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MATERIAL SAFETY DATA SHEET

SECTION I - MANUFACTURER & PRODUCT INFORMATION

Clay Art Center
2636 Pioneer Way East
Tacoma,WA 98404

Phone: (253)922-5342
Fax: (253)922-5349
E-mail: support@clayartcenter.com

TRADE NAME: **KCDA GLAZES 856xx LOW FIRE MATT SERIES** 85630- 85639

CHEMICAL NAME: **SODIUM BORO SILICATE**

CHEMICAL FAMILY: **LEAD FREE CERAMIC GLAZES**

PRODUCT NAME: **LOW FIRE MATT LINE**

85630-85639

SECTION II - POTENTIAL HAZARDOUS INGREDIENTS

Note: this Product is a combination of minerals, clay's, feldspars, or fritted glass, and coloring pigments. fritted glass is an essentially insoluble substance, which can contain some or all of the following hazardous chemicals (as described by OSHA's hazardous communications standard) Pigments also contain ingredients listed by OSHA and ACGIH, "Health Hazard Evaluation concluded that, based on the nature of the products, the expected hazards do not exist".

Na2O	*2-7%*	***Al2O3***	*10-20%*	***SiO2***	*20-70%*	***V2O5***	*0-5%*
K2O	*1-5%*	***TiO2***	*.5-10%*	***ZrO2***	*0-15%*	***SnO2***	*0-8%*
MgO	*0-4%*	***Fe2O3***	*.5-14%*	***ZnO***	*0-10%*	***CuCO3***	*0-5%*
CaO	*12-16%*	***CoCO3***	*0-3%*	***Cr2O3***	*0-5%*	***Ni2O3***	*0-5%*
Li2O	*1-3%*	*B2O3*	*2-8%*				

SECTION III - HAZARDS IDENTIFICATION

	ACGIH-TLVs	OSHA PELs	NOISHA RELs
Copper Carbonate (CuCO3)	1 Mg/M3	1 Mg/M3	1 Mg/M3

Cas# 7492-68-4
Harmful if swallowed.The toxicological properties of this materialhave not been fully investigated.

Symptoms of overexposure:

Eye Contact: May cause mild eye irritation.
Skin Contact: May cause skin irritation.
Ingestion: May cause irritation of the digestive tract. May be harmful if swallowed.
Inhalation: May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated.

Titanium Dioxide (TiO2)	10mg/m3	10mg/m3	10mg/m3

Cas# 13463-67-7

Symptoms of overexposure:

Inhalation: Inhalation of dust can cause irritation of the nose, throat, and lungs.
Eye Contact: Like any foreign body, particles can cause mechanical irritation.
Skin Contact: This material can cause irritation if not promptly washed from the skin.
Skin Absorption: This product is not expected to be absorbed through intact skin.
Ingestion: This material is not expected to produce adverse effects.

Vanadium Oxide (VO_5)	0.05 mg/m^3	0.05 mg/m^3	0.05 mg/m^3

Cas # 1314-62-1

Symptoms of overexposure:

Inhalation: Irritation of the respiratory tract, chest tightness, wheezing, coughing.
Eye Contact: Irritation possible with corneal injury.
Skin Contact: Irritation with reddening and itching. Absorption of harmful amounts possible.
Ingestion: Abdominal discomfort, nausea, vomiting, cramping. Harmless greenish tongue discoloration.

Zirconium Oxide (ZnO)	10 mg/m^3 (total)	15 mg/m^3 (total)	5 mg/m^3
Cas # 1314-13-2	5 mg/m^3 (respirable)	5 mg/m^3 (respirable)	15 min. C

Symptoms of overexposure:

Inhalation: Acute inhalation to irrespirable dust which contains radioactive uranium, thorium and radium may cause lung cancer.
Eye Contact: May cause irritation with discomfort, tearing or blurring of vision.
Skin Contact: Not applicable.

Cobalt Carbonate ($CoCO_3$)	0.02 mg/m^3	0.5 mg/m^3	N/A
Cas # 1396-06-1			

ACGIH: Animal carcinogen: Agent is carcinogenic in experimental animals at dose levels, by route (s) of administration at site, or histologic type, or by mechanism considered relevant to workers exposure. Available epidemiologist studies do not confirm an increased risk of cancer in humans except under common levels of exposure.

