SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	: Activated Carbon
CAS number	: 7440-44-0
Synonyms	: Charcoal, Activated Powder Carbon

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company : Lab Alley, LLC
22111 Highway 71 West, Suite 601
Spicewood, Texas 78669
U.S.A.

Telephone : 512-668-9918
Fax : 512-886-4008

1.4 Emergency telephone

Emergency Phone # : US & Canada: 1-800-535-5053 INFOTRAC
International 1-352-323-3500 INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Respiratory Irritation (Category 3)
Eye irritation (Category 2A)

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal Word : **Warning**

Hazard statement(s) :

- Dust causes respiratory, skin and eye irritation.
- Prolonged or repeated inhalation or ingestion can cause irritation of mucous membranes.
- Wet activated carbon removes oxygen from air causing a severe hazard to workers in enclosed or confined space.

Precautionary statement(s) :

Avoid generation of dust during handling.
The dust or fines may be more susceptible to catalytic reaction than the large mesh product.
Avoid breathing dust.
Wash thoroughly after handling.
Use in a well ventilated area.
Avoid release to environment.
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Seek medical attention for any breathing difficulty.
IF IN EYES: Rinse cautiously with water for several minutes. Seek medical attention if irritation persists.
CONTACT WITH SKIN: Remove contaminated clothing. Rinse cautiously with soap and water for several minutes. Seek medical attention if irritation persists.
IF INGESTED: Drink a large volume of water; seek medical attention.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical Name (CAS#)		%	PEL(OSHA)	TLV(ACGIH)	Other
Carbon*	(7440-44-0)	100	N/A	N/A	N/A

*ACGIH (TWA) for reparable dust is 2.5 mg/m^3

There are no established PEL, TWA or TLV values for this material. Caution should be taken for respirable dust. The product has no known carcinogenic properties.

Non-Hazardous components are recorded at 3% or >; Acute hazards are recorded when present at 1% or >; Chronic hazards are recorded when present at 0.01% or >. This is not intended to be a comprehensive compositional disclosure.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice : Show this safety data sheet to the doctor in attendance.

If inhaled : In case of inhalation remove to fresh air. Administer first aid as appropriate. Seek medical attention.

In case of skin contact : In case of skin contact, wash thoroughly with soap and water. If irritation persists seek medical attention.

In case of eye contact : In case of eye contact flush with lukewarm water for at least 15 minutes. Lift upper and lower eye lids occasionally. Seek medical attention.

If swallowed : In case of ingestion do not induce vomiting. Dilute by giving water or milk. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

The effects of chronic and sub-chronic exposure have not been determined. Safe handling on a long-term basis should emphasize protection against respective or long-term exposure to carbon dust inhalation and avoidance of contact to any liquids that may leach off the impregnated carbon. Affected individuals with pre-existing conditions pertaining to digestive, respiratory, skin or eye problems can be more susceptible to potential effects of carbon dust.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Alcohol foam, CO_2, dry chemical, water.

Unsuitable extinguishing media : No information available.

5.2 Specific hazards arising from the substance or mixture

Carbon Monoxide and Carbon Dioxide gas may be generated during combustion. Caution is advised.
Contact of activated carbon with strong oxidizers such as ozone or liquid oxygen may cause rapid combustion. Fire is possible at elevated temperatures or by contact with an ignition with most types of organic solids. Activated carbon is difficult to ignite and when it does, it has a tendency to burn or smolder very slowly without any smoke or flame.

5.3 Special protective equipment and precautions for firefighters

Firefighting personnel should wear full protective equipment, including self-contained breathing apparatus (SCBA) for all inside fires and large outdoor fires.

5.4 Further information

If possible to do safely, move smoldering activated carbon to a non-hazardous area, preferably out of doors. Extinguish fire using water fog, fine water spray, carbon dioxide or foam. Avoid stirring up dust clouds. Combustion products may include smoke and oxides of carbon (for example, carbon monoxide). Materials allowed to smolder or long periods in enclosed spaces, may produce amounts of carbon monoxide which reach the lower explosive limit (carbon monoxide LEL = 12.5% in air). Under certain conditions, any airborne dust may be an explosion hazard. Used activated carbon may produce additional combustion products.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment, keep unnecessary personnel away, and ventilate area of spill.

