



Building Products

Material Safety Data Sheet MSDS

ResCom® Building Products

ResCom-WallBoard
INTERNAL WALL LININGS

ResCom-WallBoard
EXTERNAL WALL LININGS

ResCom-flooring
RESIDENTIAL & COMMERCIAL FLOORING

No.: MGOCORP-18122015

Presented By:

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GENERAL

ResCom® Building Products are a Composite Magnesia Cement flat sheet panel for use in the building and construction as internal and external linings. ResCom® products are Non-Toxic, Non-Flammable and Non-Combustible. For best results consumers should follow detailed construction practices when taking care, custody and control of the building materials:

Products Intended Uses:

Exterior:

Sheathing, fascia, Soffit, ceiling board, drop ceiling, roofing substrate, siding, trim material.

When used as an exterior lining or in wet areas ResCom® panels are to be treated with a water impermeable and UV resistant sealer. This treatment is to be maintained over the life of the product as stipulated by the coatings manufacturer. Protection is required to be applied to the front, sides and rear of the panels prior to installation as external or wet area lining under NZBC B2.3.1 (a & b) and the BCA.

Interior:

Wallboard, ceiling board, tile backing board, underlayment, flooring substrate. Structural Insulated Panels (SIPS) and Exterior Insulated Finish Systems (EIFS) When used in wet areas ResCom® panels are to be treated with a water impermeable resistant sealer or appropriate waterproofing system. This treatment is to be maintained over the life of the product as stipulated by the coatings manufacturer. Protection is required to be applied to the front, sides and rear of the panels prior to installation as a wet area lining under NZBC B2.3.1 (a & b) and the BCA.



Protection of Materials when Applied as Exterior and Wet area Lining

ResCom® panels are to be treated with a water impermeable and UV resistant sealer. This treatment is to be maintained over the life of the product as stipulated by the coatings manufacturer. Impermeable protection is required to be applied to the front, sides and rear of the panels prior to installation as external or wet area lining. Applicators must avail themselves of the technical data and MSDS of the materials supplied by the coatings company prior to handling and installation.

ResCom Building Product Compliances:

Australia: CodeMark CMA-CM40009 Compliant to BCA Standards 2015

America: CodeMark CMI-ER 31004 Compliant to ICC-ES IBC & IRC Standards 2015

New Zealand: CodeMark NZBC Standards 2015

Sweden: SWEDAC Standards 2015

Malaysian Standards Authority 2014

Guatemala: FHA Standards 2015

Product Test Reports Independently Audited & Certified:

- SGS Test Report ASTM D1037.12 Sections 13.15, and 21
- SGS Test Report ASTM C473.12
- SGS Test Report ASTM C1186-08.
- SGS Test Report ASTM E84-12a.
- Fenestration Test Reports ASTM E72, ASTM E330-02, TAS 201-94, TAS 202-94 & TAS 203-94.
- FAB Test Reports ASTM E455-11.
- FAB Test Report ASTM E386.
- USQ Test Report ASTM E72.
- BRANZ Test Report ASTM C518-10.
- SGS Test Report EN13501-1:2007 Class A1
- SGS Test Report EN13501-1:2007 Class A1FL
- SGS Test Report ISO 5660-1:2002
- SGS Test Report AS/NZS 1530.4-2005
- SGS Test Report AS/NZS 3837:1998
- FAB Test Reports AS/NZS 2908.2-2000.
- University Auckland Test reports AS/NZS4063.1:2010.
- APL Test Reports AS/NZS 4284:2008 and NZS 4211:2008 / E2 VM1.
- CSIRO Fire test report.
- CSIRO Report to AS1530.4
- CSIRO Report Magnesium Oxide Board Lined framed wall system.
- ALS Group VOC Test Reports 2013 and 2015
- NRC Test Report GB/T 10295-2008.
- Palmer Acoustics AS/NZS 1276.1.
- Kilargo Test Report ISO10140 Airborne Sound.
- New York Product Testing Services Inc for Fire Tests of Building Construction and Materials, beams, building construction, building materials, ceiling assemblies.
- Southwest Research Institute Test fire-test-response test method which covers the determination Under specified laboratory conditions of combustion characteristics of building materials.
- BRE testing report to BS 5234-2;1992 for Partitions, Construction systems parts, Wall linings, Walls, Non-load bearing walls.
- New York Product Testing Services Inc Report Standard Test Methods for Fire Tests of Building Construction and materials, beams, building construction, building materials, ceiling assemblies.
- New York Product Testing Services Inc Report Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi, fungal biosusceptability, fungal decay.
- Report from DR Thomas Haupmann/ Anbus Analytical of Essen in Germany, Organ-chemical material Analysis.
- New York Product Testing Services Inc Report, Smoke density, Toxicity, Modus of elasticity, Shear Strength, Shear modulus, tensile strength.
- New York Product Testing Services Inc Report, measurements of surface flame spread and smoke density measurements.
- Red Test Report, . Determination of the fire resistance of uninsulated door-sets and shutter assemblies.
- PSB Test Report, spread of flame.
- PSB Test Report fire propagation.
- RED Report" Fire Test on Building materials & Structures – Non combustibility Test for materials.