Symptoms of Overexposure:

Inhalation: Prolonged inhalation of dust or metal dust, and fume or mist containing cobalt may cause serious respiratory illness. May cause an irritation of respiratory organs of sensitive persons resulting in obstruction of airways with shortness of breath.
Eye Contact: May cause serious eye irritation.
Skin Contact: Prolonged exposure may produce irritation.
Ingestion: Large amounts may cause irritation of the gastrointestinal tract, nausea, vomiting and diarrhea.

Nickel Oxide (NiO)	0.2 mg/m^3	1 mg/m^3	0.015 mg/m^3
Cas # 7440-02-0			

ACGIH: Inhalable fraction, the concentration of inhalable particulate for application of this TLV is to be determined from the fraction passing a size-selector with characteristics defined in (A1). (A1) - Confirmed human carcinogen: Agent is carcinogenic to humans based on epidemiologic studies of, or convincing clinical evidence, in exposed humans. (Ca) Carcinogen.

Symptoms of overexposure:

Inhalation: Primary enters through inhalation of dust.
Eye Contact: May cause irritation in eyes and mucous membranes.
Skin Contact: May irritate skin, can cause "Nickel Itch" in sensitive persons.
Ingestion: Low order of acute toxicity. May cause gastro-intestinal disorders.

Iron Oxide (Fe_2O_3)	5 mg/m^3	10 mg/m^3	5 mg/m^3
Cas # 1309-37-1			

ACGIH: Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of its carcinogencity in humans/animals. The value is for particulate matter containing no asbestos and 1% crystalline silica.

Symptoms of overexposure:

Inhalation: Repeated and prolonged exposure may cause beginnings Pneumoconiosis called Sideordsis.
Eye Contact: May cause irritation.
Skin Contact: May cause mechanical skin irritation.
Ingestion: Expected to be non-toxic.

Zinc Oxide (ZnO)	10 mg/m^3	10 mg/m^3 (Total) 5 mg/m^3 (Respirable)	5 mg/m^3
Cas # 1314-13-2			

Symptoms of overexposure:

Inhalation: High levels of dust may result in tightness of chest, metallic taste, cough, dizziness, fever, chills, headache, nausea, and dry throat. Chronic exposure may produce symptoms known as metal fume fever or "zinc shakes", an acute, self-limiting condition without recognized complications. Symptoms of metal fume fever include: chills, fever, muscular pain, nausea and vomiting. May aggravate respiratory conditions.
Eye Contact: May cause irritation.
Skin Contact: May cause irritation.
Ingestion: May cause irritation to the gastro-intestinal tract.

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Alumina Oxide (Al_2O_3) Cas # 1344-28-1	10 mg/mg^3 (total)	15 mg/m^3 (total) 5 mg/m^3 (respirable)	N/A

ACGIH: The value for particulate matter containing no asbestos and 1% crystalline silica.
Symptoms of overexposure:

Inhalation: Acute may cause coughing and shortness of breath. Chronic may adversely effect breathing capacity.
Eye Contact: Direct contact may cause irritation.
Skin Contact: May cause abrasions.
Ingestion: May cause irritation.

Chrome Oxide (Cr_2O_3) Cas # 1313-13-2	0.5 mg/m^3	0.5 mg/m^3	0.5 mg/m^3

ACGIH: Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of carcinogencity in humans/animals.

Symptoms of overexposure:

Inhalation: Repeated prolonged exposure to trivalent compounds may cause delayed effects involving the respiratory system.
Eye Contact: mechanical irritation to the eye may occur such as watering, reddening de to exposure to fines.
Skin Contact: Expected to be non irritating.
Ingestion: Considered to be non-irritating , non-toxic if swallowed.

