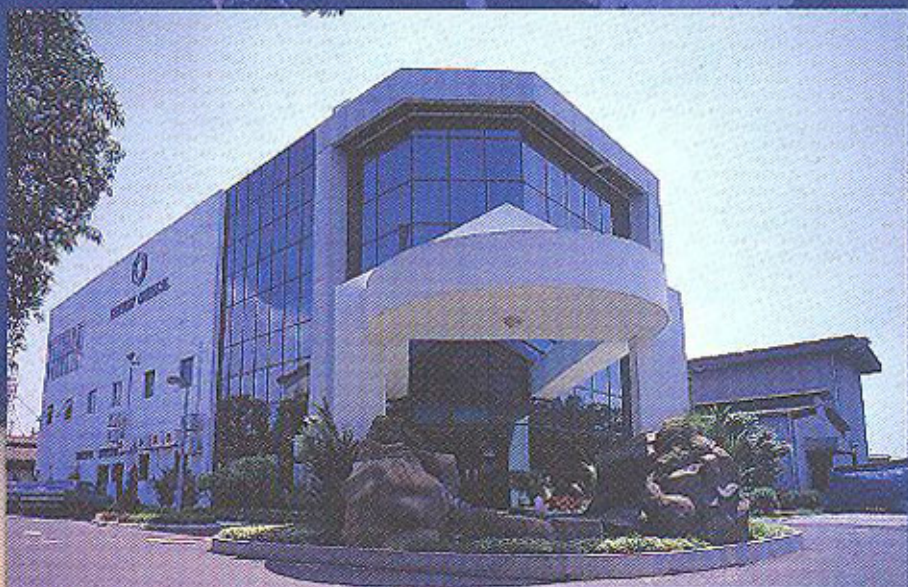
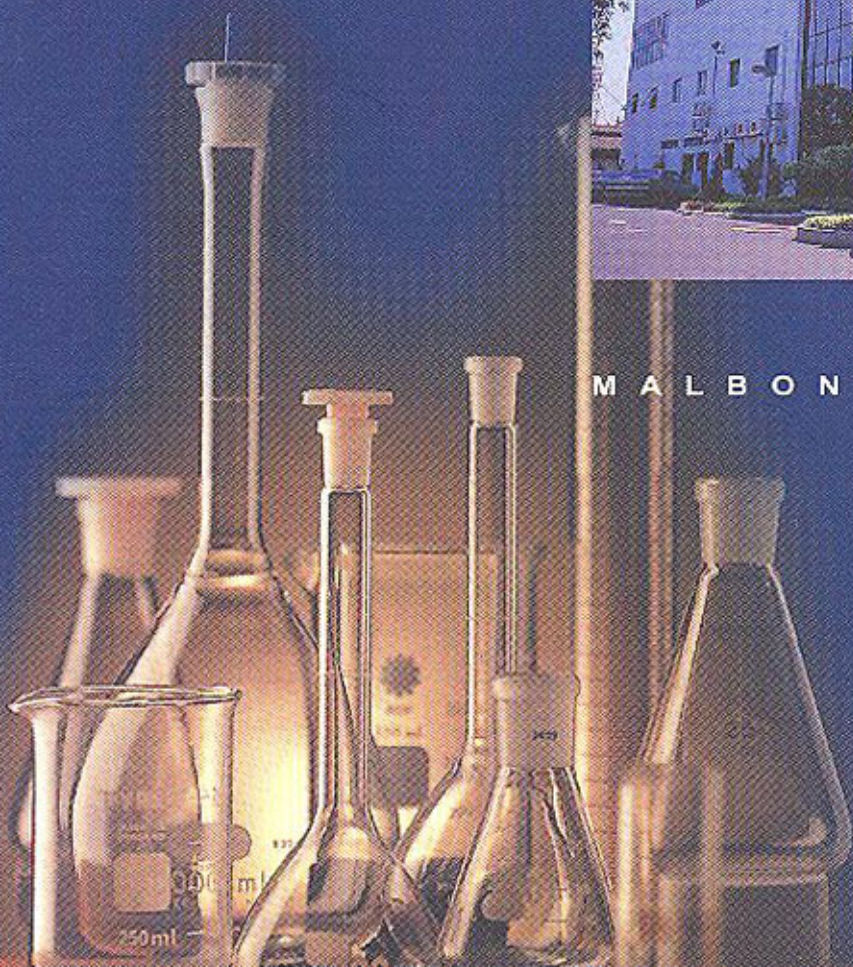




Century Chemical Works Sdn. Bhd.  
(9139-W)



MALBON activated carbon







Steam activated carbon photographed through a scanning electron microscope

## *Company Background*

# *The Progressive Producer of Powdered*

Century Chemical Works Sdn. Bhd. is a joint-venture concern between Japanese and Malaysian industrialists that manufactures powdered activated carbon under the registered trade name MALBON.

