



CONSERVATION BY DESIGN LIMITED

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Material Data Safety Sheet

MicroChamber® MC Emulsion

("the world's only paint-on tool for preventative conservation")

Description

Activated carbon in an aqueous dispersion with calcium carbonate and acrylic polymer. Black in colour, pH 8.0, with total solids content. (+/- 1%) of 37.4. Non toxic, non flammable and safe and easy to use.

Uses

MicroChamber® MC emulsions are designed to be used to protect against cumulative by products of deterioration, pollutants (whether from indoor or outdoor sources) or harmful substances which may migrate from materials such as wooden shelving or containers. It is designed for use on walls and surfaces in collection rooms, chemical : labs, conservation labs, photographic darkrooms, offices and homes. It can be applied to surfaces of exhibit cases, display units, drawers, shelves, cabinets and closets where artefacts are stored as well as to packing and shipping crates. Additionally it may be used on structural components, supports, locations surrounding laser printers or copiers, and foam boards placed, permanently or temporarily, where high levels of "Ozone or other pollutants may exist. MicroChamber® Emulsion may be applied to board, cloth, canvas, wool, metal, glass, plaster and drywall (either painted or unpainted), foam, plastic, wood and other substrates.

Mixing, application and cleaning.

A colloidal suspension, the activated carbon may settle over time, MC . emulsion must therefore be stirred thoroughly prior to use. Apply with a brush or roller observing the MSDS sheet provided. One 750 ml jar covers approximately 450 square feet when applied with a brush. Wash application equipment using water / soapy water immediately after use.

Storage

Store above 32° F to avoid freezing and deterioration.

Health & Safety

Material safety data sheet supplied with product and upon request.

A Guide to Indoor Pollutant Sources

Source	Pollutant
Nitrogen-containing species produced at substantial rates indoors.	HN02' HN03' HN04' N03' N20S

Source	Pollutant
Underground parking garage.	Hydrocarbons
Kitchens.	NO _x (oxides of nitrogen)
Species in glass-walled buildings (increased photolytic rates / reduced wall loss) at concentrations exceeding outdoor levels.	O ₃ (ozone) HNO ₂ (nitrous acid) HNO ₃ (nitric acid), H ₂ O ₂ (peroxide) PAN (peroxyacetylnitrate)
Protein-based glue, wool	Volatile sulphides
Wood / wood laminates	Peroxides, acetic acid, formic acid, formaldehyde.
Cleaning solutions, solvents.	Ammonia (NH ₃)' acetone (CH ₃ COCH ₃) Adhesives (carpet, laminate) Peroxides Paints -. Acetic acid, peroxides
Collection storage area	Cumulative, harmful by-products of deterioration.
Copy machines / laser printers, electrical equipment.	Ozone (°3)

Additionally, pollutants generated outdoors, are not removed by heating and air conditioning equipment, and can exist at high levels indoors.

HN₂ is nitrous acid; HN₃ is nitric acid; HNO₄ is peroxonitric acid; N₂O₃ is nitrogen trioxide (unstable, N₂O₅ plus °3)~ N₂O₅ is dinitrogen pentoxide, which readily decomposes to NO₂ and O₂; PAN (peroxyacetylnitrate, an organic oxidant); O₃ (ozone); NH₃ (ammonia); CH₃COOH (acetic acid); CH₃COOH₃ (acetone); HCOOH (formic acid); HCHO (formaldehyde); NO_x (oxides of nitrogen, NO, NO₂ etc); hydrocarbons - contain carbon and nitrogen.

Description:

Activated carbon in a aqueous dispersion \with calcium carbonate and acrylic polymer.

Composition / Information on Ingredients.

If used improperly is this material toxic by:

Ingestion? NO	Respiratory System? NO	Skin? NO
Inhalation? NO	Skin Absorption? NO	Eye? NO

Comments:

Hazardous/OSHA NONE	Carcinogenic/OSHA NONE
Sara Title III Sec.311,312 NONE	Sara Title III Sec. 313 NONE

Warning Statement:

CAUTION: Wet activated carbon removes oxygen from air causing a severe hazard to workers inside carbon vessels and enclosed or confined spaces. follow regulations and work procedures for low oxygen levels to ensure ample oxygen availability.

Physical and Chemical Data

Specific Gravity (water = 1)	N/A	pH	8
Total Solids% (+1%)	37.4	Odor	None
Melting Point	N/A	Appearance	Black Liquid

Fire Explosive and Reactivity Data

Is this material flammable, explosive or combustible?

Non-flammable as supplied.

Flash Point

N/A

Flammable Explosive Limits:

Lower N/A. Higher N/A

What decomposition products form upon exposure to fire and / or high temperature?

Carbon Monoxide maybe generated in the event of fire.

Product Stability:

Stable .

Does material polymerize, decompose, explode or react violently when exposed to:

Acid?	NO
Alkaline?	NO
Organic?	NO
Water?	NO
Air?	NO
Heat? Oxidizers?	YES

Comments: Contact with strong oxidizer's such as ozone, liquid oxygen, chlorine, permanganate, etc. may result in fire.

Extinguishing Media Use water, foam, carbon dioxide or dry chemical

Fire Fighting Procedures: Wear self contained breathing apparatus.

Exposure and Handling Measures

Precautions for normal use: Observe proper industrial hygienic regulation practices. Use recommended protective equipment.

Protective Equipment: Rubber gloves / safety goggles / any NIOSH approved dust respirator recommended to avoid unnecessary contact.

Procedure for spill or breakage: Cover with absorbent material. Sweep, shovel or vacuum into a closed container.

Disposal procedures: In accordance with local State and Federal regulations.

First Aid Measure

Eye: Flush immediately with water and continue for 15 minutes. Seek medical attention if irritation persists.

ingestion: Seek medical attention. Product is non-toxic.

Inhalation: For inhalation discomfort, remove to fresh air. Skin: Wash with soap and water.

Medical conditions prone to aggravation by exposure: Acute: None expected long term and low level exposure to activated carbon have not been determined. Safe handling practices should eliminate all potential effects from repetitive acute exposure. !

Other Information

HMIS Rating	HMIS Index
Health 1	0=Minimal 3=Serious

HMIS Rating	HMIS Index
Fire 0	1=Slight 4=Severe
Reactivity 0	2=Moderate
Personal B	B=Eye protection / gloves

Transformation Requirement

Temperature: KEEP FROM FREEZING

D.O. T. Regulation

Shipping Name: N/A
Hazard Class N/A
Transport Label: N/A
Reportable Quantity: N/A