	SAFETY DATA SHEET
SECTION 1	: PRODUCT AND COMPANY IDENTIFICATION
PRODUCT NAME	: Steam Processed Coconut Shell Activated Carbon
HS CODE*	: 3802.10
CAS NO.* MANUFACTURE CODE	: 7440-44-0 : Activated carbon
CHEMICAL FAMILY	: Carbon Group
CHEMICAL FORMULA	: C
APPLICATION	: Adsorption of Organic and inorganic materials in Solid, Liquid and Gas phase.
COMPANY IDENTIFICATION	: Haycarb Holdings Pty Ltd.Suite 122, 202 Jells Road, Wheelers Hill, Victoria, 3150
CONTACT DETAILS	:TEL: +61 3 8555 0680
VERSION	:XIV
(HS CODE* - Harmonized System Code, CAS No.* - Ch	
SECTION 2	: HAZARDS IDENTIFICATION
CLASSIFICATION OF THE SUBSTANCE OR MIXTURE	: <u>GHS-US classification</u>
MIATURE	Combustible Dust H232
	Not classified as a simple asphyxiate. Product does not displace oxygen in the ambient atmosphere, but slowly adsorbs oxygen from a confined space when wet. Under conditions of anticipated and recommended use, product does not pose an asphyxiation hazard.
GHS CLASSIFICATION	
	onent knowing that the concentration on the carbon is significantly less than 100%.
GHS-US labeling	
Signal word (GHS-US	S): Warning
Hazard statements (GHS-US	S): H232 - May form combustible dust concentrations in air
HAZARD/CATEGORY	: Eye Irritation 2A Respiratory Irritation Category 3-Dust causes respiratory, skin and eye irritation. Aquatic Chronic 2
	<ul> <li>Prolonged or repeated inhalation or ingestion can cause irritation of mucous membranes.</li> <li>Wet activated carbon removes oxygen from air causing a severe hazard to workers in enclosed or confined space.</li> </ul>
HAZARD SYMBOL	
PRECAUTIONARY STATEMENTS	
PREVENTION	I: 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.
RESPONS	E 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.
	STORAGE: Store in a well-ventilated place.
	Keep container tightly closed.
OTHER HAZARDS	Dust may be slightly irritating to eyes and respiratory tract.
	Wet activated carbon removes oxygen from air causing a severe hazard to workers in enclosed or
	confined space.

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		High concentrations of contaminants in the gas stream can cause a considerable amount of adsorption heat, which may result in spontaneous carbon bed fires or hot spots.
SECTION 3		: COMPOSITION / INFORMATION ON INGREDIENTS
Common name		Chemical Identity (% CAS No by weight)
Activated carbon (Steam processed coconut she	l based)	Less than or equal 100 <b>7440-44-0</b>
SECTION 4		: FIRST AID MEASURES
ROUTES OF ENTRY	Inhalation	: Dust may be inhaled and may cause mild irritation to the upper respiratory
	Ingestion	tract. : Dust may cause mild irritation to digestive track resulting in nausea or diarrhea
		<ul> <li>Dust may cause mild irritation</li> <li>Dust may cause mild irritation</li> </ul>
EFFECTS OF EXPOSURE		: Inhalation of carbon dust may cause temporary discomfort. No adverse effects expected through skin or eye contact, but may cause mild irritation. Workers should also take appropriate precautions when dealing with spent (used) activated carbons which may exhibit properties of absorbed materials.
		PLC. 400, DEANS ROAD, COLOMBO 10, SRI LANKA. 12 687565, E-MAIL. sales@haycarb.com, FAX.+94 112 699630
EMERGENCY AND FIRST AID	Inhalation	. Expose to freeh air Cot modical attention for our breathing differents
	Ingestion	<ul> <li>Expose to fresh air. Get medical attention for any breathing difficulty.</li> <li>Give water to drink to dilute. If large quantities were swallowed, get medical attention</li> </ul>
	Skin Contact	<ul><li>immediately.</li><li>Wash exposed area with soap and water. Seek medical attention if irritation develops.</li></ul>
	Eye Contact	: Immediately flush eyes with gentle but large stream of water for at least 15 min lifting lower and upper eye lids occasionally. Call a physician if irritation persists.
HEALTH HAZARD ACUTE AND C	HRONIC	: Inhalation (dust may be inhaled), dust may cause mild irritation to the upper respiratory In case of skin contact dust may cause mild irritation In case of eye contact dust may cause irritation
MEDICAL CONDITIONS GENERA	ALLY AGGRAV	
		<ul> <li>People with pre-existing skin conditions, eye problems or impaired respiratory function may be more susceptible to the potential effects of the dust.</li> </ul>
SECTION 5		: FIRE FIGHTING MEASURES
EXTINGUISHING MEDIA		: Water, carbon dioxide, nitrogen, dry chemical extinguishing agents, sand and foam. Avoid methods which may stir up dust clouds.
PREVENTION		Keep away from sources of heat or naked flames.
SPECIAL FIRE FIGHTING PROCE	DURE	: Activated carbon is difficult to ignite and tends to burn slowly (smolder) without producing smoke or flame. Carbon monoxide and carbon dioxide gas may be emitted upon combustion of material.
PROTECTIVE EQUIPMENT		: In the event of fire, wear full protective clothing and NIOSH approved self contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.
		Wet carbons adsorb oxygen, therefore do not enter closed vessels without using a self-contained breathing apparatus.
SECTION 6		: ACCIDENTAL RELEASE MEASURES
EMERGENCY PROCEDURE		: Evacuate area. Eliminate all ignition sources if safe to do so. Ventilate the area with fresh air. Observe precaution Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in section 8. Use non-sparking tools and equipment. Reduce airborne dust to prevent scattering by moistening with water.
PROPER METHOD OF CONTAMINENT AND CLEAN UP		<ul><li>Pick up spill for recovery or disposal and place in a closed container. Carbon is not soluble, but can</li><li>cause a particulate emission if discharged to waterways.</li><li>Spills: Clean up spills in a manner that does not disperse dust into the air.</li></ul>
	Warning	Spent carbon may have absorbed hazardous materials.
SECTION 7		: HANDLING & STORAGE