Silica, Crystalline (SiO_2) Cas # 14808-60-7	0.1 mg/m^3	10 mg/m^3 $\overline{SiO_2 + 2}$	0.05 mg/m^3

Symptoms of overexposure:

Inhalation:

a) Prolonged exposure to respirable crystalline silica (quartz) can cause Silicosis, a fibrosis (scarring) of the lungs. Silicosis may be progressive; it may lead to disability and death. Silicosis increases risk of Tuberculosis.
b) Inhaled from occupational-sources is classified as carcinogenic to humans. (cancer)
c) There is evidence that exposure to respirable crystalline silica or that the disease Silicosis is associated with increased incidence of Sceroderma, an auto-immune disorder manifested by fibrosis (scarring) of the skin and internal organs.
d) There are several studies suggesting that exposure to respirable silica or that the disease Silicosis is associated with the increased incidence of kidney disorders. (Nephrotoxicity)

Eye Contact: May cause abrasions of the cornea.
Skin Contact: Not applicable.
Ingestion: Not applicable.

Tin Oxide (SnO) Cas # 21651-19-4	2.0 mg/m^3	2.0 mg/m^3	2.0 mg/m^3

Symptoms of overexposure:

Inhalation: No information found on acute overexposure. Chronic exposure to tin oxide fumes or dust may result in Stannosis, a form of Phenumoconiosis.
Eye Contact: Abrasive, mild irritant
Skin Contact: Possible irritant.
Ingestion: Considered non-toxic.

SECTION IV - PHYSICAL DATA

Boiling Point: N/A
Solubility in water: trace
Vapor Pressure (mmHg): N/A
Vapor Density (air=1): N/A
Appearance: Pink Powder

Odor: oderless
Specific Gravity (water=1): N/A
Evaporation rate: None
% Volatile by volume: None

SECTION V - FIRE AND EXPLOSION DATA

Flash point: N/A Flammable Limits: None
Unusual Fire and Explosion Hazard: None expected
Extinguishing Media: Carbon dioxide, dry chemical or water
Special Fire Fighting Procedures: Wear self contained breathing apparatus when large quantities involved.

SECTION VI - REACTIVITY DATA

Stability: Stable
Hazardous Polymerization: will not occur
Incompatibility: None
Hazard Decomposition of product: N/A

SECTION VII - HEALTH HAZARD DATA

Contain spillage and scoop or vaccum. Avoid making dust, put in appropriate container for disposal.
Waste disposal method in accordance with Federal, State and Local Laws.

FIRST AID

Eye: flush thoroughly with water for 15 minutes.
Skin: remove contaminated clothing, wash thoroughly with soap and water.
Inhalation: remove to fresh air, may give oxygen if needed.
Ingestion: give large amounts of water to induce vomiting, only in conscious persons.

IF THESE FIRST AID MEASURES FAIL, CONSULT PHYSICIAN!!!!!!!!!!!!!!!!!!!!

Principal Routes of Entry:

Inhalation:	Dust from this product may cause irritation of the respiratory system. Overexposure may cause lung damage.
Ingestion:	Large amounts may cause irritation of the gastrointestinal tract, nausea, vomiting and diarrhea.
Skin & Eye:	Nuisance dust, prolonged or repeated may cause irritation

This product is a blend of various oxides,clays, salts and some compounds which are interfused by high calcination to form the finished product. Section III, Hazardous Ingredients Identity/Information, and Section IV, Symptoms of Overexposure, pertain to individual components. Section V through Section X are in reference to the finished product.

SILICA:

PRIMARY ROUTES of ENTERY: Inhalation, Dermal. and Ingestion (In DRY FORM ONLY.)

OVEREXPOSURE EFFECTS This product contains crystalline silica; there is evidence of delayed respiratory disease (silicosis) if inhaled over a long period of time. IRAC, NGP, and California Prop. 65 conclude that inhaled crystalline silica causes cancer.

Respirable Quartz: OSHA PEL: TWA-TLW 0.1mg/m3 ACGIH TLV 0.1mg/3, NIOSH TWA= 0.05 mq/rn3

MEDICAL. CONDITIONS AGGRAVATED BY EXPOSURE: Individuals with a lung disease condition (E.g. bronchitis. emphysema, chronic pulmonary disease) can be aggravated by exposure

EMERGENCY and FIRST AID PROCEDURES: No specific first aid is necessary since the adverse health effects associated with these compound results from chronic exposures. If there is a gross inhalation of dust, remove the person to fresh air, give artificial respiration as need, and seek medical help.
EYES. May cause irritation.
SKIN: May cause local dermatitis, which is relieved when removed.
INHALATION: See section V INGESTION. Toxicity due to ingestion is low. PHYSICIANS NOTE: None.

