

MATERIAL SAFETY DATA SHEET

MANUFACTURED BY: MT. SAVAGE SPECIALTY REFRACTORIES CO., INC.
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PRODUCT DETAILS

PRODUCT NAMES: SAVAGE SUPER RAM, SAVAGE RAM 60, 70 AND 85 including suffixes AS, S and QF

COMMON NAME: Fire Clay Refractory Plastic

CAS NO: Mixture

PRODUCT COMPOSITION / HAZARDOUS INGREDIENTS

These products are composed of a blend of processed alumina-silicate earth minerals (including calcined and uncalcined clays and aggregates). Upon firing to ceramic temperatures they form a hard ceramic bond for refractory materials. Dust generated during manufacture, installation and tear-out may pose a respiratory hazard if exposure is sufficient.

See below for additional health hazard information.

INGREDIENT	CAS NO.	WEIGHT %	OSHA / PEL	ACGIH TLV	CARCINOGEN
Crystalline Silica forms	as below				NTP – yes IARC – Group 1
Quartz	14808-60-7	5 – 15	0.1 mg/M ³ (resp)	0.1 mg/M ³ (resp)	
Cristobalite	14464-46-1	0 – 5	0.05 mg/M ³ (resp)	0.05 mg/M ³ (resp)	
Tridymite	15468-32-3	not detected	0.05 mg/M ³ (resp)	0.05 mg/M ³ (resp)	

PHYSICAL, CHEMICAL AND FIRE & EXPLOSION HAZARD INFORMATION

PHYSICAL PROPERTIES:

Appearance / Odor - Granular solid, brown to buff color, no distinct odor
Melting Point - Greater than 2000°F
Density (as shipped) - Specific gravity = 2.0 – 3.0 (water = 1)
Solubility - Slightly soluble in water
pH - 6 – 7

CHEMICAL REACTIVITY: No known hazardous reactions, decomposition products or polymerization

FIRE & EXPLOSION: - Non-flammable; no applicable flash point
- Hardened product which has not been properly dried is subject to explosion upon rapid heating due to internal steam pressure

SAFE HANDLING PRACTICES AND EXPOSURE CONTROL MEASURES

- Care should be exercised to prevent generation of dust during handling, installation, use and tear-out. Avoid skin and eye contact and breathing of dust. Do not ingest.
- Proper refractory practices must be followed for curing, dry-out and firing to service temperature.
- Wash skin and clothing with soap and water after contact with material.
- Appropriate control measures include dust prevention, dust containment and ventilation supplemented by the use of appropriate NIOSH approved respirators for the exposure conditions.
- Safety glasses should be used if splashing is likely. Impervious gloves, boots and protective clothing should be used as needed to prevent excessive skin contact.
- Clean-up of spills should be done in a way to minimize dust, including vacuuming and wet methods.

FIRST AID

- Respiratory Distress – Remove to fresh air. Give CPR and Oxygen if needed.
- Skin Irritation – Wash irritated areas gently with soap and water to avoid abrasion. Skin lotion may relieve irritation. If irritation is not relieved within several hours consult a physician.
- Eye Exposure – Flush eyes with water or eyewash solution for 15 minutes and get prompt medical attention if relief is not obtained immediately. **DO NOT RUB EYES!!!** Injury due to abrasion may result.
- Ingestion – do not induce vomiting. Give a cup of water if conscious.

HEALTH HAZARDS

<i>HAZARD</i>	<i>TYPE</i>	<i>ROUTE OF ENTRY</i>
dry skin, skin irritation, alkali burns and allergic dermatitis in hypersensitive individuals	acute/chronic	skin contact with product
toxicological information – moderately irritating – no significant toxic effects for reasonably foreseeable quantities	acute	Ingestion/respiration
significant eye irritation, eye abrasion Serious eye injury can occur due to abrasion from rubbing eyes!!	acute	eye contact with product
physical injury due to steam spalling or explosion of cured product	acute	improper dry-out
irritation or inflammation to the linings of the upper respiratory tract	acute	inhalation of dust
Over-exposure to crystalline silica over a period of years may lead to silicosis (a permanent and sometimes fatal lung disease) and possibly lung cancer. This product may aggravate existing respiratory conditions.	chronic	inhalation of dust

ENVIRONMENTAL AND REGULATORY INFORMATION

DISPOSAL: Dispose in accordance with federal, state and local regulations.
Dispose per 40 CFR 261 and 262.

ECOLOGICAL INFORMATION: This product is composed primarily of earth minerals and is not expected to have an ecotoxic effect.

TRANSPORTATION: This product is not DOT classified.

REGULATORY INFORMATION:

Canadian WHMIS – D2A
OSHA 29 CFR 1910.1200 – considered hazardous
EPCRA Section 302 (Extremely Hazardous Substances) – not listed
CERCLA Section 304 (Title III) not subject to reporting

SARA 313 – not subject to reporting
SARA Hazard Category – “Chronic Health Hazard”
California Prop. 65 – “Contains crystalline silica, an ingredient known to cause cancer.”

This information is given in good faith. Suitability of the product for the application and installation conditions are critical to the safety of the product. These conditions are subject to the control of the user and all risks of use of the product are assumed by the user. For guidance on use in specific applications consult MT. SAVAGE SPECIALTY REFRACTORIES CO., INC.