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Use appropriate respirators, gloves and eye protection to prevent or minimize exposures to dust.

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Store in cool, dry, ventilated place and in closed container. Keep away from oxidizers, heat or flames. CONDITIONS FOR SAFE STORAGE Store away from ignition sources. : EXPOSURE CONTROLS/PERSONAL PROTECTION **SECTION 8** Airborne Exposure Guidelines: OSHA PEL (Occupational Safety and Health Association - Permissible exposure Limit) : Less than 5 mg/m3 (Respirable Fraction) Less than 15 mg/m3 (Total Dust) Exposure Guidelines Keep in airtight packing to prevent pickup of odors and moisture from air. Wet activated carbon depletes oxygen from the air and therefore dangerously low levels of oxygen may be encountered in confined spaces. Ventilation System: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. HAYCARB PLC. 400, DEANS ROAD, COLOMBO 10, SRI LANKA. PHONE: +94 112 687565, E-MAIL. sales@haycarb.com, FAX.+94 112 699630 Personal Respirators (NIOSH\* Approved) : For conditions of use where exposure to the dust or mist is apparent, Use NIOSH/OSHA\* approved respirator for Phosphoric acid and dust/mist (non-toxic particles). Select the suitable respirator based on exposure limits. For emergencies or instances where the exposure levels are not known, use a full-face positive pressure, air-supplied respirator. Hand protection : Gloves should be classified under Standard EN 374 or ASTM F1296. Suggested glove materials are: Neoprene, Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, PVC or vinyl. Suitable gloves for this specific application can be recommended by the glove supplier Skin Protection : Wear protective gloves and clean body-covering clothing. For personal hygiene purposes, use adequate clothing to prevent skin contact including boots, gloves, lab coat, apron or overalls as appropriate. Eve Protection : Use safety glasses/goggles when working with activated carbon. Contact lenses should not be worn. Install eyewash fountain and quick-drench facilities in work area. (NIOSH\* - National Institute for Occupational Safety and Health/ OSHA\* - Occupational Safety and Health Association) : PHYSICAL AND CHEMICAL CHARACTERISTICS SECTION 9 PHYSICAL STATE : Solid APPEARANCE AND ODOUR : Black granules or powder ,odorless. ODOR THRESHOLD : Not applicable pH VALUE : 6 - 11 MOLECULAR WEIGHT : Not applicable BOILING POINT : Not applicable VAPOUR PRESSURE : Not applicable SOLUBILITY IN WATER : Insoluble PARTICLE DENSITY : Nominal 0.82 g/cc BULK DENSITY : 0.30 - 0.64 g/cc MELTING POINT : Not applicable FREEZING POINT : Not applicable EVAPORATION RATE : Not applicable FLASH POINT : Not applicable PARTITION COEFFICIENT : Not applicable AUTO IGNITION TEMP. : Above 350 °C DECOMPOSITION TEMP. : Not applicable FLAMMABILITY (SOLID, GAS) : Above 220 °C **RELATIVE VAPOR DENSITY AT 20 ° C** : Not applicable VISCOSITY : Not applicable Log Pow : Not applicable Log Kow : Not applicable Explosive properties : Not applicable Not applicable **Oxidizing properties** : Explosive Limits : Not applicable **SECTION 10** : STABILITY AND REACTIVITY