INORGANIC PIGMENT (if applicable)

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SECTION VIII - TOXICOLOGY INFORMATION

If the above is a liquid glaze, glazes are certified to NON TOXIC, conforming to ASTM D-4236 and 0-1 0:23 under the federal Labeling of Hazardous Art Materials Act (LHAMA). Toxicology data of some components is available upon request.

SECTION VX - SPILL AND LEAK PROCEDURES

WASTE DISPOSAL METHODS: Dispose of in accordance with Federal, State, and Local regulations.

SECTION X - SPECIAL PROTECTIVE INFORMATION

Provide adequate ventilation to keep dust or vapor concentrations below acceptable exposure limits. Use gloves as needed for handling material containers. Wear safety glasses when needed. Appropriate respiratory protection may be required to protect from certain dusts. Respirators must be selected and used in accordance with OSHA SUB PART 1 (29 CFR 1910.134).

Respiratory Protection: Use only NIOSHA/OSHA approved respiratory protection with adequate ventilation; avoid breathing dust. Do not exceed Occupational Exposure Limits. Wash thoroughly after handling. No food or beverage should be consumed in work area.

Personal Protective Equip: Wear appropriate gloves and goggles to avoid skin and eye contact. Safety showers and eye stations must be present in work stations.

Ventilation: Use local exhaust or mechanical such as a dust collector to maintain dust levels below Occupational Exposure Limits.

SECTION XI - REGULATORY INFORMATION

This product may contain component(s) that require reporting under Section 313 of the Emergency Planning and Community Right-To-Know Act (Superfund Amendments and Reauthorization Act), and 40 CFR Part 372.

SARA TITLE III DATA (Reportable items under OSHA regulations [29 CFR 1910.1200 (C)]: None.

SECTION XII - TOXIC SUBSTANCE CONTROL ACT (TSCA)

This product (and all of its components) is in compliance with the U.S. EPA 15 U.S. C. 2604 regulation.

SECTION XIII - DEFINITIONS AND ABBREVIATIONS

ACCIM American Conference of Governmental Industrial Hygienists
C(CIEL) The concentration that shall not be exceeded during any part of the working exposure.
CALOSHA California Occupational Safety and Health Administration
CAS Chemical Abstracts Service Registry Number
EPA Environmental Protection Agency
IARC International Agency for Research on Cancer
LEL Lower Explosion Limit
NIAP Not Applicable
NIAV Not Available
NIOSH National Institute for Occupational Safety and Health
NTP National Toxicology Program
OSHA Occupational Safety and Health Administration
PEL Permissible Exposure Limits
SARA Superfund Amendments and Reauthorization Act
STEL Short Term Exposure Limit. Usually a 15-minute time weighted average. Exposure should not be exceeded at any time during a workday.

TLV Threshold Limit Values
TSCA Toxic Substance Control Act
TWA Time Weighed Average, Exposure concentration for a normal 8-hour day.

SECTION XIII - DISCLAIMER

ALL retailers of this product are REQUIRED by law to supply their customers with a copy of this material safety data sheet with initial purchase.

******SARA 313***

This product contains certain oxides and compounds which are subject to 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 CRF, Part 372.

The information contained in this Material Safety Data Sheet must be provided to every employee who is exposed to this product in any way. We recommend the user reads and understands the contents herein before using this material.

PLEASE KEEP ON FILE FOR FUTURE REFERENCE. DO NOT THROW AWAY ! MATERIAL SAFETY DATA SHEETS ARE REQUIRED FOR FIRST SHIPMENT, AND WILL BE SENT AGAIN WHEN REVISED UPON YOUR NEXT ORDER OF PRODUCT OR BY REQUEST.

DISCLAMER

Clay Art Center, Inc. believes the information contained in this material safety data sheet is believed to be accurate and reliable as of the date of publication or revision but makes no warranty that it is. This information provided should be made available as required by the Federal OSHA Hazard Communication Standard 1910.1200 to ANYONE who handles, uses, stores, transports or will otherwise be exposed to this product. Clay Art Center, Inc. Accepts no Responsibility for the health or safety of any individual who misuses this product by not complying with manufacturer's instructions contained herein or additional /other measures that may be required under particular conditions.