

SECTION I - IDENTIFICATION OF PRODUCT

supplier's name	Mason Color Works, Inc.			emergency telephone no.	216-385-4400
address	250 E. 2nd Street, P.O. Box 76, East Liverpool, Ohio 43920				
date this form prepared	Sept. 1993	Responsible for preparation	Carol M. Cronin	Chemical Family	Inorganic Pigment
Trade Name & Synonyms	Russet Brown 6119 (319)	CAS Number	68186-88-9* 10101-52-7*	68553-01-5*	65997-18-4*
Chemical Name & Synonyms	Zn Fe Cr Ca Si Brown	Basic Chemical Formula	$(\text{Zn,Fe})(\text{Fe,Cr})_2\text{O}_4 + 3\text{CaO} \cdot \text{Cr}_2\text{O}_3 \cdot 3\text{SiO}_2$		

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT	% Wt.	ACGIH-TWA	OSHA-PEL
CHROME OXIDE CAS # 1308-38-9	10%-15%	0.5 mg/m ³ as Cr	0.5 mg/m ³ as Cr
IRON OXIDE CAS # 1309-37-1	5%-10%	5 mg/m ³ as Fe	5 mg/m ³ as Fe
MAGNESIUM OXIDE CAS # 1309-48-4	less than 5%	10 mg/m ³ fumes	10 mg/m ³ dust 5 mg/m ³ respirable fraction
ALUMINA OXIDE CAS # 1344-28-1	5%-10%	10 mg/m ³ as Al	15 mg/m ³ as Al
SILICA, CRYSTALLINE (QUARTZ) CAS # 14808-60-7	30%-35%	0.1 mg/m ³ as dust	0.1 mg/m ³ as dust
ZINC OXIDE CAS # 1314-13-2	5%-10%	10 mg/m ³ dust 5 mg/m ³ fumes	10 mg/m ³ dust 5 mg/m ³ fumes
CALCIUM OXIDE CAS # 1305-78-8	5%-10%	2 mg/m ³	5 mg/m ³
ZIRCONIUM OXIDE CAS # 1314-23-4	15%-20%	5 mg/m ³ as Zr	5 mg/m ³ as Zr
BORON OXIDE CAS # 1303-86-2	less than 5%	10 mg/m ³	10 mg/m ³ 5 mg/m ³ respirable fraction

* Contains modifiers

SECTION III - SYMPTOMS OF OVEREXPOSURE

Alumina - Acute inhalation overexposure may cause coughing and shortness of breath. Chronic inhalation overexposure may adversely effect breathing capacity. Direct eye contact may cause eye irritation. Skin contact may cause abrasions.

Zinc - Inhalation of high levels of zinc oxide may result in tightness of chest, metallic taste, cough, dizziness, fever, chills, headache, nausea and dry throat.

Chrome - Repeated or prolonged exposure to trivalent chromium compounds may cause delayed effects involving the respiratory system. Causes skin and eye irritation. According to OSHA CFR Part 1200-1900 (Hazard Communications) chromium compounds are deemed to be a possible cancer hazard. This is based on assessment by the NTP (National Toxicology Program) that they reasonably be anticipated to be a carcinogen and an assessment of IARC (International Agency Research on Cancer) which concluded that the evidence of carcinogenicity to humans was sufficient. However, there have been no studies demonstrating any excess cancer risks in workers exposed to chromium oxide in their use.

Iron - May cause mechanical skin and eye irritation. Repeated and prolonged exposure to iron oxide dust may cause a benign pneumoconiosis called siderosis.

Magnesium - Inhalation of dust may irritate the nose and throat and cause coughing and chest discomfort. May irritate the eyes and skin. Chronic effects: Can cause iron deficiency.

Calcium - No acute effects. Long term overexposure to high concentrations of this dust without the use of a dust mask may produce X-ray evidence of dust in lungs. If continued, may affect respiratory function in some individuals.

Zirconium Oxide - Chronic overexposure: May damage teeth, cause ulceration of mucous membranes. Acute: Strong irritant coughing and choking. Corrosive to tissues.

Boron - Nausea, vomiting, diarrhea. Slight irritation to eye. No irritation to skin. Inhalation - Sneezing and coughing.

