

# MATERIAL SAFETY DATA SHEET

## SECTION I - MATERIAL IDENTIFICATION AND USE

<b>PRODUCT IDENTIFIER:</b> <i>MM-9000</i>	<b>MANUFACTURER'S NAME &amp; ADDRESS:</b> Circul-Aire Inc. 3999 Cote Vertu Montreal, Quebec Canada H4R 1R2
<b>TRADE NAME:</b> <i>MM-9000</i>	<b>CA CIRCUL-AIRE®</b>
<b>CHEMICAL IDENTITY:</b> <i>Activated carbon and aqueous potassium hydroxide</i>	
<b>SYNONYMS:</b> <i>MM-9000</i>	<b>TELEPHONE NO.:</b> (1) 514-337-3331
<b>CHEMICAL FORMULA:</b> <i>C + H<sub>2</sub>O + KOH</i>	<b>FAX NO.:</b> (1) 514-336-3023
<b>CHEMICAL FAMILY:</b> <i>Inorganic</i>	<b>SUPPLIER'S NAME &amp; ADDRESS:</b> Circul-Aire Inc. 3999 Cote Vertu Montreal, Quebec Canada H4R 1R2
<b>MATERIAL USE:</b> <i>Air purification</i>	<b>CA CIRCUL-AIRE®</b>
	<b>EMERGENCY TELEPHONE NO.:</b> (1) 514-337-3331
	<b>MOLECULAR WEIGHT:</b> <i>N/A</i>

## SECTION II - HAZARDOUS INGREDIENTS OF MATERIAL

Hazardous Ingredients	Approximate Concentrations %	C.A.S. N.A. or U.N. Numbers	"Exposure Limits"	LD <sub>50</sub> / LC <sub>50</sub> Specify Species & Route
<i>Activated carbon</i>	<i>75-85</i>	<i>7440-44-0</i>	<i>N/A</i>	<i>LD<sub>50</sub> 10 g/kg oral-RAT</i>
<i>Potassium hydroxide</i>	<i>5-10</i>	<i>1310-58-3</i>	<i>N/A</i>	<i>LD<sub>50</sub> 273 Mg/kg oral-RAT</i>

## SECTION III - PHYSICAL DATA FOR MATERIAL

Physical State Gas <input type="checkbox"/> Liquid <input type="checkbox"/> Solid <input checked="" type="checkbox"/>	Odor and Appearance <i>Black odorless granules</i>	Odor Threshold (p.p.m.) <i>N/A</i>	Specify Gravity <i>Packed density .5 - .6 g/cc</i>
Vapor Pressure (mm) <i>N/A</i>	Vapor Density (Air=1) <i>N/A</i>	Evaporation Rate <i>N/A</i>	Boiling Point (°C) <i>N/A</i>
Solubility in Water (20°C) <i>10%</i>	% Volatile (by volume) <i>15% (H<sub>2</sub>O)</i>	pH <i>9.5 (10% suspension)</i>	Freezing Point (°C) <i>N/A</i>
			Coefficient of water/oil distribution <i>N/A</i>

## SECTION IV - FIRE AND EXPLOSION HAZARD OF MATERIAL

Flammability Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	If yes, under which conditions: <i>Ignition temperature &gt; 300°C</i>
Means of Extinction <i>If involved in fire, flood with plenty of water.</i>	
Special Procedures <i>MM-9000 in large vessels under static conditions is susceptible to exothermic reaction on contact with oxidizable material. Flooding the vessel with water will extinguish any hot zones. Copious volumes of steam will be generated in the process of extinguishing the hot zones. The carbon *</i>	
Flashpoint (°C) and Method <i>N/A</i>	Upper explosion limit (% by volume) <i>N/A</i>
Auto Ignition Temperature (°C) <i>N/A</i>	Lower explosion limit (% by volume) <i>N/A</i>
Hazardous Combustion Products <i>CO may be generated in the event of combustion.</i>	
Explosion Data Sensitivity to Mechanical Impact <i>N/A</i>	Rate of Burning <i>N.D.</i>
	Explosive Power <i>N/A</i>
	Sensitivity to Static Discharge <i>N/A</i>