6.2 Environmental precautions

The carbon is not soluble in water; however, dust particles can cause a particulate emission if discharged to waterways. Block all entrances to sewers and drains to avoid introducing the material into the waterways.

6.3 Methods and materials for containment and cleaning up

Block all entrances to sewers and drains. Vacuum, shovel or sweep up spilled material, neutralize and place in closed container for disposal. Do not release to sewer or waterway. Remove product to appropriate storage area until it can be properly disposed of in accordance with local, state and federal regulations. Avoid formation of dust.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Follow good handling and housekeeping practices to minimize spills, generation of airborne dusts, and accumulation of dusts on exposed surfaces. Use with adequate exhaust ventilation to draw dust away from workers' breathing zones. Keep away from ignition sources. Use in well ventilated areas. Protect containers from physical damage. Avoid prolonged contact with eyes and skin. Prevent or minimize exposures to dusts by using appropriate personal protection equipment Avoid Wash exposed skin areas thoroughly with soap and water after handling.

Hygiene measures

The usual precautionary measures for handling chemicals should be followed: i.e. Keep away from food and beverage; remove contaminated clothing immediately; wash hands before breaks or eating; avoid contact with eyes and skin.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Dry airtight storage recommended. Store in cool, dry, ventilated area and in closed containers. Maintain good housekeeping. Store away from strong oxidizers such as ozone, liquid oxygen, chlorine, permanganate, etc. Keep away from heat or flames or ignition sources.

8. Exposure controls/personal protection

8.1 Occupational exposure limits

Airborne Exposure Guidelines:	Recommended Exposure Limits 8-hr TWA	Activated Carbon
	Total Dust	10 mg/m3*
	Respirable Fraction	3 mg/m3*

8.2 Exposure controls

NOTE:	*PEL, TLV and Toxicological data when available are provided for the pure component knowing that the carbon product contains a lesser percentage.*		
Component	**OSHA PEL**	**ACGIH TLV**	**Other Limits**
*Activated Carbon	Data not available	Data not available	
Exposure Guidelines	Wet activated carbon removes oxygen from air posing a hazard to workers in enclosed or confined space. Before entering such an area, sample the air within to assure sufficient oxygen supply. Use work procedures for low oxygen levels, observing all local, state and federal regulations. Comment: Remove from the area any worker who shows allergic reactions from exposure to sulfur.		

*OSHA and ACGIH have not established specific exposure limits for this material. The recommended exposure limits for these activated carbon products are based on the Threshold Limit Values adopted by ACGIH for Particulates (insoluble) Not Otherwise Classified. The OSHA PEL for Nuisance Dust is 15 mg/m^3 (5 mg/m^3 respirable fraction).

Appropriate engineering controls

Exhaust ventilation should be designed to prevent accumulation and recirculation in the workplace and safely remove carbon black from the air. Note: Wet activated carbon removes oxygen from air causing a severe hazard to workers in enclosed or confined space. If risk of overexposure exists, wear an approved respirator. Provide adequate ventilation in warehouse or closed storage area.

Personal protective equipment

Eye/face protection

Safety glasses or goggles with side shields are recommended for any type of handling. Where eye contact or dusty conditions may be likely, dust tight goggles are recommended. Have eye flushing equipment available.

Skin protection

Avoid contact with the skin. Wear appropriate dust resistant clothing. Wash contaminated clothing and clean protective equipment before reuse. Wash skin thoroughly after handling. Protective gloves are recommended.

Body Protection

Wear long sleeve shirt or lab coat and/or other protective clothing/equipment as determined appropriate.

Respiratory protection

Use NIOSH/MSHA approved respiratory protection equipment appropriate to the material and/or its concentration where airborne exposure is likely. If exposures cannot be kept to a minimum with engineering controls, consult respirator manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH/MSHA or the manufacturer. Ventilation is essential in confined areas.

Control of environmental exposure

Refer back to section 8.2.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Solid
Appearance	Granular, powder of extruded pellet
Odor	None
Color	Black
pH	7-10
Specific Gravity, (H2O=1)	3.5
Melting Point/Range	NA
Boiling Point/Range	NA
Evaporation Rate	NA
Flammability (solid)	> 220 ^{o}C

Vapor Pressure	0
Vapor Density	Solid
Density	0.4-0.7
Solubility	Insoluble

Partition coefficient; n-octanol/water	NA
Autoignition Temp	> 220 °C
Decomposition Temp	NA
Viscosity	NA
Molecular Formula	C
Molecular Weight	NA
VOC Content(%)	Not oxidizing.
Oxidizing properties	Not oxidizing.

