

SAFETY DATA SHEET

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

Product Identifier : **ARDEX MRF™**
Product ID No. : 70115210
Trade Name/Synonyms : MRF
Material Use : Moisture-Resistant, Rapid-Drying, Skimcoat Patching Underlayment
Uses Advised Against : No information available.

Manufacturer's name and address:

Supplier's name and address:



ARDEX Americas
400 Ardex Park Dr.
Aliquippa, PA 15001 USA

Refer to Manufacturer

Information Telephone No. : (888) 512-7339 or (724) 203-5000
Website Address : <http://www.ardexamericas.com>
24 Hr Emergency Telephone # : **CHEM-TEL: 1-800-255-3924 OR 1-813-248-0585 (call collect)**

SECTION 2 – HAZARDS IDENTIFICATION

GHS Classification according to 29 CFR 1910.1200 (OSHA HCS 2012) / HPR (WHMIS 2015)
Skin Irritation 2
Eye Dam. 1
Carc. 1
STOT RE 1

GHS Pictograms



Signal Word

Danger

Hazard Statements

Causes skin irritation.
Causes serious eye damage.
May cause cancer by inhalation.
Causes damage to lungs through prolonged or repeated inhalation.

Precautionary Statements

Obtain special instructions before use. (See Section 7.) Do not handle until all safety precautions have been read and understood. Do not breathe dust. Wash hands and exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection. Wash contaminated clothing before reuse. Protect from sunlight. Dispose of contents / container in accordance with federal, state, and local laws. Do not allow product to enter drains.

Hazards Not Otherwise Classified

None

% With Unknown Acute Toxicity : Up to 40% by weight of this product consists of ingredients with unknown acute toxicity.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS #	% (by weight)
Limestone	1317-65-3	30 – 60
Calcium sulfate	7778-18-9	10 – 30
Vinyl acetate copolymer	24937-78-8	10 – 30
Cellulose	9004-34-6	1 - 5
Portland cement	65997-15-1	1 - 5
Crystalline silica, quartz**	14808-60-7	0.1 – 0.25

The exact percentages of the ingredients have been withheld by the manufacturer as trade secrets.

**Note: Crystalline Silica (Quartz) is not intentionally added to this product, but is a naturally occurring component in Limestone (Calcium Carbonate). Exposure monitoring tests using typical occupational procedures found no measurable respirable crystalline silica in the breathing space of a worker mixing this product during an 8-hour work shift.

SECTION 4 – FIRST AID MEASURES

- General** : Get medical attention if you feel unwell.
- Inhalation** : Not expected to cause symptoms.
- Skin contact** : Remove contaminated clothing. Flush affected skin with water. If irritation persists: seek medical attention/advice.
- Eye contact** : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
- Ingestion** : Rinse mouth. Do NOT induce vomiting. Get medical advice/attention if you feel unwell.
- Notes for Physician** : Treat symptomatically.

Signs and symptoms of short-term (acute) exposure

- Inhalation* : Symptoms may include coughing and irritation.
- Skin* : Symptoms may include redness and itching.
- Eyes* : Direct contact may strongly irritate or burn the eyes. Could cause blindness.
- Ingestion* : Symptoms such as gastric pain, nausea, vomiting, and diarrhea may occur.

Indication of need for immediate medical attention or special treatment

- : In case of accident or ailment, seek medical advice immediately (show label or SDS if possible).

SECTION 5 – FIRE FIGHTING MEASURES

- Suitable extinguishing media** : Carbon dioxide, dry chemical powder, foam.
- Unsuitable extinguishing media** : Water. Contact with water may cause hydration and formation of caustic alkaline material.
- Hazardous combustion products** : Calcium oxide, calcium oxalate, vinyl acetate, acetic acid, formic acid, formaldehyde, carbon monoxide, and carbon dioxide.
- Special fire-fighting procedures/equipment** : Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame. After fires have been extinguished, carefully clean all equipment and surfaces exposed to fumes.
- Environmental precautions** : Do not allow material to enter drains or contaminate ground water system.
- Fire hazards/conditions of flammability** : Not flammable under normal conditions of use.

Flammability classification (OSHA 29 CFR 1910.1200, WHMIS 2015)

: Not flammable.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

- Personal precautions** : Restrict access to area until completion of clean-up.
- Protective equipment** : Refer to Section 8 on this Safety Data Sheet, EXPOSURE CONTROLS / PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.
- Emergency Procedures** : If a spill/release exceeding the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8802). Outside of the U.S. call the emergency number listed in Section 1.
US CERCLA Reportable quantity (RQ): None reported.
- Methods and materials for containment and cleaning up** : Ventilate area of release. Stop spill or leak at source if safely possible. Contain material, preventing it from entering sewer lines or waterways. Using HEPA vacuum, or other dustless methods, gather up spilled material and place in suitable container for later disposal (see Section 13).
- Prohibited materials** : Avoid adding water, material becomes alkaline when wet.
- Environmental precautions** : Do not allow product to enter drains or waterways. Do not allow material to contaminate ground water system.
- Reference to other sections** : See Section 13 for disposal information.

