Section 1. Identification of Product and Company

Supplier
ADA
8051 E. Maplewood, Suite 210
Greenwood Village, CO 80111-4742
Telephone Number: 888-843-8416

Manufacturer
ADA
201 Red River Mine Rd.
Coushatta, LA 71019
Telephone Number: 888-843-8416

Supplier Emergency Contacts & Phone Number
CHEMTREC: 800-424-9300

Manufacturer Emergency Contacts & Phone Number
CHEMTREC: 800-424-9300

Product Name: FastPAC Premium® 80, FastPAC Platinum™ 80

CAS Number: 7440-440

Product/Material Uses
Powdered carbon sorbent for vapor-phase mercury removal in flue gas, primarily in coal-fired power plants.

Section 2. Hazard(s) Identification

GHS Classification

WARNING:

Hazard and Precautionary Statements

H316: Causes mild skin irritation.
H320: Causes eye irritation.
H335: May cause respiratory irritation.

P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261: Avoid breathing dust/fume/gas/ mist/ vapors/ spray.
P281: Use personal protective equipment as required.
P285: In case of inadequate ventilation wear respiratory protection.

Dust explosion potential, avoid ignition sources; such as flame, sparks and extended high heat. Avoid dust dispersions (clouds) in a confined space.

Activated carbon (especially when wet) removes oxygen from air and can lower the concentration of oxygen inside vessels and other confined spaces. Activated carbon is an eye irritant and eye protection must be worn when handling. Avoid breathing dust; product contains particles less than 10 microns, which are considered a nuisance dust under OSHA guidelines. High airborne concentrations of low-toxicity dusts may cause coughing, sneezing, and mild temporary irritation. Respiratory protection must be worn when excess dusting occurs.

Store in sealed containers in a clean cool, dry, well-ventilated area away from strong oxidizers, ignition sources, combustible materials, and heat. Do not store near, or allow contact with, moisture or strong oxidizers. Dispose in accordance with applicable federal, state, and local government regulations.

Primary Routes of Entry

Inhalation

May cause respiratory irritation, mild gastrointestinal tract irritation and diarrhea.

High airborne concentrations of low-toxicity dusts may cause coughing, sneezing, and mild temporary irritation.

Avoid use in confined spaces. Wet activated carbon can absorb and deplete oxygen from the air, causing a severe hazard to workers.

Skin Hazards

Prolonged or repeated skin contact may cause irritation, drying, and redness.

Eye Hazards

Dust may cause mild mechanical irritation.

Ingestion Hazards

May cause mild gastrointestinal tract irritation and diarrhea.

Carcinogenicity- See Section 11.

Section 3. Composition/Information on Ingredients

Ingredient Name	CAS Number	Percent of Total Weight
Carbon, activated	7440-44-0	65–100
Non-relevant Chemicals per 29 CFR 1910.1200	Not given	0-35

Section 4. First Aid Measures

Inhalation

May cause respiratory irritation.

High airborne concentrations of low-toxicity dusts may cause coughing, sneezing, and mild temporary irritation.

Avoid use in confined spaces. Wet activated carbon can absorb and deplete oxygen from the air, causing a severe hazard to workers.

Remove person from source of exposure and into fresh air. Get medical attention if irritation or breathing difficulties develop.

Skin

Prolonged or repeated skin contact may cause irritation, drying, and redness.

Wash affected areas with soap and water. Get medical attention immediately if irritation develops.

Eye

Dust may cause mild mechanical irritation.

Hold eyelids apart and flush eyes with copious amounts of water for at least 20 minutes.

Fine particles of activated carbon may not be detected in the eyes following an exposure event, so appropriate medical attention is advised.

Ingestion

May cause mild gastrointestinal tract irritation and diarrhea.

If person is fully conscious, give one or two cups of water or milk to drink. Get medical attention immediately if large quantities are ingested.

Section 5. Fire-Fighting Measures

Fire and Explosion Hazards

High dust concentrations may form explosive mixtures with air, which can be ignited by spark or flame. Dusts may accumulate a static charge. Explosivity: Class ST 1.

Fire is possible at elevated temperatures or by self-heating when exposed to strong oxidizers. Activated carbon tends to burn slowly without producing smoke or flame. Material allowed to smolder for long periods in enclosed spaces may produce carbon monoxide, which may reach a lower explosive limit for carbon monoxide (12.5%) in air. Wet activated carbon depletes oxygen from the air. Thermal decomposition may produce toxic gases of oxides of carbon, sulfur, nitrogen, sodium and nitriles of carbon.