9.2 Other safety information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No information available.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

Will not occur.

10.4 Conditions to avoid

None.

10.5 Incompatible materials

Strong oxidizers such as oxygen, chlorine, permanganates, etc...alkali metals, liquid acids.

10.6 Hazardous decomposition products

Carbon monoxide an carbon dioxide gas can be generated if combustion of this material takes place. Sulfur oxides emission is possible during combustion.

10.7 Caution

High concentrations of organics in air will cause temperature rise due to heat of absorption. At very high concentration levels this may result in a thermal excursion, referred to as a bed fire. High concentrations of Ketones and Aldehydes may cause a rise in bed temperature due to adsorption and oxidation.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

NOTE: Toxicological data is provided for the pure component knowledge that the carbon product contains a lesser %.

Acute toxicity

Toxicity Studies	Oral LD50	Not determined on the finished product.
	Dermal LD50	Not determined on the finished product.

Skin corrosion/irritation

Carbon is non-toxic through skin absorption. Dust may cause mild irritation probably reddening.

Serious eye damage/eye irritation

The physical nature of carbon may cause eye irritation. Dust may cause mild irritation probably reddening.

Respiratory or skin sensitization

The physical nature of carbon may irritate the respiratory system. Dust may cause mild irritation to the upper respiratory tract

Ingestion

Carbon is non-toxic through ingestion. Dust may cause mild irritation to the digestive tract resulting in nausea or diarrhea.

Germ cell mutagenicity

Not determined on the finished product.

Carcinogenicity

Not determined on the finished product.

Reproductive toxicity

Not determined on the finished product.

Specific target organ toxicity - single exposure

Eyes, skin, and upper respiratory system.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Chronic effects

Prolonged inhalation may be harmful.

Developmental Factors

Not determined on the finished product.

11.2 Additional Information

Other dangerous properties can not be excluded.
Handle in accordance with good industrial hygiene and safety practice.

12. Ecological information

12.1 Ecotoxicity

Not determined on the finished product.

12.2 Persistence and degradability

Not determined on the finished product.

12.3 Bio accumulative potential

Not determined on the finished product.

12.4 Mobility in soil

Not determined on the finished product.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

Not determined on the finished product.

13. Disposal considerations

13.1 Waste Disposal Methods

Unused product may have a lot pH. Used product may contain hazardous chemicals or hazardous properties that may have to be examined to determine proper disposal method. Dispose in accordance with local, state, and federal regulations. Activated carbon, in its original state, is not a hazardous material or hazardous waste. Follow applicable governmental regulations for waste disposal. Used activated carbon may become classified as a hazardous waste depending upon the application. Follow applicable regulations for disposal. Recycling (reactivation) may be a viable alternative to disposal.

SECTION 14: Transport information

TRANSPORTATION INFORMATION:

USDOT (United States Department of Transportation) Regulations

Proper Shipping Name:	Steam Activated Carbon, Non-Regulated OR Carbon, Activated, Non-
Shipping Class:	Regulated Class 70
Hazard Class:	Not Applicable See *Note Below
UN/NA Number:	Not Applicable
Packing Group:	Not Applicable
Freight Classification:	STCC Code - #2899643 / NMFC #40560
DOT Marking:	Not Applicable
DOT Placard:	Not Applicable
Precautions To Be Taken	No specific precautions
In Transportation:	See Section

EMERGENCY ACCIDENT PRECAUTIONS AND PROCEDURES:
Contact: Lab Alley LLC
Phone: 512-668-9918

