

MATERIAL SAFETY DATA SHEET

EnProve™ TR2



MSDS Ref. No.: 533-96-0-4

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Revision No.: 2

This document has been prepared to meet the requirements of the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200 and Canada's Workplace Hazardous Materials Information System (WHMIS) requirements.

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: EnProve™ TR2

SYNONYMS: Milled Trona

GENERAL USE: Combustion gas treatment for control of acid gases such as SO₂, SO₃, HCl and HF.

For environmental use only.

MANUFACTURER

FMC Wyoming Corporation
Alkali Chemicals Division
1735 Market Street
Philadelphia, PA 19103
(215) 299-6000 (General Information)
msdsinfo@fmc.com (Email - General Information)

EMERGENCY TELEPHONE NUMBERS

(307) 872-2452 (Plant - Green River, WY)

(303) 595-9048 (Medical - Call Collect)

For leak, fire, spill, or accident emergencies, call:
(800) 424-9300 (CHEMTREC - U.S.A. & Canada)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

- Off white to yellow brown, fine powder.
- Product is non-combustible.
- Reacts with acids to release carbon dioxide gas and heat.
- Prolonged, repeated exposure to respirable crystalline silica can cause silicosis or possibly cancer. See section 11 for additional details.

POTENTIAL HEALTH EFFECTS: Direct contact with the product causes irritation of the eyes and continuous contact may cause skin irritation (red, dry, cracked skin). Excessive levels of

airborne dust may irritate the mucous membranes and upper respiratory tract. Prolonged, repeated exposure to respirable crystalline silica can cause silicosis or possibly cancer. See section 11 for additional details.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Wt. %	EC No.	EC Class
Sodium Sesquicarbonate	533-96-0	90 - 98	208-580-9	Not classified
Impurities		2 - 10		
Silica, quartz	14808-60-7	<2	238-878-4	Not classified

COMMENTS: As a naturally occurring mineral there may be some variation in the percent silica present in the product.

4. FIRST AID MEASURES

EYES: Flush with water for at least 15 minutes. If irritation occurs and persists, obtain medical attention.

SKIN: Wash with plenty of soap and water. Get medical attention if irritation occurs and persists.

INGESTION: Drink plenty of water. Never give anything by mouth to an unconscious person. If any discomfort persists, obtain medical attention.

INHALATION: Remove to fresh air. If breathing difficulty or discomfort occurs and persists, obtain medical attention.

NOTES TO MEDICAL DOCTOR: Internal toxicity is low. Irritant effects may occur. Treatment is symptomatic and supportive.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Water, water fog, carbon dioxide (CO₂), dry chemical

FIRE / EXPLOSION HAZARDS: None

FIRE FIGHTING PROCEDURES: None

FLAMMABLE LIMITS: Not applicable

HAZARDOUS COMBUSTION PRODUCTS: Fumes of sodium oxide.

SENSITIVITY TO IMPACT: None

SENSITIVITY TO STATIC DISCHARGE: None

6. ACCIDENTAL RELEASE MEASURES

COMMENTS: PERSONAL PRECAUTIONS: Refer to Section 8 "Exposure Controls / Personal Protection".

CONTAINMENT: Prevent large quantities of this product from contacting vegetation or waterways; large spills could kill vegetation and fish.

CLEAN-UP: This product, if spilled, can be recovered and re-used if contamination does not present a problem. Vacuum or sweep up the material. If the spilled product is unusable due to contamination, consult state or federal environmental agencies for acceptable disposal procedures and locations. See Section 13 "Disposal Considerations".

NOTIFICATION REQUIREMENTS: Federal regulations do not require notification for spills of this product. State and local regulations may contain different requirements; consult local authorities.

7. HANDLING AND STORAGE

HANDLING: Use air conveying/mechanical systems for bulk transfer to storage. For manual handling of bulk transfer use mechanical ventilation to remove airborne dust from railcar, ship or truck. Avoid prolonged or repeated breathing of dust. Use approved respiratory protection when ventilation systems are not available. Selection of respirators is based on the dust level generated.

