



## VRG DONGWHA MDF JOIN STOCK COMPANY

# MATERIAL SAFETY DATA SHEET (MSDS)

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PRODUCT **MEDIUM DENSITY FIBREBOARD**  
**Normal Grade with Low Formaldehyde Emission (CARB- P2 )**

## 1. Identity and Use

Registered Trade names	Standard MDF
Dangerous Goods Class	None allocated
Hazchem Code	None allocated
Poisons Schedule	Not scheduled
Use	Construction of furniture and cabinets. General purpose building boards

## 2. Ingredients

Chemical Entity	Proportion
Rubber wood	> 80%
Urea formaldehyde resin	8 - 12%
Paraffin wax	< 1%

Note : *The above ingredients are bound together under heat and pressure. The process “cures” the resin, but small amounts of formaldehyde may be released from the finished products. The finished product contains less than 0.1% free formaldehyde.*

## 3. Physical Description/Properties

**Appearance** The products are manufactured as pressed panels ranging in thickness from 2.5 mm to 38 mm. They are made from wood fibers that are bonded together with resin.

<i>Odour</i>	Newly manufactured MDF product and freshly cut surfaces of these products may have an odour due to the resin.
<i>Boiling point</i>	Not applicable.
<i>Specific gravity</i>	0.65 - 0.85
<i>Vapour pressure</i>	Not applicable
<i>Flash point</i>	Not applicable
<i>Solubility in water</i>	Not soluble
<i>Flammability limits</i>	Not available
<i>Auto-Ignition Temperature</i>	Does not auto-ignite

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## 4. Health Hazard Information

### Health Effects

When first manufactured, the unsealed surfaces of these MDF Products may release formaldehyde gas in concentrations up to approximately 0.15 ppm.

The concentrations will be highest when the products are stored in confined, poorly ventilated spaces. When the products are sealed with paint, varnish or other surface decorative finishes, the potential for the release of formaldehyde will be greatly reduced with concentrations not exceeding 0.1 ppm. When the MDF products are cut, drilled or sanded etc, dust will be given off.

### The known health affects of the constituents of the MDF products are as follows

Wood dust	Dust and splinters may cause irritation of the nose and throat, eyes and skin.  Inhalation of wood dust may increase the risk of nasal and paranasal sinus cancers.
Cured resin	The cured resin is inert and not likely to contribute to health effects.
Parafin wax	The wax vapour may be irritating to the nose and throat, eyes and skin, if the board is heated to 120 °C or more
Formaldehyde	Formaldehyde gas and dilute solutions or formaldehyde in water are irritating to the nose and throat, eyes and skin. The solution are also sensitisers and contact dermatitis has been reported.

### Exposures to the dust, gas and vapour from the panels may result in the following health effects:

Swallowed	Unlikely to occur, but swallowing the dust may result in abdominal and redness
Eyes	The dust, gas and vapour may irritate the skin, resulting in itching and occasionally a red rash. Allergic contact dermatitis may occur.

Inhaled	The dust, gas and vapour may irritate the nose, throat and lungs, especially in people with upper respiratory tract or chest complaints. Asthma may occur.
Skin	The dust, gas and vapour may irritate the skin, resulting in itching and occasionally a red rash. Allergic dermatitis may occur
Chronic	Repeated exposures over many years to uncontrolled dust, gas and vapour from these boards may increase the risk of allergic dermatitis, asthma, or chronic nose or throat irritation in some people. The risk of nasal or paranasal sinus cancers may also be increased. But if the work practices that noted in this MSDS are followed, no chronic health effects are anticipated.

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## 5. First Aid Measures

Swallowed	Drink a glass of water.
Eye	Flush with flowing water for at least 15 minutes, and if symptoms persist seek immediate medical attention.
Skin	Wash with mild soap and running water.
Advice to doctor	Treat symptomatically.

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## 6. Protective measures.

### *Engineering controls*

All work with these MDF products should be carried out in such a way as to minimize the generation of dust, gas and vapours.

Under factory conditions, sawing, drilling, sanding, etc, should be done with.

equipment fitted with exhaust devices capable of removing dust, gas and vapour at source. Hand powered tools should only be used in well ventilated. Work areas should be cleaned at least daily, and dust removed by vacuum cleaning or wet sweeping method.

### *Skin Protection*

Wear loose, comfortable clothing. Long-sleeved shirts and trousers are recommended if skin irritation occurs. After handling panels, wash with mild soap and water. Do not scratch or rub the skin if it becomes irritated. Wash works clothes regularly and separates from other clothes. Comfortable work gloves should be worn.

### *Respiratory Protection*

A replaceable filter or disposal half-face piece respirator should be worn when sawing, drilling or sanding etc.

<b><i>Eye Protection</i></b>	Safety glasses of non-fogging goggles should be worn sawing, drilling or sanding etc.
<b><i>Flammability</i></b>	These MDF products are flammable but difficult to light. Avoid a build-up of dust and keep all storage and work areas well ventilated. Avoid sources of radiant heat and flame; and avoid sparks and sources of ignition in all electrical equipment, including dust extraction equipment.  People must not smoke in storage or work areas.

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## **7. Safe Handling Information**

<b><i>Storage and Transport</i></b>	The MDF products should be stored in well-ventilated areas away from sources of heat, flame or sparks. No special transport requirements are considered necessary.
<b><i>Spills and Disposal</i></b>	Off-cuts and general waste material should be placed in containers and disposed off at approved landfill sites, or burnt in an approved furnace or incinerator, in accordance with disposal authority guidelines. Dust should be cleaned up by vacuuming or wet sweeping.
<b><i>Fire/Explosion Hazard</i></b>	Burning or smoldering MDF or dust can generate carbon dioxide and other pyrolysis products typical of burning organic material. Dry dust in high concentrations can be explosive. Use water or dry foam fire extinguishers.

## **MATERIAL SAFETY DATA SHEET**

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