Land	Global Transport	Proper Shipping	Steam Activated Carbon, Non-Regulated
	Regulations	Description:	OR Carbon, Activated, Non-Regulated
		Hazard Class:	Not Applicable See *Note Below
		UN/NA Number:	Not Applicable
		Packing Group:	Not Applicable
		Marine Pollutant:	Not Applicable
Water	IMO / IMDG	Proper Shipping Description:	Steam Activated Carbon, Non-Regulated OR Carbon, Activated, Non-Regulated
		Hazard Class:	Not Applicable See *Note Below
		UN/NA Number:	Not Applicable
		Packing Group:	Not Applicable
		Marine Pollutant:	Not Applicable
Air	ICAO / IATA	Proper Shipping Description:	Steam Activated Carbon, Non-Regulated OR Carbon, Activated, Non-Regulated
		Hazard Class:	Not Applicable See *Note Below
		UN/NA Number:	Not Applicable
		Packing Group:	Not Applicable
		Marine Pollutant:	Not Applicable
		+ Information reported for product/size: 0.5 Kg	

***Note:** *Under the UN classification for activated carbon, all activated carbons have been identified as a class 4.2 product. However, This product has been tested according to the United Nations Transport of Dangerous Goods test protocol for a "self-heating substance" (United Nations Transportation of Dangerous Goods, Manual of Tests and Criteria, Part III, Section 33.3.1.6 - Test N.4 - Test Method for Self Heating Substances) and it has been specifically determined that this product does not meet the definition of a self-heating substance (class 4.2) or any other hazard class, and therefore should not be listed as a hazardous material. This information is applicable only for the Activated Carbon Product identified in this document.*

SECTION 15: Regulatory information

FEDERAL REGULATIONS:

US FEDERAL REGULATIONS

OSHA (29 CFR1910:1200):	Not Regulated See Table Z-1 of 29CFR1910.1000, Limits For Air Contaminates.
CERCLA/SUPERFUND (40CFR117, 302):	Contains no CERCLA hazardous substances. Notification of spills of this material is not required Specific reporting requirements at the local, regional, or state level pertaining to releases of this material may exist.
RCRA (40CFR261.33, 261.20-24):	This product, in its original state, does not meet the criteria of hazardous waste.
Toxic Substances Control Act (40CFR710):	Activated carbon does not contain any relevant components.
Clean Water Act (40CFR122.21 and 40CFR122.42):	Activated carbon does not contain any substances regulated as pollutants.
Clean Air Act (CAA, Section112, 40CFR82):	Activated carbon does not contain any components listed as Hazardous Air Pollutants, Flammable Substances, Toxic Substances, or Class 1 or 2 Ozone Depletors.
California Prop. 65	Product and impregnate component are not listed.

Section 302 - Extremely Hazardous Substances (40CFR355):	This product is not listed as an extremely hazardous substance.
SECTION 313- List of Toxic Chemicals:	This product is not listed.

Amendments and Reauthorization Act of 1986 (Title III), Sections 302, and 313

SARA 311/312 Hazard Categories

Acute Health Hazard	NO
Chronic Health Hazard	NO
Fire hazard	NO
Sudden release of pressure hazard	NO
Reactive Hazard	NO

Activated carbon, (CAS: 7440-44-0) is found on the following regulatory lists:	US EPA High Production Volume Program Chemical List US FDA CFSAN Color Additive Status List 4 US FDA CFSAN Color Additive Status List 6 US DOE Temporary Emergency Exposure Limits (TEELs) US - Hawaii Air Contaminant Limits US - Idaho - Toxic and Hazardous Substances - Mineral Dust US - Minnesota Hazardous Substance List US - Minnesota Permissible Exposure Limits (PELs) US - Rhode Island Hazardous Substance List US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants US - Washington Permissible exposure limits of air contaminants Canada - British Columbia Occupational Exposure Limits Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances Canada Domestic Substances List (DSL) International Air Transport Association (IATA) Dangerous Goods Regulations OECD Representative List of High Production Volume (HPV) Chemicals

CANADIAN CLASSIFICATION WHMIS (CPR, SOR/88-66):	Product and impregnate component are listed
DSL #.	Product and impregnate component are listed

EEC Council Directives relating to the classification, packaging, and labeling of dangerous substances and preparations

Risk and Safety Phrases	R36: Irritating to the eyes R37: Irritating to the respiratory system R38: Irritating to the skin

SECTION 16: Other information

Issue Date	06/18/2018
Revision Date	05/31/2023

Disclaimer:
The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

Prepared in accordance with the United States Hazard Communication
Standard: 29 CFR 1910.1200 (March 26, 2012)

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