## SECTION V - REACTIVITY DATA

Chemical Stability Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	If no, under which conditions:
Incompatibility to other substances Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	If so, which ones? <i>Strong oxidizers. Avoid contact with vapor streams that have high concentration of combustible hydrocarbons.</i>
Reactivity and under what conditions <i>Do not leave large beds in static state for long periods of time unless vessel sealed to prevent entrance of large volumes of air, etc.</i>	
Hazardous Decomposition Products <i>Carbon monoxide may be generated in the event of fire.</i>	

*\* itself will not exhibit flaming although any combustible material in contact with it will. Since wet activated carbons adsorb oxygen, do not enter a closed area without using a self-contained breathing apparatus.*

**MATERIAL NAME/IDENTIFIER: MM-9000**

**SECTION VI - TOXICOLOGICAL PROPERTIES OF PRODUCT**

Route of Entry  Skin Contact  Skin Absorption  Eye Contact  Inhalation Acute  Inhalation Chronic  Ingestion

Effects of Acute Exposure to Product

*If the active ingredients of the product are leached out by water, the resulting solution may cause skin, eye and mucous membrane burn and/or irritation.*

Effects of Chronic Exposure to Product

N/A

LD<sub>50</sub> of Product (Specify Species and Route)

N/A

Irritancy of Product

N/A

Exposure Limits of Product

N/A

LC<sub>50</sub> of Product (Specify Species)

N/A

Sensitization to Product

N/A

Synergistic Materials

N/A

Carcinogenicity

Reproductive effects

N/A

Teratogenicity

Mutagenicity

**SECTION VII - PREVENTIVE MEASURES**

Personal Protective Equipment

*See following details*

Gloves (Specify)

*Rubber*

Respiratory (Specify)

*Particulate mask*

Eye (Specify)

*Safety glasses/goggles*

Footwear (Specify)

N/A

Clothing (Specify)

*Work apparel*

Other (Specify)

N/A

Engineering Controls (e.g. ventilation, enclosed process, specify)

*Handle in a well-ventilated area.*

Leak and Spill Procedure

*Avoid direct body contact. If dry, scoop or rake. If wet, rinse with copious amounts of water, scoop or rake, and store in waterproof container.*

Waste Disposal

*Dispose of in accordance with all Government regulations.*

Handling Procedures and Equipment

*Wet MM-9000 removes oxygen from air causing a severe hazard to workers inside MM-9000 vessels and enclosed or confined spaces. Before entering such an area, sampling and work procedures for low oxygen levels should be taken to ensure ample oxygen\*\**

Storage Requirements

*Store in a closed container in a cool dry area.*

Special Shipping Information

*Class 8 Packing Group II U.N 1813*

**SECTION VIII - FIRST AID MEASURES**

Skin

*Wash with soap and water.*

Eye

*Flush with plenty of water for at least 15 minutes. Get prompt medical attention if irritation persists.*

Inhalation

*Move to clean air.*

Ingestion

*Consult doctor and drink water.*

General Advice

*Wash hands before eating or smoking. Wash contaminated clothing.*

**SECTION IX - PREPARATION, DATE OF M.S.D.S.**

Additional Information

*WHMIS CLASS E*

Sources Used

*Chemical literature, MSDS for base impregnated carbon from Calgon Carbon Corp. and Weststates Carbon Co., Inc. U.S.A., COH*

Prepared by:

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Telephone Number

*(1) 514-337-3331*

Date

*February 2009*

**N/A - NOT APPLICABLE**

**N.D. - NOT DETERMINED**

**Circul-Aire Inc. requests the users of this product to study this Material Safety Data Sheet (MSDS) and become aware of product hazards and safety information. To promote safe use of this product, a user should (1) notify its employees, agents and contractors of the information on this MSDS and any product hazards and safety information, (2) furnish this same information to each of its customers for the product, and (3) request such customers to notify their employees and customers for the product of the same product hazards and safety information.**

\*\* availability, observing all Government regulations.