



MATERIAL SAFETY DATA SHEET

▶ **SECTION 1 – PRODUCT AND COMPANY INFORMATION**

Product Identifier	Activated carbon (all grades)
Product Use	Water purification, gold recovery, air scrubbing
Supplier Name	Starke Aquacare Technologies 17 Najafgarh Road New Delhi 110051 India
Prepared By	Starke Aquacare Technologies Technical Department Phone: 91-11-47009571

▶ **SECTION 02 - COMPOSITION / INFORMATION ON INGREDIENTS**

Ingredients	Activated Carbon	100%
CAS Number	Activated Carbon	7440-44-0
Synonym (s)	Activated granular carbon, activated powdered carbon, pelleted activated carbon, activated charcoal, graphite, graphite carbon, carbon, mineral carbon.	

▶ **SECTION 03 - HAZARD IDENTIFICATION**

Inhalation	May cause irritation to the lungs and mucous membranes. Although considered non-toxic through inhalation, avoid inhalation of dust.
Skin Contact / Absorption	Avoid prolonged contact with skin.
Eye Contact	May cause eye irritation.
Ingestion	Not a likely route of exposure. Non-toxic through ingestion.

Exposure Limits OSHA/PEL-T-TWA= Not established.
ACGIH/TLV-TWA= Not established.

▶ SECTION 04 - FIRST AID MEASURES

Inhalation Remove victim to fresh air. Give artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. Seek medical attention.

Skin Contact / Absorption Remove contaminated clothing. Wash affected area with soap and water. Seek medical attention if irritation occurs or persists.

Eye Contact Contact lenses should never be worn when working with this product. Flush immediately with water for at least 20 minutes. Forcibly hold eyelids apart to ensure complete irrigation of eye tissue. Seek immediate medical attention.

Ingestion Give 1 cup of warm water to drink. Do not induce vomiting. Seek immediate medical attention.

Additional Information Not available

▶ SECTION 05 - FIRE FIGHTING MEASURES

Conditions of Flammability Potential combustible hazard. Powdered material may form explosive dust-air mixture, which can be ignited by a spark heat or flame. Powdered form is self-heating and may catch fire. Dry activated carbon burns slowly in air hotter than 450°C. Organic impurities lower the autoignition temperature and increase the ignition hazard. Powdered dry activated carbon accumulates static charge. When evaluating the dust explosion hazard of a specific process or sample of material, the important factors to consider include: particle size and shape, dust concentration, the nature of any impurities, oxygen concentration, humidity, and extent of containment. Wet activated carbon removes oxygen



from air and can lower the concentration of oxygen inside vessels containing carbon and other confined spaces. During a fire, toxic gases are generated.

Means of Extinction

Small fires: Carbon dioxide dry chemical powder, sand.

Large fires: regular foam.

NOTE: Violent steam generation and frothing may occur on direct application of water stream.

Flash Point

Not applicable.

Auto-ignition Temperature

~ 300°C [Depends on particle size and physical form.]

Upper Flammable Limit

Not applicable.

Lower Flammable Limit

Not applicable.

Hazardous Combustible Products

Carbon monoxide and carbon dioxide. Contact with strong oxidizers (ozone, liquid oxygen) may cause rapid combustion. Other material adsorbed onto the carbon may also be released.

Special Fire Fighting Procedures

Wear NIOSH-approved self-contained breathing apparatus and protective clothing.

Wet activated carbon removes oxygen from air and can lower the concentration of oxygen inside vessels containing carbon and other confined spaces. During a fire, toxic gases are generated.

Explosion Hazards

Airborne dust may create an explosion hazard.

► **SECTION 06 - ACCIDENTAL RELEASE MEASURES**

Leak / Spill

Wear appropriate personal protective equipment. Ventilate area. Stop or reduce leak if safe to do so. Prevent material from entering sewers. Notify safety personnel for large spills. Avoid generation of dust. Collect solid for recovery or disposal. Personnel involved in clean up need protection against skin and eye contact and inhalation of dust or mist. Vacuum or shovel spilled material and place in closed, labeled container for proper disposal.



Deactivating Materials Not available

▶ **SECTION 07 - HANDLING AND STORAGE**

Handling Procedures Use in a well ventilated area. Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure. Avoid inhalation of dust and prolonged contact with skin and eyes.