SECTION 2: Performance Characters:

- Density: Approx density of each thickness is 0.95-1.40g/cm³, it can be adjusted in the production
- Fireproof characteristic: A grade not combustible
- Intensity of bending resistance when dry 18Mpa
- Intensity of bending resistance when moisture-saturated condition: 22Mpa
- The Rate of deformation when pick up the moisture: 0.26%
- The shrinking rate when heated: 1.0%
- Water permeability: There is no drop of water to emerge in the back
- Impact resistance: No crack, strip and run through
- Minimum Thermal resistance: 1.14m²k/w
- Sound insulation: ≥ BCA V2 3.8.6 >Rw54 (single sheet wall system)
- Security: 100% does not include the asbestos, formaldehyde, and benzene

Physical Characteristics:

- **Flexural Modulus:** Not less than 0.93 × 10⁶ psi when tested in accordance with ASTM D6109.
- **Flexural Strength:** Not less than 1295 psi when tested in accordance with ASTM D6109.
- **Shear Strength:** Not less than 391 psi when tested in accordance with ASTM D6109.
- **Fungus/Mold:** Non-nutrient when tested in accordance with ASTM G21.

Ingredients:

- **MgO (Magnesium Oxide)**
(so called burnt magnesium) used in medicine for curing heartburn;
- **MgCl₂ (Magnesium Chloride)**
It's contained in marine and rainwater and is the element of such material as Bishofit
- **Perlite (SiO₂)**
(volcanic glass) in the MgO Boards is used as the filling materials.
- **Alpha Cellulose Material**
- **Filler**
Glass fibre mesh and non-woven fabric

ResCom Panel Composition of Ingredients:

- Magnesium Oxide (MgO)
- Magnesium Chloride Solution (MgCl₂) (included NaCl ≤ 1.5%, KCl ≤ 0.7%)
- Phosphoric Acid (H₃PO₄) **no**
- Iron Sulfate (FeSO₄) **no**
- Polyvinyl Alcohol Glue **no**
- Aluminum Sulfate water solution (AlSO₄) **no**
- Magnesium Sulfate **no**
- Alpha Cellulose Material
- Perlite
- Glass fibre mesh and non-woven fabric

SECTION 3: HAZARDS IDENTIFICATION

Emergency Overview:

Non-toxic, non explosive and is not a fire hazard.

Primary Routes of Entry:

Eyes:

Dust may irritate the eyes from mechanical abrasion causing watering and redness.

Skin:

Dust may cause irritation of the skin from friction but cannot be absorbed through intact skin.

Ingestion:

Unlikely under normal conditions of use, but swallowing the dust from this product may result in irritation to the mouth and gastrointestinal tract.

Inhalation:

Dust may cause irritation of the nose, throat, and airways, resulting in coughing and sneezing. Certain susceptible individuals may experience wheezing (spasms of the bronchial airways) on inhaling dust during sanding or sawing operations.

SECTION 4: FIRST AID MEASURES

EYES:

Remove contact lens. Flush with running water or saline for at least 15 minutes. Seek medical attention if redness persists or if visual changes occur.

