

## MATERIAL SAFETY DATA SHEET

**PRODUCT NAME : EXCHANGE CARBON**

### 1. Product and Company Identification

Product name: Exchange Carbon  
Synonyms: Carbon, activated  
Item Numbers: E427-10-700, E427-11-100

#### European Contact Details

Edwards, Manor Royal, Crawley  
West Sussex, RH10 9LW, England  
E-mail: info@edwardsvacuum.com

#### General enquiries

UK : +44 (0)1293 528844  
France : +(33) 1 47 98 24 01  
Germany : +(49) 6420-82-410  
Italy : +(39) 0248-4471

#### US Contact Details

Edwards, Three Highwood Drive, Suite 3-10E,  
Highwood Office Park, Tewksbury, MA 01876

#### General enquiries

+(1) 978-658-5410  
Toll Free: 1-800-848-9800

24 h Emergency telephone number:

Chemtrec: 1-800-424-9300

### 2. Hazards Identification

#### EMERGENCY OVERVIEW

Odourless black exchange carbon. This product may cause eye or skin irritation but when properly handled, according to good working and hygienic practices, is not dangerous to human health.

Wet activated carbon removes oxygen from air causing severe hazard to workers inside carbon vessels and enclosed or confined spaces. Oxygen levels must be checked before these work areas are occupied.

For short and long term exposure effects see Section 11 Toxicological data.

Eye Effects: May cause slight irritation.  
Skin Effects: May cause mild skin irritation.  
Ingestion/Oral Effects: Ingestion of large amounts may cause gastrointestinal irritation.  
Inhalation Effects: Inhalation of high concentrations of dust may cause irritation.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.

NFPA Hazard codes		HMIS Hazard codes		Rating System
Health	0	Health	0	0 = No Hazard
Flammability	1	Flammability	1	1 = Slight Hazard
Instability	1	Reactivity	1	2 = Moderate Hazard
				3 = Serious Hazard
				4 = Severe Hazard

## MATERIAL SAFETY DATA SHEET

**PRODUCT NAME : EXCHANGE CARBON**

### 3. Composition/Information on Ingredients

Ingredient	% Weight	CAS No	Hazard class*	Risk phrase*
Steam activated carbon	95 (maximum)	7440-44-0	Not applicable	Not applicable
Water	5 (minimum)	7732-18-5	Not applicable	Not applicable

\*Hazard class & Risk phrase. These columns are only completed for ingredients which are classified as hazardous under EU Directive No 1272/2008 (as amended) and are present in sufficient concentration to make the overall substance hazardous. In all other situations, the column will be completed as "Not applicable".

### 4. First Aid Measures

Eyes:	Immediately wash out with plenty of water for at least 15 minutes. If irritation persists, seek medical attention.
Skin:	Remove contaminated clothing and wash affected area with plenty of water.
Ingestion/Oral:	Wash out mouth with water and give two glasses of water to drink. Seek immediate medical attention. Do not induce vomiting! Never give anything by mouth to an unconscious person!
Inhalation:	If high concentrations of dust are inhaled, remove to fresh air. Seek medical attention.
Other Information:	None.

### 5. Fire Fighting Measures

Extinguishing Media:	Foam, dry powder, water spray.
Fire and Explosion Hazard:	Combustion products include carbon oxides. Explosion may occur if the material comes into contact with nitric acid or strong oxidizers. Sufficient concentrations of airborne dusts may ignite or explode in the presence of an ignition source.
Special Protective Equipment for Fire Fighters:	Fire fighters should wear a self-contained breathing apparatus (SCBA) and full protective gear.

For Flammability Properties - see Section 9.

### 6. Accidental Release Measures

Isolate the area of the spill. Do not walk through or otherwise scatter spilled material. Wear appropriate protective equipment (See Section 8).

Spilled material may cause floors to be slippery. Take care to avoid falls.

Sweep up spilled material and transfer to plastic containers for recovery or disposal: see Section 13.

Take measures to prevent run off water (from the spill) from entering drains, sewers or watercourses. If polluted water reaches drainage systems or water courses, immediately inform the appropriate authorities.