From its start in the Prai Industrial Complex, Penang, in early 1972, the Company has expanded production to a new, high-technology production facility in the Prai Industrial Estate, producing over 11000 metric tons of powdered activated carbon annually.

Century Chemical Works has established close manufacturing and technical collaboration with Takeda Chemical Industries of Japan, one of Asia's foremost producers of activated carbon and pharmaceuticals.

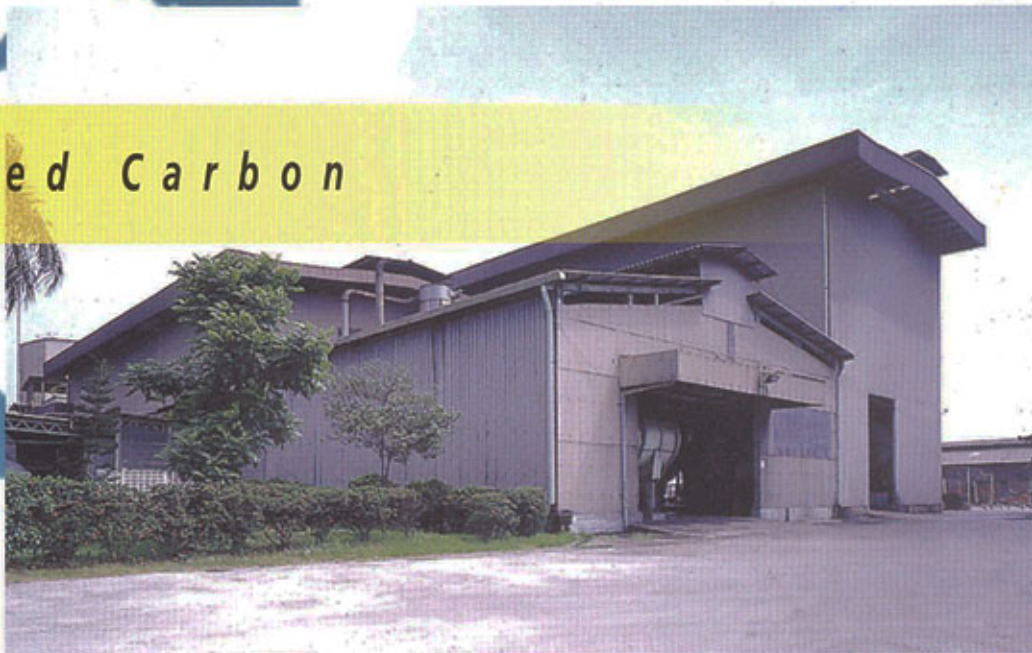




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## Activated Carbon



Century Chemical Works factory at Prai Industrial Complex, Penang.



# Introducing MALBON

*The Perfect Powdered Activated Carbon*



*Careful maintenance ensures smooth operation of process equipment.*



*Uncompromising attention towards heavy-duty machinery leads to quicker production cycles.*



*An employee paying careful attention to quality.*







Highly efficient production equipment at Century Chemical Works' factory.

MALBON Powdered Activated Carbon is practical and economical, providing effective purification in terms of removing unwanted colours, odour or other impurities from liquids or solutions.

Carbon was well-known for its adsorption qualities long before the discovery of the activation process. Activation, either physical or chemical, greatly enhances the absorption powers of ordinary carbon.

MALBON's adsorption process is physical without the use of chemical change. MALBON Activated Carbon is produced through steam activation, using carefully selected sawdust charcoal from various tropical wood species as the base material. The excellent adsorption power of MALBON Activated Carbon is due to the extremely large internal pore surface area which varies from 800 to 1200 M<sup>2</sup>/gm depending on the grades.

Several advantages such as flexibility and economy are apparent in MALBON Activated Carbon with the ability of products to be tailored specifically to the user's requirements.

A selection of the different grades of MALBON Activated Carbon are presented in this publication to enable the user to choose the product best suited to his needs.