Warning: Electrostatic precipitator and baghouse hoppers containing powdered activated carbon or fly ash with activated carbon can auto ignite and present a smoldering fire hazard when exposed to elevated temperature and other sources of heat, such as heaters. If activated carbon is present, hoppers should be emptied frequently and particular care should be exercised when hopper heaters are in use. Cutting or welding operations should not be used near this material due to potential for smoldering combustion. This material is not a self-heating material as classified for transportation.

Extinguishing Media

In case of fire use dry chemical, N_2 or CO_2. Use water to cool fire-exposed containers. Water will be adsorbed by activated carbon and will displace surface oxygen. Upon drying activated carbon will passivate with oxygen which will cause localized heat build-up. Use water only when necessary.

Fire-Fighting Instructions

Firefighters should wear self-contained breathing apparatus and full protective gear. Remove product from building to a non-hazardous area, preferably outdoors, if safe to do so.

Section 6. Accidental Release Measures

In case of inadequate ventilation to control dust, use NOISH-approved respirator for particulates (e.g., N95). Safety glasses with side shields are recommended as minimum industrial eye protection. Protective gloves are recommended to minimize skin contact. Wash thoroughly with soap and water after handling. Provide maximum dilution or appropriate exhaust ventilation. Avoid generating dust. Pick up released product with appropriate implements and return to original container if reusable, or dispose.

Section 7. Handling and Storage

Handling Precautions

Follow good handling and housekeeping practices. Avoid spills and accumulations of dust, or generation of airborne dust.

Do not enter places where bulk material is used or stored until adequately ventilated to prevent asphyxiation.

As with all finely divided materials, precautions should be taken to avoid inhalation and eye contact. Ground all transfer, blending, and dust collecting equipment to prevent static discharge in accordance with NFPA 70, National Electric Code," NFPA 499, "Recommended Practice for the Classification of Combustible Dusts and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas," NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids," and OSHA Combustible Dust standards. Minimize ignition sources from enclosed material handling, transfer and processing areas where dust may be present.

If activated carbon is present, hoppers should be emptied frequently and particular care should be exercised when hopper heaters are in use. Cutting or welding operations should not be used near this material.

Storage Precautions

Store in sealed containers in a clean cool, dry, well-ventilated area away from strong oxidizers, ignition sources, combustible materials, and heat. Do not store near, or allow contact with, moisture or strong oxidizers.

Warning: Wet activated carbon depletes oxygen, creating oxygen-deficient atmospheres in confined spaces.

Work/Hygienic Practices

Wash thoroughly with soap and water after handling.

Section 8. Exposure Controls/Personal Protection

Lower Explosive Limit: N/A
Upper Explosive Limit: N/A

Engineering Controls

Use with adequate general and local exhaust ventilation to prevent excessive airborne dust concentrations. Local exhaust ventilation should be provided, to maintain exposures below recommended occupational exposure limits. Confined spaces where activated carbon is present should be well ventilated and monitored for oxygen content.

Eye/Face Protection

Safety glasses with side shields are recommended as minimum industrial eye protection when handling bulk product or performing spill cleanup.

Skin Protection

Protective gloves are recommended to minimize skin contact. Use a lab coat or disposable coveralls to prevent excessive contamination to personal clothing.

Respiratory Protection

In case of inadequate ventilation to control dust, use NOISH-approved respirator for particulates (e.g., N95). Supplied air respirators may be needed for entering confined spaces where product is stored or handled to protect against oxygen deficiency. Always follow specific company confined space entry procedures.

Ingredients – Exposure Limits

Carbon, activated.

OSHA PEL-TWA: 15 mg/m^3, total dust, as particulates not otherwise specified.
OSHA PEL-TWA: 5 mg/m^3, respirable dust, as particulates not otherwise specified.