Storage Requirements Store in a sealed container in a clean, dry, well ventilated area away from strong oxidizers, strong acids, ignition sources, combustible materials, and heat.

▶ **SECTION 08 - PERSONAL PROTECTION AND EXPOSURE CONTROLS**

Protective Equipment

Eyes Chemical goggles, full-face shield, or a full-face respirator is to be worn at all times when product is handled. Contact lenses should not be worn; they may contribute to severe eye injury.

Respiratory Respiratory protection is not normally required. If use creates dust formations, then a NIOSH-approved respirator with a dust cartridge is recommended. Wet activated carbon removes oxygen from air causing a severe hazard to workers inside confined spaces. Before entering such an area, sampling and work procedures for low oxygen levels should be taken (such as wearing a self-contained breathing apparatus).

Gloves Impervious gloves of chemically resistant material (rubber or PVC) should be worn. Wash contaminated clothing and dry thoroughly before reuse.

Clothing Body suits, aprons, and/or coveralls of chemical resistant material should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse.

Footwear No special footwear is required other than what is mandated at place of work.

Other No other information available

Engineering Controls

Ventilation Requirements Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions must be provided in accordance with all fire codes and regulatory requirements. Supply sufficient replacement air to make up for air removed by exhaust systems.

Other Emergency shower and eyewash must be available and tested in accordance with regulations and be in close proximity.

► SECTION 09 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Odor and Appearance	Black odourless particulate solid, pellet, or powder
Odor Threshold	Not applicable
Specific Gravity (Water=1)	Not available
Vapor Pressure (mm Hg, 20°C)	Not applicable
Vapor Density (Air=1)	Not applicable
Evaporation Rate	Not applicable
Boiling Point	Maximum 4000°C
Freeze/Melting Point	>3500°C
pH	Not applicable. Activated carbon bearing inorganic and chemically active groups on its surface may alter the pH of liquids to which it is added.
Water/Oil Distribution Coefficient	Data not available
Bulk Density	> 525kg/m ³
% Volatiles by Volume	0%
Solubility in Water	Insoluble
Molecular Formula	C
Molecular Weight	12.011 g/mol



▶ **SECTION 10 - STABILITY AND REACTIVITY**

Stability	Stable under normal conditions. Self-heats due to slow oxidation by air. Presence of moisture accelerates self-heating.
Incompatibility	Strong oxidizers such as ozone, liquid oxygen, chlorine, potassium permanganate.
Hazardous Products of Decomposition	Formaldehyde, carbon monoxide, carbon dioxide, and other irritating and toxic and fumes may be formed in a fire. Carbon monoxide may be generated in the event of a fire (especially with incomplete combustion in an enclosed space).
Polymerization	Will not occur

▶ **SECTION 11 - TOXICOLOGICAL INFORMATION**

Irritancy	Data not available.
Sensitization	Data not available
Chronic/Acute Effects	None
Synergistic Materials	Data not available
Animal Toxicity Data	LD50(rat,oral): >10,000 mg/kg LC50(rat, inhalation): >64.4 mg/L
Carcinogenicity	Not considered to be carcinogenic as per IARC, NTP, and OSHA.
Reproductive Toxicity	Data not available
Teratogenicity	Data not available
Mutagenicity	Data not available

▶ **SECTION 12 - ECOLOGICAL INFORMATION**

Fish Toxicity	Data not available.
Biodegradability	Data not available.
Environmental Effects	Data not available. None expected.

▶ **SECTION 13 - DISPOSAL CONSIDERATIONS**

Waste Disposal	Dispose in accordance with all federal, provincial, and/or local regulations including the Asian Environmental Protection Act.
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▶ SECTION 14 - TRANSPORT INFORMATION**TDG Classification**

Shipping Name	Not regulated
Class	Not regulated
Group	Not regulated
PIN Number	Not regulated
Other	Secure containers (full and/or empty) with suitable hold down devices during shipment and ensure all caps, valves, or closures are secured in the closed position.

▶ SECTION 15 - REGULATORY INFORMATION

WHMIS Classification Not a controlled product

NOTE: THE PRODUCT LISTED ON THIS MSDS HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE ASIAN CONTROLLED PRODUCTS REGULATIONS. THIS MSDS CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS.

▶ SECTION 16 - OTHER INFORMATION

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Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.

If you have any questions or concerns please call our customer service or technical service department.

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