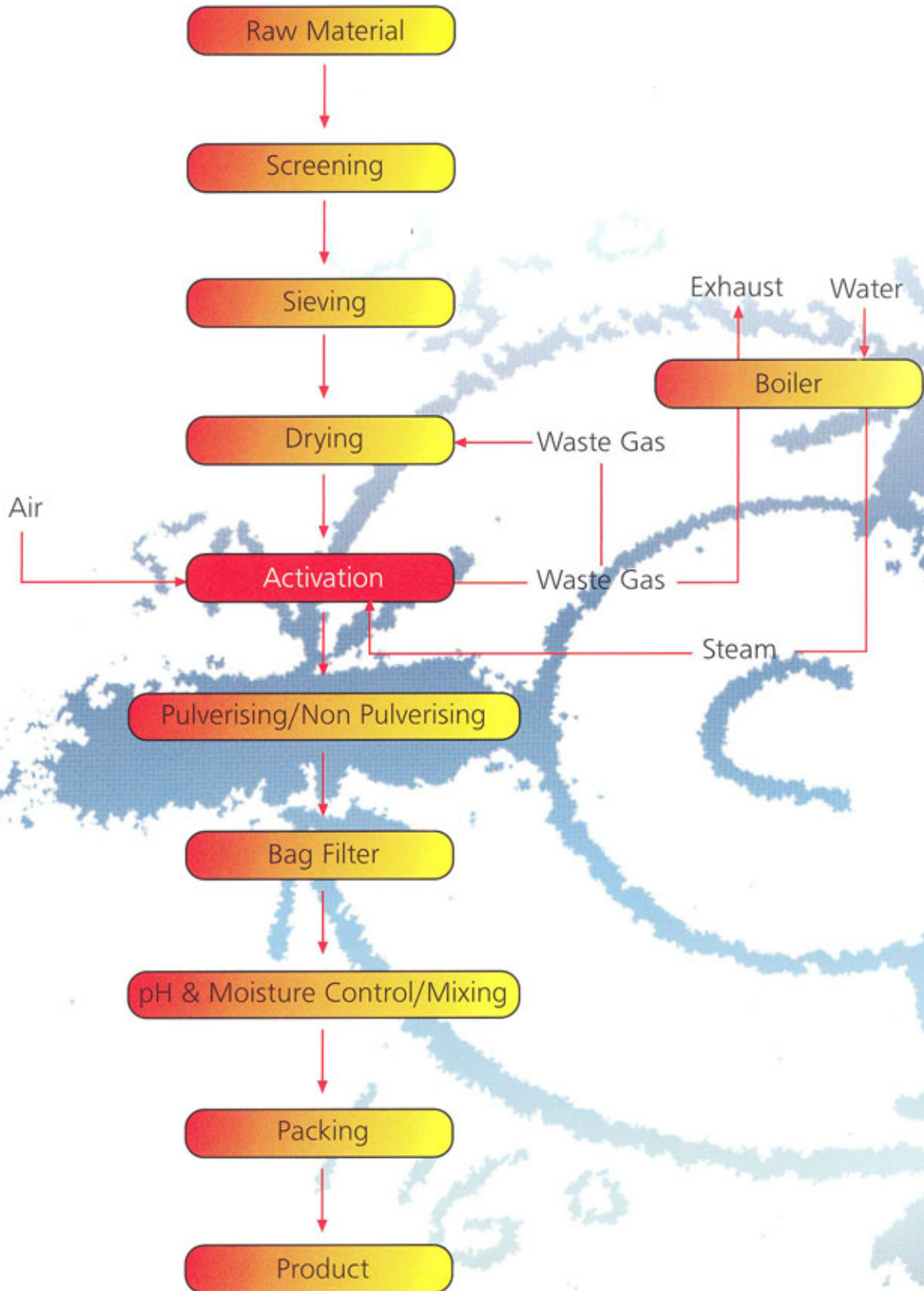


Century Chemical Works' new office in Prai Industrial Estate.



Safety is a key element in every step of production.

## The Process Flow Chart







## M A L B O N ' s A t t r i b u t e s

*Economy, Efficiency, Quality*

Manufactured from specially and carefully selected sawdust charcoal, MALBON is activated by steam and gases. MALBON provides a high degree of adsorption in various grades of uniform and consistent quality.



The production process is planned intelligently to enable stringent quality control from the first to final stages of production.

The products comprise mainly of pure carbon containing a very low percentage of impurities derived from the raw materials. Moisture content and pH level can be adjusted according to the intended use of the Activated Carbon.

