storage	Store away from incompatible materials.		
-	-	th local/regional/national/ir	ternational regulations
Storage	Store away from incompatible materials.	th local/regional/national/ir	ternational regulations
Storage Disposal Hazard(s) not otherwise classified (HNOC)	Store away from incompatible materials. Dispose of contents/container in accordance with	th local/regional/national/ir	ternational regulations
Storage Disposal Hazard(s) not otherwise classified (HNOC)	Store away from incompatible materials. Dispose of contents/container in accordance with None known.		ternational regulations
Storage Disposal Hazard(s) not otherwise classified (HNOC) Supplemental information	Store away from incompatible materials. Dispose of contents/container in accordance with None known. Not applicable.		ternational regulations
Storage Disposal Hazard(s) not otherwise classified (HNOC) Supplemental information Mixture	Store away from incompatible materials. Dispose of contents/container in accordance with None known. Not applicable.		ternational regulations
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Storage Disposal Hazard(s) not otherwise classified (HNOC) Supplemental information Mixture Chemical name	Store away from incompatible materials. Dispose of contents/container in accordance with None known. Not applicable. 3. Composition/Information on Ing	CAS number 8029-10-5 of composition has been	% 60-100
Storage Disposal Hazard(s) not otherwise classified (HNOC) Supplemental information Mixture Chemical name Coal, anthracite	Store away from incompatible materials. Dispose of contents/container in accordance with None known. Not applicable. 3. Composition/Information on Ing Common name and synonyms US GHS: The exact percentage (concentration)	CAS number 8029-10-5 of composition has been	% 60-100
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Most important symptoms/effects, acute and delayed	Dusts may irritate the respiratory tract, skin and eyes. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. If you feel unwell, seek medical advice (show the label where possible). Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.
	5. Fire Fighting Measures
Suitable extinguishing media	Dry chemical, CO2, water spray or regular foam. Apply extinguishing media carefully to avoid creating airbornedust.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
Fire-fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. In the event of fire, cool tanks with water spray. Move containers from fire area if you can do so without risk.
Specific methods	Cool containers exposed to flames with water until well after the fire is out.
General fire hazards	May form combustible dust concentrations in air.
Hazardous combustion products	May include and are not limited to: Oxides of carbon. Oxides of nitrogen. Oxides of sulfur.
Explosion data	
Sensitivity to mechanical impact	Not available.
Sensitivity to static discharge	Not available.
	6. Accidental Release Measures
Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep out of low areas. Keep people away from and upwind of spill/leak. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Use only non-sparking tools. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of dust from the spilled material. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools.
	Large Spills: If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Collect dust using a vacuum cleaner equipped with HEPA filter. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Minimize dust generation and accumulation. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.
	Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.
	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground. Prevent entry into waterways, sewers, basements or confined areas.

	7. Handling and Storage		
Precautions for safe handling	Keep away from heat/sparks/open flames/hot surfaces No smoking. Combustible dust clouds may be created where operations produce fine material (dust). Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Minimize dust generation and accumulation. Handling and processing operations should be conducted in accordance with 'best practices' (e.g. NFPA-654). Provide appropriate exhaust ventilation at places where dust is formed. Use only with adequate ventilation. Avoid contact with skin and eyes. In case of insufficient ventilation, wear suitable respiratory equipment. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Practice good housekeeping. Wash thoroughly after handling.		
Conditions for safe storage, including any incompatibilities	Keep away from heat, sparks and open flame. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Guard against dust accumulation of this material. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Keep out of reach of children.		
	8. Exposure Controls/Personal Protection		
Occupational exposure limits	No exposure limits noted foringredient(s).		
Biological limit values	No biological exposure limits noted for the ingredient(s).		
Appropriate engineering controls	Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks.		
Individual protection measures,	such as personal protective equipment		
Eye/face protection Skin protection	Wear safety glasses with side shields (or goggles).		
Hand protection	Rubber gloves. Confirm with a reputable supplier first.		
Other	Wear suitable protective clothing. As required by employer code.		
Respiratory protection	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Wear respirator with dust filter.		
Thermal hazards	Not applicable.		
General hygiene considerations	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Wash hands before breaks and immediately after handling the product.		

9. Physical and Chemical Properties

Appearance	Particles
Physical state	Solid.
Form	Powder.
Color	Black
Odor	Odorless
Odor threshold	Not available.
рН	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Pour point	Not available.
Specific gravity	1.6 (water = 1)
Partition coefficient (n-octanol/water)	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.

Upper/lower flammabilit	v or explosive limits
	<i></i>

Reactivity	None known.
Possibility of hazardous reactions	Hazardous polymerization does notoccur.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Keep away from heat, sparks and open flame. Do not mix with other chemicals. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Minimize dust generation and accumulation.
Incompatible materials	Oxidizers.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon. Oxides of nitrogen. Oxides of sulfur.

11. Toxicological Information

Routes of exposure

Ingestion

Inhalation

Eye, Skin contact, Inhalation, Ingestion.