SECTION 7 – HANDLING AND STORAGE

- Special instructions** : Mixing the product according to the directions in the Technical Data Sheet will not produce measurable levels of airborne respirable crystalline silica, per NIOSH 7500 exposure monitoring.
- Safe handling procedures** : See Section 8 for additional information on Permissible Exposure Levels for individual components and recommendations for Personal Protection Equipment (PPE). Do not breathe dust. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling.
- Storage requirements** : Store in a cool, dry, well-ventilated area. Store away from heat and open flame. Avoid storing in direct sunlight. Store in original container.
- Incompatible materials** : See Section 10.
- Special packaging materials** : Always keep in containers made of the same materials as the supply container.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

- Permissible Exposure Limits** : No exposure limits have been established for the product itself. Below are exposure limits for the components in the product.

Threshold Limit Values for the Ingredients	CAS #	ACGIH TLV		OSHA PEL	
		TWA	STEL	PEL	STEL
Limestone	1317-65-3	N/Av	N/Av	15 mg/m ³ (Total dust); 5 mg/m ³ (respirable)	N/Av
Calcium sulfate	7778-18-9	10 mg/m ³ (inhalable)	N/Av	15 mg/m ³ (Total dust); 5 mg/m ³ (respirable)	N/Av
Portland cement	65997-15-1	1 mg/m ³ (respirable, no asbestos and	N/Av	15 mg/m ³ (Total dust); 5 mg/m ³ (respirable)	N/Av

		< 1% crystalline silica)			
Cellulose	9004-34-6	10 mg/m ³	N/Av	15 mg/m ³ (Total dust); 5 mg/m ³ (respirable)	N/Av
Vinyl acetate copolymer	24937-78-8	10 mg/m ³ (Total dust); 3 mg/m ³ (respirable)	N/Av	15 mg/m ³ (Total dust); 5 mg/m ³ (respirable)	N/Av
Crystalline silica, quartz	14808-60-7	0.025 mg/m ³ (respirable fraction)	N/Av	0.05 mg/m ³ (respirable) (final rule limit)	N/Av

Engineering Controls : Exposure monitoring during typical working conditions, measured exposures below OSHA PELs, without using general ventilation or local exhaust ventilation.

Personal Protection Equipment

Eye / face protection : Safety glasses or goggles must be worn when using this product.

Skin protection : Use protective clothing that provide comprehensive protection (e.g. rubber, nitrile). For hands, use protective gloves that provides comprehensive protection (e.g. rubber, nitrile).

Respiratory protection : Under normal working conditions, exposures to crystalline silica from this product will be below the OSHA Action Level (0.025 mg/m³ TWA). Furthermore, total respirable particulates were also below OSHA's PEL for normal working conditions, based on NIOSH 7500 exposure monitoring.

Site safety equipment : An eyewash station and safety shower should be made available in the immediate working area.

General hygiene considerations : Avoid contact with eyes, skin and clothing. Do not breathe dust. Do not eat, drink or smoke when using this product. Clean all equipment and clothing at end of each work shift.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: solid	Appearance	: gray powder
Odor	: No odor	Odor threshold	: N/Av
pH	: 10 – 11	Specific gravity	: 2.7 – 3.1
Boiling point	: N/Av	Coefficient of water/oil distribution	: N/Av
Melting/Freezing point	: N/Av	Solubility in water	: < 55 g/L
Vapor pressure (mm Hg @ 20°C / 68°F)	: N/Av	Evaporation rate (n-Butyl acetate = 1)	: N/Av
Vapor density (Air = 1)	: N/Av	Volatiles (% by weight)	: N/Av
Volatile organic compounds (VOCs)	: 0 g/L		
Particle size	: N/Av	Flammability classification	: Not flammable
Flash point	: N/Av	Lower flammable limit (% by vol)	: Not available
Flash point method	: N/Av	Upper flammable limit (% by vol)	: Not available
Auto-ignition temperature	: N/Av	Decomposition temperature	: Not available
Viscosity	: Not available	Oxidizing properties	: Not available

Explosion data: Sensitivity to mechanical impact / static discharge
: Not expected to be sensitive to mechanical impact or static discharge.

SECTION 10 – REACTIVITY AND STABILITY INFORMATION

Reactivity	: Contact with water may cause hydration and formation of caustic calcium hydroxide.
Stability	: Stable under the recommended storage and handling conditions prescribed.
Hazardous reactions	: Hazardous polymerization does not occur.
Conditions to avoid	: Excessive heat.