If there is significant dust content, extinguish all ignition sources. Wear dust mask protection and dampen the spill to avoid raising dusts. Carefully scoop or shovel into containers for later recycle or disposal. Use a vacuum or wet mop to remove remaining dusts. Sufficient concentrations of dust can be flammable or explosive.

## MATERIAL SAFETY DATA SHEET

**PRODUCT NAME : EXCHANGE CARBON**

### 7. Handling and Storage

**Handling:** No special measures are required, however note that static charges may accumulate in the material. Avoid creating and inhaling airborne dusts. Avoid contact with skin and eyes. Work and storage areas should be periodically cleaned to prevent dust accumulation.

**Storage:** Store in a well ventilated place, between 0 and 40 °C (32 and 104 °F). Avoid dehydration (when wetted again the resin volume may increase and cause a rupture of the packaging). Keep only in the original container.

### 8. Exposure Controls/Personal Protection

#### Exposure Limits:

Ingredient	ACGIH - TLV -	OSHA - PEL	Occupational Exposure Limits EH40 (UK)
Carbon (as graphite)	Based on an 8 hrs TWA 10 mg/m <sup>3</sup> (total) 4 mg/m <sup>3</sup> (respirable)	None Established	Based on an 8 hrs TWA 10 mg/m <sup>3</sup> (total) 4 mg/m <sup>3</sup> (respirable)

#### Personal Protection:

**Engineering Measures:** Workplace should be well-ventilated, but no special precautions are necessary for the dry product.

**Respiratory Protection:** Suitable respiratory protection is recommended if there is a dust hazard.

**Hand/Skin Protection:** Wear suitable gloves and long-sleeved clothing.

**Eye/Face Protection:** Wear safety glasses/goggles. Ensure an eyewash facility is available.

**Hygiene Measures:** Practice good workplace hygiene. Do not eat or smoke when handling. Wash thoroughly after handling, before meals, breaks, and leaving the work area.

**Other/General Protection:** Wet activated carbon removes oxygen from air causing severe hazard to workers inside carbon vessels and enclosed or confined spaces. Before entering these work areas, sampling and work procedures for low oxygen levels should be taken to make sure that oxygen is available, whilst observing all local and national regulations.

## MATERIAL SAFETY DATA SHEET

**PRODUCT NAME : EXCHANGE CARBON**

### 9. Physical and Chemical Properties

Appearance and Odour	Odourless black particulate solid	Boiling point	No data available	°C/°F
pH (as supplied)	Slightly alkaline	Freezing Point	No data available	°C/°F
Solubility in Water	Insoluble	Auto Ignition	No data available	°C/°F
Volatile Content by Volume	Not applicable	Flash Point	No data available	°C/°F
Specific Gravity	1.2 to 1.3 (in water)			
Vapour Pressure (mbar)	No data available	Vapour Pressure (Torr)	No data available	

### 10. Stability and Reactivity

Stability:	Stable under normal conditions of use.
Material/Conditions to Avoid:	Avoid contact with nitric acid and strong oxidizers (such as ozone, liquid oxygen, chlorine and permanganate), due to the risk of explosion.
Hazardous Decomposition:	Combustion products include carbon oxides.
Hazardous Polymerisation:	Will not occur.

### 11. Toxicological Information

For a comprehensive description for the various toxicological (health) effects which may arise if the user comes into contact with the substance or preparation refer to Section 2 Hazards Identification.

#### Acute toxicity:

No evidence of acute toxicity.

#### Carcinogenicity:

No known carcinogenic effects.

#### Teratogenicity

No evidence of reproductive effects.

#### Mutagenicity

No evidence of mutagenic effects.

#### Other Information:

Repeated inhalation of dusts over time may cause pneumoconiosis and decreased lung capacity.

## MATERIAL SAFETY DATA SHEET

**PRODUCT NAME : EXCHANGE CARBON**

### 12. Ecological Information

The material presents little or no hazard to the ecosystem. It is insoluble in water and non-volatile.

The product is not biodegradable, there is no risk of bioaccumulation.