: Stable under ordinary conditions of use and storage.

## HAYCARB SAFETY DATA SHEET CONDITIONS TO AVOID : Moisture and contact with oxidizing substances or ignition sources. INCOMPATIBILITY (MATERIALS TO AVOID) Strong oxidizing chemicals such as ozone, liquid oxygen, chlorine, permanganate, strong acids etc. and hydrocarbons. HAZARDOUS DECOMPOSITION PRODUCT/BY-PRODUCT : On burning carbon dioxide, carbon monoxide. HAZARDOUS POLYMERIZATION Will not occur HAYCARB PLC. 400, DEANS ROAD, COLOMBO 10, SRI LANKA. PHONE: +94 112 687565, E-MAIL. sales@haycarb.com, FAX.+94 112 699630 : TOXICOLOGICAL INFORMATION **SECTION 11** ACUTE EFFECTS Oral LD50\* **Toxicity Studies** Not determined on the finished product Dermal LD50\* Not determined on the finished product Silica Crystalline, Quarts (14808-60-7) IARC group : 1 - Carcinogenic to humans The International Agency for Research on Cancer (IARC) has classified "silica dust, crystalline, in the form of quartz or cristobalite" as carcinogenic to humans (group 1). However these warnings refer to crystalline silica dusts and do not apply to solid activated carbon containing crystalline silica as a naturally occurring, bound impurity. As such, we have not classified this product as a carcinogen in accordance with the US OSHA Hazard Communication Standard (29 CFR §1910.1200) but recommend that users avoid inhalation of product in a dust form. Inhalation Section (4) Ingestion Section (4) Eye Irritation Section (4) Skin Irritation Section (4) Sensitization Not determined on the finished product Target organ(s) or System Eyes, skin and upper respiratory system Signs and Symptoms of Exposure Irritation and redness of eyes, irritation of skin and respiratory system may result from exposure to carbon dust. Chronic Effects WARNING: This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer, birth defects, or other reproductive harm. (LD50\* - Lethal Dose expected to kill 50% of a group of test animals) : ECOLOGICAL INFORMATION **SECTION 12** Eco toxicity See section (11) Persistence/degradability Not determined on the finished product. **Bioaccumulations/Accumulation** Not determined on the finished product. Mobility in Environmental Media Not determined on the finished product. Other adverse effects Not determined on the finished product.

: DISPOSAL CONSIDERATIONS

## **SECTION 13**

### WASTE TREATMENT METHODS

Waste treatment and disposal methods

: Vacuum or shovel material into a closed container. Dispose in a safe manner in accordance with local/national regulations. Do not allow the product to be released into the environment.

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: Activated carbon is an adsorbent media; hazard classification is generally determined by the adsorbate. Consult U.S. EPA guidelines listed in 40 CFR 261.3 for more information on hazardous waste disposal.

Additional information

SECTION 14	:	TRANSPORT INFORMATION
In accordance with DOT	:	Not classified as hazardous for domestic land transport
UN-No.(DOT)		None on finished product
DOT NA no.	:	None on finished product
Proper Shipping Name (DOT)	:	Not regulated
Department of Transportation(DOT)Hazard Classes	:	None on finished product
Hazard labels (DOT)	:	None on finished product
Packing group (DOT)	:	None on finished product
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	None on finished product
Transport by sea IMO / IMDG	:	Not classified as hazardous for water transport
UN/NA Identification Number	:	None on finished product
UN- Proper Shipping Name	:	Not regulated
Transport Hazard Class	:	None on finished product
<u>Air transport</u> ICAO / IATA	:	Not classified as hazardous for air transport
UN/NA No	:	None on finished product
UN- Proper Shipping Name		Not regulated
Transport Hazard Class	:	None on finished product
Packing Group	:	None on finished product
Marine Pollutant	:	None on finished product
Additional Information		