MALBON Activated Carbon contains numerous advantageous attributes such as:

### **Excellent Adsorptive Capacity**

Economy is ensured because only a minimum use of the Activated Carbon is needed in decolourisation or purification due to its excellent adsorptive quality.

### **Easy Filtration**

The controlled particle size distribution of the carbon allows easy and quick filtration with any filter. This attribute enables greater production efficiency for the user.

### **Uniform Quality**

The production process utilises the latest technology while highlighting stringent quality standards. Every MALBON Activated Carbon grade is delivered to users in highly dependable and consistent quality.

### **Easy Suspension Formation**

A minimum of "dusting" is required for MALBON Activated Carbon to go into suspension, quickening the user's production cycles.



*Dependable, consistent product quality through strict quality control.*

## MALBON's Main Uses

Effective Purification and Treatment

MALBON Activated Carbon effectively satisfy user requirements in the following main capacities:

**Purification of Chemicals**

**Purification of Beverages**

**Purification of Edible Oils**

**Purification of MSG**

**Treatment of Municipal/Industrial Water**

General uses of MALBON include:

- decolourisation/production of clear filtrates
- improving quality of tastes
- deodorising solutions
- water treatment and purification of most liquids

MALBON GRADES	SUBSTANCE TO BE TREATED
S5	Water Treatment, Glycerine, Edible Oils, Fructose, Sugar, Organic Acids, Industrial Chemicals, Pharmaceutical Intermediates
S4	Sugar, Glucose
R4	Water Treatment / Waste Water Treatment
S6	Edible Oils



Engineers engrossed in continuous process design and improvement.



MALBON Activated Carbon is used in industrial treatment and purification of liquids.







## ***F l e x i b l e   P a c k a g i n g***

### *For Your Ease*

MALBON's range of Activated Carbon grades are available in:

- 20 kg, three ply kraft paper bags with one ply of polyethylene lining
- new flexible poly-propylene container bags with a polyethylene lining of 200 - 500 kg each

### ***Free Trial Samples***

Interested users may request obligation-free trial samples of the grades available,



*Packaging and storage of finished products.*



*MALBON ready for delivery.*



*Convenient, flexible packaging for MALBON Activated Carbon.*



## Specifications

### **MALBON S5**

A general purpose grade of MALBON Activated Carbon with a very high degree of efficiency.

Carefully selected sawdust charcoal is activated by steam and gases and pulverised to the size required.

#### **General specifications**

Moisture	:	Max 5%
Caramel decolourising power	:	Min 90%
pH	:	9 - 12
Filtration rate	:	30 - 90
Ash content	:	Max 8%
Iodine	:	Min 1000 mg/g
Arsenic	:	Max 5 ppm
~ 200 mesh	:	Max 20%
Methylene Blue	:	Min 180 ml/g

### **MALBON S4**

An economical grade of Activated Carbon possessing excellent adsorptive qualities.

It is activated by steam and gases, and pulverised to the required size before pH and moisture is adjusted to the user's requirement.

#### **General specifications**

Moisture	:	Max 10%
Caramel decolourising power	:	Min 93%
pH	:	6 - 7
Filtration rate	:	30 - 120
Ash content	:	Max 8%
Iodine	:	Min 930 mg/g
Arsenic	:	Max 5 ppm
~ 200 mesh	:	Max 20%
Methylene Blue	:	Min 140 ml/g







**MALBON R4**

Specially manufactured for use in the treatment of municipal and industrial water.

It is activated by steam and gases, and pulverised with pH and moisture adjustments at the final stage.

**General specifications**

Moisture	: 10 - 30%
Caramel decolourising power	: Min 88%
pH	: 6 - 8
Filtration rate	: 30 - 90
Ash content	: Max 8%
Iodine	: Min 700 mg/g
Arsenic	: Max 5 ppm
~ 200 mesh	: Max 20%
Methylene Blue	: Min 100 ml/g



**MALBON S6**

Caters mainly for the edible oils market.

Sawdust charcoal is activated with steam and gases at high temperature, and pulverised and moisture adjusted at the final stage to reduce "dust" flying during usage.

**General specifications**

Moisture	: Max 10%
Caramel decolourising power	: Min 70%
pH	: 9 - 12
Filtration rate	: 30 - 90
Ash content	: Max 6%
Iodine	: Min 700 mg/g
Arsenic	: Max 5 ppm
~ 200 mesh	: Max 20%
Methylene Blue	: Min 100 ml/g





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