Materials to avoid and incompatibility

: Oxidizing agents.

Hazardous decomposition products

: None known, refer to hazardous combustion products in Section 5.

SECTION 11 – TOXICOLOGICAL INFORMATION

Symptoms or exposure : See Section 4.

Calculated Acute Toxicity Estimates for the Product

Inhalation : Not Available
Oral : Not Available
Dermal : Not Available

Toxicological data : There are insufficient data for estimating the product's acute toxicity See below for individual ingredient acute toxicity data.

Acute Toxicity Parameters for the Ingredients	CAS #	LC50, Inhalation mg/L, Rat, 4 hr	LD50, Oral mg/kg, rat	LD50, Dermal mg/kg, rabbit
Limestone	1317-65-3	N/Av	6,450	N/Av
Calcium sulfate	7778-18-9	N/Av	> 3,000	NAv
Portland cement	65997-15-1	N/Av	N/Av	N/Av
Cellulose	9004-34-6	> 5.8	> 2,000	> 2,000
Vinyl acetate copolymer	24937-78-8	N/Av	> 1,000	N/Av
Crystalline silica, quartz	14808-60-7	N/Av	N/Av	N/Av

Skin corrosion or irritation : Causes skin irritation. Prolonged exposure to wet product may cause skin burns.

Serious eye damage / eye irritation : Causes eye burns. May cause blindness.

Respiratory or skin sensitization : Portland cement may cause an allergic skin reaction in hypersensitive individuals, possibly due to trace amounts of chromium.

Germ cell mutagenicity : None known.

Carcinogenic status : This product contains trace amounts of Crystalline silica. Crystalline silica (respirable size) is classified as carcinogenic by inhalation by IARC (Group 1), ACGIH (Group A2), NTP (Group 1) and OSHA (OSHA Select carcinogen). No other components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Reproductive toxicity : None known.

Specific Target Organ Toxicity, Single Exposure : May cause respiratory irritation.

Specific Target Organ Toxicity, Repeated Exposure : May cause lung damage upon repeated or prolonged exposure.

Aspiration hazard : None known.

Additional information : N/Av

SECTION 12 – ECOLOGICAL INFORMATION

Environmental effects : The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.

Ecotoxicological : No data is available on the product itself.

Ecotoxicity : No data available.

Biodegradability : No data available.

Bioaccumulative potential : No data available.

Mobility in soil : No data available.

PBT and vPvB assessment : No data available.

Other adverse effects : No data available.

SECTION 13 – DISPOSAL CONSIDERATION

Limestone	1317-65-3	No	Yes	No	Yes	No	Yes	Yes
Portland cement	65997-15-1	No	Yes	No	Yes	No	Yes	Yes
Calcium sulfate	7778-18-9	No	Yes	No	Yes	No	Yes	No
Cellulose	9004-34-6	No	Yes	No	Yes	No	Yes	Yes
Crystalline silica, quartz	14808-60-7	No	Yes	Yes	Yes	No	Yes	Yes

SECTION 16 – OTHER INFORMATION

HMIS Rating : * - Chronic Hazard 0 - Minimal 1 – Slight 2 – Moderate 3 – Serious 4 – Severe
*Health: *3 Flammability 0 Physical Hazard 1 PPE: B*
 Gloves, safety glasses

Legend :

- ACGIH: American Conference of Governmental Industrial Hygienists
- CAS: Chemical Abstract Services
- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
- CFR: Code of Federal Regulations
- DOT: Department of Transportation
- DSL: Domestic Substances List
- EPA: Environmental Protection Agency
- GHS: Globally Harmonized System
- HPR: Hazardous Products Regulations
- IARC: International Agency for Research on Cancer
- Inh: Inhalation
- N/Av: Not Available
- N/Ap: Not Applicable
- NIOSH: National Institute of Occupational Safety and Health
- NTP: National Toxicology Program
- OSHA: Occupational Safety and Health Administration
- PEL: Permissible exposure Limit
- RCRA: Resource Conservation and Recovery Act
- SARA: Superfund Amendments and Reauthorization Act
- STEL: Short Term Exposure Limit
- TDG: Canadian Transportation of Dangerous Goods Act & Regulations
- TLV: Threshold Limit Values
- TSCA: Toxic Substance Control Act
- TWA: Time Weighted Average
- WHMIS: Workplace Hazardous Materials Identification System

Disclaimer of Liability

The Information presented herein is supplied as a guide to those who handle or use this product and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive. The manner and conditions of use and handling may involve other and additional considerations. Safe work practices must be employed when working with any materials. It is important that the end user determines the adequacy of the safety procedures employed during the use of this product. No warranty of any kind is given or implied. ARDEX Americas will not be liable for any damages, losses, injuries or consequential damages which may result from the use or reliance on any information contained herein.

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Revision date: : 12-Mar-2018

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