SKIN:

Wash with mild soap and water. Contact physician if irritation persists or later develops.

INGESTION:

If ingested, dilute by drinking large amounts of water. Do not induce vomiting. Seek medical attention. If unconscious, loosen tight clothing and lay the person on his / her side. Give nothing by mouth to an individual who is not alert and conscious. Seek medical attention.

INHALATION:

Remove to fresh air. If shortness of breath or wheezing develops, seek medical attention.

NOTES TO PHYSICIAN OR FIRST AID PROVIDERS:

Treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

ResCom's range of products are non flammable, non explosive and non combustible.

- Fire and Explosion Hazard: Not applicable
- Flash Point: Not applicable
- Auto-ignition: Not applicable
- Extinguishing Media: This material is non combustible
- Appropriate extinguishing media should be used for a surrounding fire
- Fire Fighting: Fire fighting personnel should wear normal protective equipment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

No special precautions are necessary to pick up product that has been dropped. The following applies only to spills or releases of dust generated during cutting or sanding ResCom Panels.

Precautions:

Good housekeeping practices are necessary for cleaning up areas where dust has been produced. Take measures to either eliminate or minimize the creation of dust.

Wherever possible, practices likely to generate dust should be controlled with engineering controls such as local exhaust ventilation, dust suppression with water and containment, enclosure or covers.

Cleanup Methods:

A fine water spray may be used to suppress dust when sweeping (dry sweeping is not recommended). Vacuuming with an industrial vacuum cleaner outfitted with a high-efficiency filter is recommended over sweeping. Waste may be disposed of by landfill in compliance with federal, provincial, state, territory and local requirements governing non-toxic mineral materials

Avoid using materials and products that are incompatible with this product. (Refer to section 10.)

SECTION 7: HANDLING AND STORAGE

Handling and Storage Products in their intact state do not present a health hazard. The controls below apply to dust generated from the boards by cutting, drilling, routing, sawing, crushing, or otherwise abrading, and cleaning or moving sawdust.



Other Precautions:

Even though ResCom Panels have been tested and deemed non toxic, Magnesium Oxide Board Corporation recommends that exposure to dust be kept as low as reasonably possible.

Respirable levels should not exceed those specified by OH&S and MSHA and identified in this MSDS.

Exposure to respirable (fine) dust depends on a variety of factors, including activity rate (i.e. cutting rate), method of handling (i.e. electric shears), environmental conditions (i.e. weather conditions, workstation orientation) and control measures used.

Wherever possible, practices likely to generate dust should be carried out in well ventilated areas (i.e. outside). The work practices and engineering controls set out in Section 8 should be followed as precautions to reduce dust exposures.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls Cutting Outdoors:

1. Magnesium Oxide Board Corporation recommends positioning cutting station so that wind will blow dust away from user or others in working area and allow for ample dust dissipation.

2. Use one of the following methods based on the required cutting rate and jobsite conditions. Acceptable Practices:

- Score and snap using carbide-tipped scoring knife or utility knife (Ability to use this method depends on thickness of ResCom Panels being installed)
- Fibre cement board shears (electric or pneumatic).

Preferred Practices

- Dust reducing circular saw equipped with appropriate blade and vacuum extraction.

Suitable Practices (for low to moderate cutting only - DIY projects)

- Dust reducing circular saw with appropriate saw blade. Always use correct tools when executing all cutting operations.

Ventilation:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limit.

Respiratory Protection:

Dust mask is recommended.

Eye Protection:

When cutting material, dust resistant safety goggles / glasses should be worn and used in compliance with the BCA and ASTM standards.

Skin Protection:

Loose comfortable clothing should be worn. Magnesium Oxide Board Corporation recommends that direct skin contact with dust and debris be avoided when possible by wearing long sleeved shirts and long trousers, a cap or hat, and gloves.

Sanding / Drilling / Other Machining:

If sanding, drilling, or other machining is conducted, Magnesium Oxide Board Corporation recommends workers wear approved dust masks at all times.

Important Notes:

1. For maximum protection (lowest respirable dust production), Magnesium Oxide Board Corporation recommends always using "Best" level cutting methods where feasible.