### 13. Disposal Considerations

As supplied, the material is not classified as hazardous waste, and can be disposed of by landfill or the usual methods for plastics. Controlled incineration is also possible. All local and national regulations should be followed.

Processing, normal use, or contamination may change the disposal requirements for this material. Dispose of used or contaminated material in accordance with all local and national requirements.

EU number for activated carbon used for the preparation of drinking water or water for industrial use is 19 09 04.

EU number for activated carbon used in waste water treatment plants not otherwise specified is 19 08 99.

In UK, surplus material should be declared a 'Special Waste'. Refer to the 'Control of Pollution (Special Waste) Regulations 1980 - SI 1709'.

### 14. Transport Information

This material as supplied is not classified as dangerous under transport regulations.

PARAMETER	EUROPEAN	CANADIAN TDG	UNITED STATES DOT
Proper Shipping Name	Not applicable	Not applicable	Not applicable
Hazard Class	Not applicable	Not applicable	Not applicable
Identification Number	Not applicable	Not applicable	Not applicable
Shipping Label	Not applicable	Not applicable	Not applicable

Material contaminated by hazardous substances is subject to transport regulations for hazardous wastes.

### 15. Regulatory Information

#### European Regulatory Information

This product has been classified in accordance with EU Regulation No 1272/2008 (as amended) on the Classification, Labelling and Packaging of Substances and Mixtures.

Classified as dangerous to supply: No.

Risk Phrases: Not applicable.

Safety Phrases: S14 - Keep away from oxidizers.

S16 - Keep away from sources of ignition.

Symbols: None.

## MATERIAL SAFETY DATA SHEET

**PRODUCT NAME : EXCHANGE CARBON**

### United States Regulatory Information

All materials contained in this product are listed on the U.S. Toxic Substances Control Act (TSCA).

SARA TITLE III - SECTION 313 SUPPLIER NOTIFICATION:

This product does not contain toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 and 40 CFR Part 372.

California Proposition 65: This product does not contain chemicals known to the State of California to cause cancer or reproductive toxicity.

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

### Canadian Regulatory Information

WHMIS Classification: Not Applicable.

All ingredients in this product are included in the Canadian DSL.

### 16. Other Information

This MSDS is compiled in accordance with ANSI Z400.1 and Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Sources of information for this data sheet:

- Purolite International Material Safety Data Sheet Number 43: PUROLITE AC20, AC20G, AC40G, AC55SG. Revision No : 00, First issue date : 08 September 2003.
- Purolite Safety Data Sheet for Purolite® AC20. Revision date: 19 July 2009.

### Glossary:

ACGIH - American Conference of Governmental Industrial Hygienists; ANSI - American National Standards Institute; Canadian TDG - Canadian Transportation of Dangerous Goods; CAS - Chemical Abstracts Service; Chemtrec - Chemical Transportation Emergency Center (US); DSL - Domestic Substances List; EH40 (UK) - HSE Guidance Note EH40 Occupational exposure limits; EPCRA - Emergency Planning and Community Right-to-Know Act; HMIS - Hazardous Material Information Service; LC - Lethal Concentration; LD - Lethal Dose; NFPA - National Fire Protection Association; OSHA - Occupational Safety and Health Administration, US department of Labour; PEL - Permissible exposure limit; SARA (Title III) - Superfund Amendments and Reauthorization Act; SARA 313 - Superfund Amendments and Reauthorization Act, Section 313; SCBA - Self-Contained Breathing Apparatus; TLV - threshold limit value; TSCA - Toxic Substances Control Act Public Law 94-469; TWA - Time Weighted Average; WGK - Water Hazard Class (German); US DOT - US Department of Transportation; WHMIS - Workplace Hazardous Materials Information System.

### Revisions:

August 2010 - Data Sheet updated to reflect the latest regulatory and supplier safety information.

---

Although the information and recommendations in this data sheet are to the best of our knowledge correct, it is recommended that you make your own determination of the material's suitability for your purpose before you use it. The information contained in this data sheet has been reproduced from the manufacturers data; the accuracy of this information is the responsibility of the manufacturer. Edwards accept no responsibility for damage of any nature resulting from the use of, or the reliance upon, this data sheet.