Silica - Undue breathlessness, wheezing, cough and sputum production. Long term exposure to silica dust can cause silicosis which is characterized by shortness of breath. Crystalline silica is listed by the International Agency for Research on Cancer (IARC) as 2A: Sufficient evidence in laboratory animals and limited evidence of carcinogenicity in humans. Conclusions were based on long-term exposure to crystalline silica in the stone industry cutting industry. Studies are in progress to evaluate low-levels and sporadic exposure to crystalline silica.

SECTION IV - HEALTH HAZARD DATA

occupational exposure limits

See Section II

effect of overexposure

EYE - May cause irritation.

SKIN - Skin contact may cause irritation, allergic dermatitis.

INHALATION- Inhalation causes irritation of the respiratory tract and may cause disabling, progressive pulmonary fibrosis due to the free quartz silica.

INGESTION - toxic, may cause excessive coughing, intestinal disorders.

EMERGENCY AND FIRST AID PROCEDURES

EYE - Flush thoroughly with potable water for 15 minutes. Consult physician.

SKIN - Remove contaminated clothing, wash thoroughly with soap & water. Consult physician.

INHALATION- Remove to fresh air. May give oxygen. Consult physician.

INGESTION - Induce vomiting if conscious. Consult physician.

SECTION V - SPECIAL PROTECTION INFORMATION

respiratory protection (specific type)- Use NIOSH approved respiratory protection where airborne level exceeds appropriate Occupational Exposure Limit.

ventilation	local exhaust X	special N/A
	mechanical (general) X	other adequate to maintain below exposure limit

personal protective equipment - Wear appropriate gloves & goggles to avoid skin and eye contact. Safety showers and eye stations must be present in work area.

SECTION VI - SPECIAL PRECAUTIONS

precautions to be taken in handling & storing - Keep container closed. Protect physical damage. Avoid contact with eyes, skin & clothing.

other precautions - Avoid breathing and use only with adequate ventilation. Wash thoroughly after handling. No food or beverage should be consumed in work area.

SECTION VII - PHYSICAL DATA

boiling point (F°) N/A	appearance & odor Brown powder - odorless	specific gravity (water=1) N/A	% volatile by volume None
solubility in water Trace	vapor pressure (mm Hg) N/A	vapor density (air=1) N/A	evaporation rate None

SECTION VIII - REACTIVITY DATA

STABILITY	unstable	conditions to avoid N/A	hazardous polymerization	may occur	conditions to avoid N/A
	stable X			will not occur X	

incompatibility (materials to avoid)

N/A

hazard decomposition products

N/A

SECTION IX - FIRE AND EXPLOSIVE DATA

flash point (method used)	flammable limits	LEL	UEL
Non-Flammable		N/A	
extinguishing media	Carbon dioxide, dry chemical or water spray		
special fire fighting procedures	Not a fire hazard. Wear self-contained breathing apparatus when large quantities are involved.		
unusual fire & explosion hazard	None expected.		

SECTION X - SPILL OR LEAK PROCEDURES

steps to be taken in case material is released or spilled	Contain spill. Pick up the spill in an appropriate container for disposal
waste disposal method	Dispose in accordance with Federal, State and Local Laws.

MATERIAL OR COMPONENT

This product is a mixture of various metal oxides, salts and some compounds, considered to be a nuisance dust, are interfused to form the final product which does not represent individual components.

This product contains the compounds Chrome, Alumina, Silica and Zinc. These toxic chemicals are subject to the reporting requirements of Superfund Amendment and Reauthorization Act (SARA) of 1986; Section 313 of the Emergency Planning and Community Right to Know Act and of 40 CFR, Part 372.

This Material Safety Data Sheet should be made available by the buyer to each of buyer's plant workers.

The buyer assumes all risk in connection with the use and handling of the material. The seller assumes no responsibility or liability in connection with the information supplied in this sheet or for any damage or injury caused by the material; reasonable safety procedures should be followed. The seller assumes no responsibility for injury or damage caused by use of the material even if reasonable safety procedures are followed. The information contained in this sheet is developed from what is believed to be accurate and reliable sources but the seller makes no warranties, either expressed or implied, and assumes no responsibility for the accuracy or completeness of the data contained herein.