Section 9. Physical and Chemical Properties

Appearance	grey to black, free flowing powder
Odor	slight sulfur odor may be present
Odor threshold	Not available
pH	5-12
Melting point/freezing point	Not available
Initial boiling point and boiling range	Not available
Flash Point	Not available
Evaporation rate	Not available
Flammability (solid/gas)	Not available
Vapor pressure	Not available
Vapor Density	Not available
Relative Density (Tapped)	0.4-0.7 g/ml
Solubility	Activated carbon is not soluble in water
Partition coefficient: n-octanol/water	NA
Auto-ignition temperature	> 400 °C
Decomposition Temperature	NA
Viscosity	NA

Section 10. Stability and Reactivity

Reactivity: Powdered activated carbons adsorbs most chemical compounds some may be reacted to the Surface of the carbon.

Stability: Stable under ordinary conditions of shipment, storage, and use.

Possibility of Hazardous Reactions

No hazardous reactions are known. Activated carbon is a known health and environmental control for hazardous material.

Conditions to Avoid

Concentrated strong acids and bases at high concentration. Avoid getting the activated carbon wet with drying cycles, as passivation of the surfaces may release heat.

Incompatible Materials

Avoid contact with strong oxidizing agents such as sulfuric acid and nitric acid.

Hazardous Decomposition Products

Thermal decomposition (“burning”) may produce irritating toxic gases of oxides or hydrides of carbon, sulfur, nitrogen, sodium and nitriles of carbon. The exact chemicals formed depend on many factors including temperature, oxygen content and heating rate.

Section 11. Toxicological Information

Ingredients – Toxicological Data

Complete toxicological data is not available for activated carbon.

Carbon, activated.

LC50 (inhal, rat): > 64,400 mg/m^3

LD50 (oral, rat): > 10,000 mg/kg

Chronic/Carcinogenicity

The product is not listed as potentially carcinogenic by NTP, IARC, OSHA, or ACGIH. . Contains a component (crystalline silica) that is listed by IARC as group 1, by ACGIH as group A2, and by NTP as a known human carcinogen.

Section 12. Ecological Information

Ecotoxicological Information

Ecotoxicity

No information available for the product. However, ecotoxicity is expected to be minimal.

Persistence and Degradability

Activated carbon is not biodegradable.

Bioaccumulative Potential

No information available for the product.

Mobility in Soil

No information available for the product.

Other Adverse Effects

This material will increase the conductivity of water by increasing dissolved solids. Activated carbon may exhibit characteristics of the adsorbed material.

Section 13. Disposal Considerations

Dispose in accordance with applicable federal, state, and local government regulations.

When used for mercury sorption in most combustion flue gas, and mixed with combustion residues such as fly ash, the spent product is typically non-hazardous. Spent granular activated carbon may be recyclable, although in special situations the spent material could be a hazardous waste. Dispose of material in approved landfill. Avoid dispersal of spilled material and runoff into soil waterways, drains, and sewers.

Section 14. Transport Information

Additional Shipping Paper Description

UN Number: 1362

Shipping name: Activated Carbon.

Transport hazard class(es): NA

Packing group: NA

Environmental Hazards: NA

This product is NOT considered spontaneously combustible under the “Self-Heating Test for Carbon” protocol listed in the United Nations Manual of Tests and Criteria [33.3.1].

Section 15. Regulatory Information

U.S. Regulatory Information

Toxic Substance Control Act (TSCA): All ingredients of the product are listed on the TSCA 8(b) Chemical Substance Inventory or are exempt.

Product is subject to SARA 311/312: See section 2 for more information.

Product does not have a CERCLA RQ.

SARA Section 313 Notification

This product does not contain any ingredients regulated under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 or 40 CFR 372.

Canadian Regulatory Information

Product is not regulated or controlled under WHMIS (Canada). This product is not classifiable as hazardous under the Canadian Hazardous Products Act (HPA).
DSL: 6798

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	California Proposition 65
Quartz (respirable) 14808-60-7 (<10)	Carcinogen

Section 16. Other Information

NFPA Rating
Health: 1
Fire: 1
Reactivity: 0

HMIS Rating
Health: 0
Fire: 0
Reactivity: 0
Personal Protection: B

Disclaimer

This information relates to the product designated herein and does not relate to its use in combination with any other material or in any other process. To the best of ADA Carbon Solutions (Red River), LLC's and ADA-ES, Inc.'s knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability, and completeness are not guaranteed. Users are responsible to verify this data for their own particular use and they assume all risks of their reliance upon information contained herein. ADA Carbon Solutions (Red River), LLC and ADA-ES, Inc., shall under no circumstances be liable for incidental or consequential damages as a result of reliance upon information contained herein.

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