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1. IDENTIFICATION OF THE COMPANY AND CHEMICAL

Supplier:

MJV International Trade LLC
242 Zircon Road – Kissimmee, Florida, USA
Postal Code: 34758 **Phone:** +1 954 952 2097

Product name:

MF-574

2. INFORMATION ABOUT COMPOSITION AND INGREDIENTS

Product based on aluminum silicate, hematite, braunite, polyanite, WAD - hydrated oxides.

3. HAZARDS IDENTIFICATION

Risks

Health: Minimal danger / slightly toxic.

Flammability: No danger under normal conditions. Not flammable.

Reactivity: Stable no danger in normal conditions

Physical hazards: Not classified.

Health hazards:

Acute toxicity, oral	Category 4
Acute toxicity, inhalation	Category 4
Serious eye damage / eye irritation	Category 2A
Specific target organ toxicity, single exposure	Category 3

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Environmental hazards: Not classified.

OSHA defined hazards: Not classified.

Label elements:



Signal word: Warning

Hazard statement: Harmful if swallowed. Causes serious eye irritation. Harmful if inhaled. May cause respiratory irritation.

Precautionary statement

Prevention: Avoid breathing dust. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear eye / face protection.

Response: If swallowed: Call a poison center / doctor if you feel unwell.

If inhaled: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center / doctor if you feel unwell. Rinse mouth. If eye irritation persists: Get medical advice / attention.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal: Dispose of contents / container in accordance with local / regional / national / international regulations.

Hazards not otherwise classified (HNOC): None known.

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Supplemental information: None.

4. COMPOSITION / INFORMATION ON INGREDIENTS

Component: Manganeses Dioxide (Product no recognized by UN).

Synonymous: Manganês oxide IV, Manganese dioxide, pirolusita.

Nature: Mineral.

Chemical Name: MANGANESE DIOXIDE (MN02)

CAS Number: 1313-13-9

%: 75 -85

Constituents:

Chemical Name	CAS Number	%
Calcium Oxide	1303-78-8	0 – 6
Iron	7439-89-6	0 – 12
Quartz (SiO2)	14808-60-7	0 – 10
Aluminium Oxide	1344-28-1	< 15
Magnesium Oxide	1309-48-4	< 4
Potassium Oxide	12136-45-7	< 7
Barium Oxide	1304-28-5	< 15
Phosphorus	7723-14-0	< 2

*Designates that a specific Chemical identity and / or percentage of composition has been withheld as a trade secret.

5. IDENTIFICATION HAZARD

Effects of the product: Oxidant.

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Effects adverse human health: Inhalation: May cause respiratory tract irritation.

Ingestion: May cause gastrointestinal irritation with vomiting, nausea and diarrhea.

Skin: Irritation on the possibility for sensitive people. Low risk for usual industrial handling.

Eyes: May cause mild eye irritation.

Specific hazards: Chronic exposure to high concentrations of manganese can lead to manganism, a disease of the central nervous system.

6. FIRST AID ACTIONS

Inhalation: Remove to fresh air. If there is shortness of breath artificial respiration.

Eyes: Immediately wash the eyes with water for at least 15 minutes. If irritation persists, seek medical attention.

Skin contact: Wash with soap and water in abundance for 15 minutes. If irritation persists, contact a doctor.

Intake: Rinse mouth with water and consult a doctor.

7. FIREFIGHTING MEASURES

Recommended for agent's fire disposal:

Foam – carbon dioxide – dry chemical – water spray.

Special precautions for firefighting:

Use personal protective equipment with mask for breathing.

8. MEASURES SPILL INCIDENTAL

Occupational exposure limits / US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

MJV Solution

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Components	Type	Value	
MANGANESE DIOXIDE (MNO2) (CAS 1313-13-9)	Ceiling	5 mg/m3	
Constituents	Type	Value	Form
Barium Oxide (CAS 1304-28-5)	PEL	0.5 mg/m3	
PHOSPHORUS (CAS 7723-14-0)	PEL	0.1 mg/m3	
TITANIUM DIOXIDE (CAS 13463-67-7)	PEL	15 mg/m3	Total dust.
MAGNESIUM OXIDE (CAS 1309-48-4)	PEL	15 mg/m3	Total particulate.
ALUMINIUM OXIDE (CAS 1344-28-1)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
CALCIUM OXIDE (CAS 1305-78-8)	PEL	5 mg/m3	

US. OSHA Table Z-3 (29 CFR 1910.1000)

Constituents	Type	Value	Form
QUARTZ (SIO2) (CAS 14808-60-7)	TWA	0.3 mg/m3	Total dust.
		0.1 mg/m3	Respirable.
		2.4 mppcf	Respirable.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
MANGANESE DIOXIDE (MNO2) (CAS 1313-13-9)	TWA	0.1 mg/m3	Inhalable fraction.
		0.02 mg/m3	Respirable fraction.
Constituents	Type	Value	Form
Barium Oxide (CAS 1304-28-5)	TWA	0.5 mg/m3	
PHOSPHORUS (CAS 7723-14-0)	TWA	0.1 mg/m3	
TITANIUM DIOXIDE (CAS 13463-67-7)	TWA	10 mg/m3	
MAGNESIUM OXIDE (CAS 1309-48-4)	TWA	10 mg/m3	Inhalable fraction.