(DOT\* - Department of Transportation, UN NO\* - United Nations Hazardous substance No, IMCO \* - Intergovernmental Maritime Consultative Organization, IATA\* - International Air Transportation Association, IMDG\* - International Maritime Dangerous Goods)

SECTION 15	: REGULATORY INFORMATION
US FEDARAL REGULATIONS - Activated Carbon Profile 1	: All chemical substances in this product are listed in the EPA (Environment Protection Agency) TSCA
- Cobalt (7440-48-4)	<ul> <li>(Toxic Substances Control Act) Inventory or are exempt</li> <li>Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on United States SARA Section 313</li> </ul>

## **INTERNATIONAL REGULATIONS**

No additional information available

## **US STATE REGULATIONS**

#### California Proposition 65

WARNING: This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer, birth defects, or other reproductive harm.

	Silica: Crystalline, quartz (14808-60-7)	Cobalt (7440-48-4)	Titanium dioxide (13463- 67-7)
U.S California - Proposition 65 - Carcinogens List	YES	YES	YES
U.S California - Proposition 65 - Developmental Toxicity	NO	NO	NO
U.S California - Proposition 65 - Reproductive Toxicity - Female	NO	NO	NO
U.S California - Proposition 65 - Reproductive Toxicity - Male	NO	NO	NO
No significance risk level (NSRL)	NA	NA	NA

## SAFETY DATA SHEET

## Aluminum oxide (1344-28-1)

- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Massachusetts Right to Know List
- U.S. Pennsylvania RTK (Right to Know) Environmental Hazard List

#### Calcium sulfate (7778-18-9)

- U.S. Massachusetts Right to Know List
- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List

#### Silica: Crystalline, quartz (14808-60-7)

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

U.S. - Massachusetts - Right to Know List

(SARA\* - Superfund Amendments and reauthorization Act, TSCA\* - Toxic Substances Control Act, OSHA\* - Occupational Safety and Health Association, CERLA\* -Comprehensive Environmental Response, Compensation and Liability Act, RCRA\* - Resource Conservation and Recovery Act., DSL\* - Domestic Substance s List, WHMIS\* - Workplace Hazardous Material Information System)

SECTION 16	: OTHER INFORMATION	N N	
not enter vessels containing wet Activated Car	bon before checking oxygen level. Vess	els with limited ventilation may be low in oxygen due to the adsorbing	

Do not enter vessels containing wet Activated Carbon before checking oxygen level. Vessels with limited ventilation may be low in oxygen due to the adsorbing characteristics of Activated Carbon. If necessary, use a NIOSH-approved self-contained breathing apparatus.

### Dangerous goods regulation-

Steam activated carbon (HS CODE 3802.10) is not classified as dangerous good as per UN No 1362, IMCO Class or division 4.2, Packing group III, Special provisions 925 IMDG code

Special Provision 925 - The provisions of this Code do not apply to:

carbons made by a steam activation process.

- a consignment of carbon if it passes the tests for self-heating substances as reflected in the UN Manual of Tests and Criteria (see 33.3.1.3.3), and is accompanied by a certificate from a laboratory accredited by the competent authority, stating that the product to be loaded has been correctly sampled by trained staff from that laboratory and that the sample was correctly tested and has passed the test

## HMIS III RATING

Health	:	0
Flammability	:	1
Physical	:	0
Personal Protection	:	
NFPA health hazard	:	0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.
NFPA fire hazard		1 - Must be preheated before ignition can occur.
NFPA fire nazard	-	1 - Must be preneated before ignition can occur.
NFPA reactivity	:	0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

Haycarb SDS complies with OSHA GHS 1910.1200 Hazard communication Regulation

EMPLOYERS SHOULD USE THIS INFORMATION ONLY AS A SUPPLEMENT TO OTHER INFORMATION GATHERED BY THEM AND SHOULD MAKE INDEPENDENT JUDGMENT OF SUITABILITY OF THIS INFORMATION TO ENSURE PROPER USE AND PROTECT THE HEALTH AND SAFETY OF EMPLOYEES. THIS INFORMATION IS FURNISHED WITHOUT WARRANTY AND ANY USE OF THE PRODUCT NOT IN CONFORMANCE WITH THIS MATERIAL SAFETY DATA SHEET OR IN COMBINATION WITH ANY OTHER PRODUCT OR PROCESS, IS THE RESPONSIBILITY OF THE USER.

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