Information on likely routes of exposure

Expected to be a low ingestion hazard. May cause damage to organs by inhalation. Excessive, long-term exposure by inhalation to coal dust may lead to a condition called workers' pneumoconiosis (or "Black Lung"). This condition may be characterized by cough, shortness of breath, reduction in pulmonary function, pulmonary hypertension, bronchitis, emphysema and premature death.

Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Dust in the eyes will cause irritation.
Symptoms related to the physical, chemical and	Direct contact with eyes may cause temporary irritation.

toxicological characteristics

Information on toxicological effects

Acute toxicity

Components	Species	Test Results	
Coal, anthracite (CAS 8029-10-	5)		
Acute			
Inhalation			
LC50	Not available		
Oral			
LD50	Not available		
Skin corrosion/irritation	Prolonged skin contact may caus	e temporary irritation.	
Exposure minutes	Not available.		
Erythema value	Not available.		
Oedema value	Not available.		
Serious eye damage/eye irritation	Dust in the eyes will cause irritation	on.	
Corneal opacity value	Not available.		

Iris lesion value	Not available.	
Conjunctival reddening value	Not available.	
Conjunctival oedema value	Notavailable.	
Recover days	Not available.	
Respiratory or skin sensitizatior	1	
Respiratory sensitization	Not available.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	Non-hazardous by WHMIS/OSHA criteria.	
Mutagenicity	Non-hazardous by WHMIS/OSHA criteria.	
Carcinogenicity	See below.	
Reproductive toxicity	Non-hazardous by WHMIS/OSHA criteria.	
Teratogenicity	Non-hazardous by WHMIS/OSHA criteria.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	May cause damage to organs through prolonged or repeated exposure.	
Aspiration hazard	Not available.	
Chronic effects	Prolonged or repeated exposure may cause lung injury. May cause damage toorgans through prolonged or repeated exposure.	
Further information	Not available.	
Name of Toxicologically Synergistic Products	Not available.	
	12. Ecological Information	
Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.	
Persistence and degradability	No data is available on the degradability of this product.	
Bioaccumulative potential	No data available.	
Mobility in soil	No data available.	
Mobility in general	Not available.	
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.	
	13. Disposal Considerations	
Disposal instructions	Review federal, state/provincial, and local government requirements prior to disposal. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container.	
Local disposal regulations	Dispose in accordance with all applicable regulations.	
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.	
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).	
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.	
	14. Transport Information	
General U.S. Department of Transportati		
Not regulated as dangerous g		

Transportation of Dangerous Goods (TDG - Canada)

Not regulated as dangerous goods.

15. Regulatory Information

15. Regulatory Information		
Canadian federal regulations	This product has been classified in accordance with the hazard criteria of the Contro Regulations and the SDS contains all the information required by the Controlled Pro Regulations.	
WHMIS status	Controlled	
WHMIS classification	Class D - Division 2B	
WHMIS labeling		
\bigcirc		
US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communic Standard, 29 CFR 1910.1200.	ation
TSCA Section 12(b) Export	Notification (40 CFR 707, Subpt. D)	
Not regulated.		
CERCLA Hazardous Subst	ance List (40 CFR 302.4)	
Not listed.		
	n 112(r) Accidental Release Prevention (40 CFR 68.130)	
Not regulated. Clean Air Act (CAA) Sectio	n 112 Hazardous Air Pollutants (HAPs) List	
Not regulated.		
-	eauthorization Act of 1986 (SARA)	
Hazard categories	Immediate Hazard - No	
Hazaru categories	Delayed Hazard - Yes	
	Fire Hazard - No	
	Pressure Hazard - No	
	Reactivity Hazard - No	
SARA 302 Extremely hazardous substance	Yes	
SARA 311/312 Hazardous	Yes	
chemical		
SARA 313 (TRI reporting) Not regulated.		
Other federal regulations		
Safe Drinking Water Act (SDWA)	Not regulated.	
Food and Drug Administration (FDA)	Not regulated.	
US state regulations	This product does not contain a chemical known to the State of California to cause or defects or other reproductive harm.	ancer, birth
US - California Proposi	ition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance	
Not listed.		
US - Texas Effects Scr	eening Levels: Listed substance	
Coal, anthracite (CA US. Massachusetts RT		
Not regulated. US. Pennsylvania RTK	- Hazardous Substances	
Not regulated. US. Rhode Island RTK		
Not regulated.		
Inventory status		
Country(s) or region	Inventory name On inve	ntory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes
	onents of this product comply with the inventory requirements administered by the governing count	

16. Other Information

Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Disclaimer

HEALTH	* 1	
FLAMMABILITY	0	
B ERSONAL PROTECTION	X	

The data contained in this material safety data sheet was obtained from sources that were technically accurate, reliable, and state of the art when this document was prepared. If data was unavailable to complete certain sections, the absence of that data is identified in this document. Because the supplier cannot know the exact circumstances during actual use of this product, other hazards, exposure scenarios, disposal considerations, and regulations may apply and it is the responsibility of the user to read and understand the product label and this document before use. Do not use the product for purposes other than those stated in Section 1.

Issue date	07-April-2015
Effective date	07-April-2015
Expiry date	07-April-2018
Further information	Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling. For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.
Prepared by	United Nuclear Scientific Tel: 541-205-6855
Other information	This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

This SDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.