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US. ACGIH Threshold Limit Values

Constituents	Type	Value	Form
ALUMINIUM OXIDE (CAS 1344-28-1)	TWA	1 mg/m ³	Respirable fraction.
QUARTZ (SiO ₂) (CAS 14808-60-7)	TWA	0.025 mg/m ³	Respirable fraction.
CALCIUM OXIDE (CAS 1305-78-8)	TWA	2 mg/m ³	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
MANGANESE DIOXIDE (MNO ₂) (CAS 1313-13-9)	STEL	3 mg/m ³	Fume.

Constituents

Constituents	Type	Value	Form
Barium Oxide (CAS 1304-28-5)	TWA	0.5 mg/m ³	
PHOSPHORUS (CAS 7723-14-0)	TWA	0.1 mg/m ³	
QUARTZ (SiO ₂) (CAS 14808-60-7)	TWA	0.05 mg/m ³	Respirable dust.
CALCIUM OXIDE (CAS 1305-78-8)	TWA	2 mg/m ³	

Biological limit values: No biological exposure limits noted for the ingredients.

Appropriate engineering controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as Personal Protective Equipment

Eye / face protection: Wear safety glasses with side shields (or goggles)

Skin protection: Hand protection: Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other: Wear suitable protective clothing. Use of an impervious apron is recommended.

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Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment. Chemical respirator with organic vapor cartridge.

Thermal hazards: Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations: Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking and / or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form: Granular solid.

Sample size: 95% < 100 mesh

Melting point: 535°C

Apparent density: 1.9 to 2.0g/cm³

Color: Dark brown.

Reactivity: Oxidizing.

Solubility in water: Insoluble.

10. STABILITY AND REACTIVITY

Reactivity: The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability: Material is stable under normal conditions.

Possibility of hazardous reactions: No dangerous reaction known under normal conditions.

Conditions to avoid: Contact with incompatible materials.

Incompatible materials: Strong oxidizing agents.

Hazardous decomposition products: No hazardous decomposition products are known

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11. TOXICOLOGICAL INFORMATION

Chronic toxicity: Massive and long dose exposure to dust – venous poisoning leads to mental retardation and nervous disorders.

Carcinogenesis: Not listed by IARC, ACGIH, NIOSHI, NTP or OSHA as a carcinogen.

Medical restrictive: Eyes, skin diseases or respiratory disorders, kidney or liver may be aggravated by repeated or prolonged exposure to this chemical. People with a history of alcoholism, psychiatric, neurological or liver dysfunction may present risk increasing the exposure.

12. ECOLOGICAL INFORMATION

Ecotoxicity: The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability: No data is available on the degradability of this product.

Bioaccumulative potential: No data available.

Mobility in soil: No data available.

Other adverse effects: No data available.

13. CONDITIONS OF DISPOSAL

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They must be disposed in authorized disposal site for chemical waste, according to federal and local governments.

14. TRANSPORT INFORMATION

DOT: Not regulated as dangerous goods.

IATA: Not regulated as dangerous goods.

IMDG: Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable.

15. REGULATORY INFORMATION

Decree Law No. 96.044 of 18/05/88: Road Transport Regulation of Dangerous Products; MT Ordinance 204 of 05/20/97: Further Review of Regulations on Road and Rail Transport of Dangerous Products.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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16. OTHER INFORMATION

In places where chemical products are handled, should monitor the exposure of workers as PPRA (Environmental Risk Prevention Program) from NR-9. Employees who handle chemicals in general biologically should be monitored as PCMSO (Control Program Occupational Health) of NR-7. The information and recommendations contained in this publication were researched and complied from reliable sources and able to send them. The data in this document, refers to a specific product and may or may not be valid where this product is used in combination with others. MJV International Trade LLC with the facts of this sheet is not intended to establish absolute and definitive information about the products and its risks, but support with information on what is known, its employees and customers for their individual protection, maintaining continuity operational and environmental preservation.

The information and recommendations are offered for the examination and consideration of users, and it is the responsibility of the same use and application for specific use within their necessities. The packaging must not be reused for individual safety and protection effect. The manufacturer makes no warranty; either express or implied, and assumes no responsibility regarding the accuracy or data that is not contained in this material. The above information is in accordance with Directive EEC / 91/155.