STORAGE: Protect from excessive heat and moisture. Store away from acids.

COMMENTS: Use appropriate protective equipment if dust is generated or contact with eyes or skin is expected. If ventilation is inadequate or not available, use dust respirator and eye protection.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS

Chemical Name	ACGIH	OSHA	Supplier
Silica, quartz	0.025 mg/m ³ (8-hour TWA) (respirable fraction)	(10/(% SiO ₂ + 2) mg/m ³ (8-hour TWA, respirable dust)) (30/(% SiO ₂ + 2) mg/m ³ (8-hour TWA, total dust))	
Sodium Sesquicarbonate		(As Particulates Not Otherwise Regulated) 15 mg/m ³ (PEL/TWA) (total dust) 5 mg/m ³ (PEL/TWA) (respirable fraction)	

ENGINEERING CONTROLS: Where possible, provide general mechanical and/or local exhaust ventilation to prevent release of airborne dust into the work environment.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Appropriate eye and face protection equipment (ANSI Z87 approved) should be selected for the particular use intended for this material. Safety glasses with side shields are recommended.

RESPIRATORY: Whenever dust in the worker's breathing zone cannot be controlled with ventilation or other engineering means, workers should wear respirators or dust masks approved by NIOSH/MSHA, EU CEN or comparable certification organization to protect them against airborne dust.

PROTECTIVE CLOTHING: Dry product is generally non-irritating to intact skin. However, this product can be irritating where skin has been damaged and can create skin irritation after long exposures when moisture is present. Under such conditions, gloves and long-sleeved clothing are recommended to minimize skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR:	Odorless to slight sour pungent odor.
APPEARANCE:	Off white to yellow brown, fine powder.
AUTOIGNITION TEMPERATURE:	Not applicable
BOILING POINT:	Not applicable

COEFFICIENT OF OIL / WATER:	Not available
DENSITY / WEIGHT PER VOLUME:	1.11 g/cm ³
EVAPORATION RATE:	Not applicable (Butyl Acetate = 1)
FLASH POINT:	Not applicable
MELTING POINT:	Decomposes on heating with release of carbon dioxide gas.
ODOR THRESHOLD:	Not available
OXIDIZING PROPERTIES:	Not applicable
PERCENT VOLATILE:	Not applicable
pH:	9.9 (1% solution)
SOLUBILITY IN WATER:	17.1 % @ 25 °C 21.5 % @ 50 °C (as Sesqui)
SPECIFIC GRAVITY:	2.12 (H ₂ O=1)
VAPOR DENSITY:	Not applicable (Air = 1)
VAPOR PRESSURE:	Not applicable

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID:	Contact with acids except under controlled conditions.
STABILITY:	Stable
POLYMERIZATION:	Will not occur
INCOMPATIBLE MATERIALS:	Aluminum powder, strong acids, fluorine, molten lithium. Reacts with acids with release of large volumes of carbon dioxide gas and heat.
HAZARDOUS DECOMPOSITION PRODUCTS:	None

11. TOXICOLOGICAL INFORMATION

EYE EFFECTS: Similar product: Irritant (rabbit) [Toxicology 23:281, 1982]

SKIN EFFECTS: Similar product: Non-irritating (rabbit) [FMC Study I98-2239]

DERMAL LD₅₀: No data available for the product.

ORAL LD₅₀: Similar product: > 2,000 mg/kg (rat) [FMC Study I98-2238] [FMC Study I98-2238]

INHALATION LC₅₀: Similar product: > 5.03 mg/l (4 h) (rat) [FMC Study I98-2261]

SENSITIZATION: Similar product: (Skin) Non-sensitizing (guinea pig) [FMC Study I98-2262]

ACUTE EFFECTS FROM OVEREXPOSURE: May cause irritation of eyes. Dusts and mists may be irritating to the skin, mucous membranes and upper respiratory tract. No significant acute toxicological effects expected.