2. Always use a circular saw blade that is appropriate for the specific operation being undertaken.
3. Dry sweeping is not the preferred clean up method Magnesium Oxide Board Corporation suggests wet suppression methods or vacuum.
4. It is not recommended that a grinder or continuous rim diamond blade be used for cutting.
5. Always follow tool manufacturer's safety recommendations.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Is commonly white to beige in colours depending on application, each with varying tensile strengths according to product application.

- Odor: Very mild
- Physical State: Solid boards
- Vapor Pressure: Not relevant
- Specific Gravity: Not relevant
- Flammability Limits: Not relevant
- Boiling Point: Not relevant
- Melting Points: Not relevant
- Flash Point: Not relevant
- Auto-ignition Temperature: Not relevant
- Volatility: Not relevant
- Solubility in Water: Not relevant
- Evaporation rate: Not applicable
- NFPA Ratings (Scale 0 – 4)
- Health = 1
- Flammability = 0
- Reactivity = 0
- Personal Protection = E

SECTION 10: STABILITY AND REACTIVITY

Stability:

The ResCom Panels as identified in section 1 are stable under ordinary conditions.

Conditions to Avoid:

Excessive dust generation without proper dust mask protection.

Materials to Avoid:

Incompatibility: Hydrofluoric acid will dissolve Magnesium Oxide and can generate Magnesium Chloride fumes.

SECTION 11: TOXICOLOGICAL INFORMATION

ResCom Panels are nontoxic in their intact form. The following applies to dust that may be generated during cutting and sanding.

Chronic Effects: Inhaled:

Repeated and prolonged overexposures to dust may cause increased risk of bronchitis. It is possible that repeated inhalation exposure to ResCom Panels fibre dust over time may lead to inflammation of the lungs in humans. All necessary precautions should be taken to prevent inhalation of dust to prevent these problems.

SECTION 12: ECOLOGICAL INFORMATION

Because Magnesium Oxide is a naturally occurring mineral, releases that may occur into the environment are not expected to leave any hazardous material that could cause a significant adverse impact.

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of material, as an inert, inorganic mineral, in conformance with federal, provincial, state, territory and local regulations. ResCom Panels are not a hazardous waste.

SECTION 14: TRANSPORT INFORMATION

There are no special requirements for storage and transport of ResCom Panels under the materials safety data requirements. "Refer to the Storage and Handling Instructions for warehouse and handling requirements"

UN No: None allocated

Dangerous Goods Class: None allocated

Hazchem Code: None allocated

Poisons Schedule: None allocated

Packing Group: Not applicable

Label: Not a DOT hazardous material

SECTION 15: REGULATORY INFORMATION

- DOT Hazard Classification: None
- Placard Requirement: Not a DOT hazardous material
- CERCLA Hazardous Substance (40 CFR Part 302)
- Listed substance: Not listed
- Substance: No Reportable Quantity (RQ)
- None Characteristic(s): Not applicable RCRA
- Waste Number: Not applicable

SECTION 16: OTHER INFORMATION

Preparation of Information and Disclaimer:

This form has been prepared to meet current Federal OH&S hazard communication regulations and is offered without any warranty or guarantee of any type. Magnesium Oxide Board Corporation Pty Ltd cannot control the use of its products, and therefore specifically disclaims liability and responsibility arising from the use, misuse and alteration of its products.

The information contained herein is based upon scientific and other data Magnesium Oxide Board Corporation Pty Ltd believes is valid and reliable and provides the basis for this MSDS.

The information contained herein relates only to specific materials listed in the document.

It does not address the effects of ResCom Panels dust when used in combination with other materials or substances, or when used in other processes.

Because conditions of use are beyond Magnesium Oxide Board Corporation's control, the company makes no representations, guarantees or warranties, either express or implied warranties as to the fitness of the product for use, and assume no liability related to the information contained above.

Magnesium Oxide Board Corporation Pty Ltd requires, as a condition of use of its products, that purchasers or applying agent complies in full with all applicable Federal, Provincial, State, Territory and Local health and safety laws, regulations, orders, requirements, and strictly adhere to all instructions and warnings which accompany the product.

Submitted in Good Faith by Senior Management:

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