CHRONIC EFFECTS FROM OVEREXPOSURE: Repeated contact may cause red, dry, cracked skin. May cause irritation of the respiratory airways, mucous membranes and eyes. IARC has concluded that there is sufficient evidence of carcinogenicity to crystalline silica to experimental animals and limited evidence of carcinogenicity to humans. NTP has classified respirable crystalline silica (quartz, cristobalite and tridymite) as "reasonably anticipated to be carcinogenic". The American Conference of Governmental Industrial Hygienists (ACGIH) has concluded that silica quartz is a suspected human carcinogen (A2 - limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals with relevance to humans). Chronic exposure to silica dust may increase the risk of developing pneumoconiosis or silicosis, chronic diseases affecting the lungs, characterized by labored breathing, cough, reduction of work capacity, reduction of lung capacity, heart enlargement and failure.

CARCINOGENICITY:

Chemical Name	IARC	NTP	OSHA	Other
Silica, quartz	1	Known Carcinogen	Not listed	(ACGIH) A2

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: No data available for the product.

CHEMICAL FATE INFORMATION: Biodegradability does not apply to inorganic substances.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: When this product is discarded or disposed of, as purchased, it is neither a characteristic nor a listed hazardous waste according to US Federal RCRA regulations (40 CFR 261). As a non-hazardous waste the material may be disposed of in a landfill in accordance with government regulations; check local or state regulations for applicable requirements prior to disposal. Any processing, usage, alteration, chemical additions to, or contamination of, the product may alter the disposal requirements. Under Federal regulations, it is the generator's responsibility to determine if a waste is a hazardous waste.

14. TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION (DOT)

ADDITIONAL INFORMATION: This material is not regulated in transportation.

INTERNATIONAL MARITIME DANGEROUS GOODS (IMDG)

ADDITIONAL INFORMATION: Not regulated

INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO) / INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA)

ADDITIONAL INFORMATION: Not regulated

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355, APPENDIX A):
Not listed

SECTION 311 HAZARD CATEGORIES (40 CFR 370):
Immediate, Delayed

SECTION 312 THRESHOLD PLANNING QUANTITY (40 CFR 370):
The Threshold Planning Quantity (TPQ) for this product, if treated as a mixture, is 10,000 lbs; however, this product contains the following ingredients with a TPQ of less than 10,000 lbs.:
None

SECTION 313 REPORTABLE INGREDIENTS (40 CFR 372):
Not listed

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT)

CERCLA DESIGNATION & REPORTABLE QUANTITIES (RQ) (40 CFR 302.4):

Not listed as a hazardous substance

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA INVENTORY STATUS (40 CFR 710):

All components are listed or exempt.

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)

RCRA IDENTIFICATION OF HAZARDOUS WASTE (40 CFR 261):

Waste Number: Refer to Section 13 "Disposal Considerations" for RCRA status.

CANADA

WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM):

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Product Identification Number: Not applicable
 Hazard Classification / Division: D2A
 Ingredient Disclosure List: Listed
 Domestic Substance List: All components are listed or exempt.

16. OTHER INFORMATION

HMIS

Health	1
Flammability	0
Physical Hazard	0
Personal Protection (PPE)	B

Protection = B (Safety glasses and gloves)

HMIS = Hazardous Materials Identification System

Degree of Hazard Code:

- 4 = Severe
- 3 = Serious
- 2 = Moderate
- 1 = Slight
- 0 = Minimal

NFPA

Health	1
Flammability	0
Reactivity	0
Special	None

No special requirements

NFPA (National Fire Protection Association)

Degree of Hazard Code:

4 = Extreme

3 = High

2 = Moderate

1 = Slight

0 = Insignificant

REVISION SUMMARY:

This MSDS replaces Revision #1, dated December 26, 2008.

Changes in information are as follows:

Section 2 (Hazards Identification)

Section 7 (Handling and Storage)

Section 16 (Other Information)

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