

30411-4614

# SAFETY DATA SHEET



Revision date 13-Sep-2022

Revision Number 2

## 1. Identification

### Product identifier

**Product Name** V-389 Flame Orange

### Other means of identification

**Product Code(s)** FG00005

**Synonyms** 37512X, 37506P

### Recommended use of the chemical and restrictions on use

#### **Recommended use**

#### **Restrictions on use**

### Details of the supplier of the safety data sheet

#### **Manufacturer Address**

American Art Clay Co Inc  
6060 Guion Road  
Indianapolis, IN 46254-1222 USA  
Toll Free: 1-800-999-5456  
CustomerCare@Amaco.com

### Emergency telephone number

**Emergency Telephone** U.S. Poison Control 1-800-222-1222

## 2. Hazard(s) identification

### Classification

Acute toxicity - Oral	Category 4
Skin sensitization	Category 1
Specific target organ toxicity (repeated exposure)	Category 2

### Hazards not otherwise classified (HNOC)

Not applicable

### Label elements

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**Hazard statements****Warning**

H302 - Harmful if swallowed

H317 - May cause an allergic skin reaction

H373 - May cause damage to organs through prolonged or repeated exposure

**Physical state** Liquid**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Contaminated work clothing must not be allowed out of the workplace

Wear protective gloves/clothing and eye/face protection

Do not breathe dust/fume/gas/mist/vapors/spray

**Precautionary Statements - Response**

Specific treatment (see .? on this label)

Get medical advice/attention if you feel unwell

IF ON SKIN: Wash with plenty of soap and water

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

15.177 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

16.177 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

33.177 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

33.177 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

19.847 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

**Other information**

Toxic to aquatic life with long lasting effects. Toxic to aquatic life.

**3. Composition/information on ingredients**

Not applicable.

**Mixture**

Chemical name	CAS No	Weight-%
Zircon, cadmium orange	99749-34-5	10 - 20
Zircon	14940-68-2	5 - <10
Quartz	14808-60-7	3 - <5
Kaolin	1332-58-7	3 - <5
Frits, chemicals	65997-18-4	3 - <5
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1

**4. First-aid measures**

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**Description of first aid measures**

<b>Inhalation</b>	Remove to fresh air.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Skin contact</b>	Wash skin with soap and water.
<b>Ingestion</b>	Rinse mouth.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** No information available.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

**5. Fire-fighting measures**

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Large Fire</b>	CAUTION: Use of water spray when fighting fire may be inefficient.
<b>Unsuitable extinguishing media</b>	Do not scatter spilled material with high pressure water streams.
<b>Specific hazards arising from the chemical</b>	No information available.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	None.
<b>Sensitivity to static discharge</b>	None.
<b>Special protective equipment and precautions for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**6. Accidental release measures****Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Ensure adequate ventilation.

**Methods and material for containment and cleaning up**

<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Pick up and transfer to properly labeled containers.

**7. Handling and storage****Precautions for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

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**Conditions for safe storage, including any incompatibilities****Storage Conditions**

Keep container tightly closed in a dry and well-ventilated place.

**8. Exposure controls/personal protection****Control parameters****Exposure Limits**

The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Zircon, cadmium orange 99749-34-5	STEL: 10 mg/m <sup>3</sup> Zr TWA: 0.01 mg/m <sup>3</sup> Cd TWA: 0.002 mg/m <sup>3</sup> Cd respirable particulate matter TWA: 5 mg/m <sup>3</sup> Zr	TWA: 5 mg/m <sup>3</sup> Zr (vacated) TWA: 5 mg/m <sup>3</sup> Zr (vacated) STEL: 10 mg/m <sup>3</sup> Zr	IDLH: 9 mg/m <sup>3</sup> Cd dust and fume IDLH: 25 mg/m <sup>3</sup> Zr TWA: 5 mg/m <sup>3</sup> except Zirconium tetrachloride Zr STEL: 10 mg/m <sup>3</sup> Zr
Zircon 14940-68-2	STEL: 10 mg/m <sup>3</sup> Zr TWA: 5 mg/m <sup>3</sup> Zr	TWA: 5 mg/m <sup>3</sup> Zr (vacated) TWA: 5 mg/m <sup>3</sup> Zr (vacated) STEL: 10 mg/m <sup>3</sup> Zr	IDLH: 25 mg/m <sup>3</sup> Zr TWA: 5 mg/m <sup>3</sup> except Zirconium tetrachloride Zr STEL: 10 mg/m <sup>3</sup> Zr
Quartz 14808-60-7	TWA: 0.025 mg/m <sup>3</sup> respirable particulate matter	TWA: 50 µg/m <sup>3</sup> (vacated) TWA: 0.1 mg/m <sup>3</sup> respirable dust : (250)/(%SiO <sub>2</sub> + 5) mppcf TWA respirable fraction : (10)/(%SiO <sub>2</sub> + 2) mg/m <sup>3</sup> TWA respirable fraction	IDLH: 50 mg/m <sup>3</sup> respirable dust TWA: 0.05 mg/m <sup>3</sup> respirable dust
Kaolin 1332-58-7	TWA: 2 mg/m <sup>3</sup> particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 10 mg/m <sup>3</sup> total dust (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction	TWA: 10 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable dust
Frits, chemicals 65997-18-4	STEL: 10 mg/m <sup>3</sup> Zr TWA: 0.01 mg/m <sup>3</sup> As TWA: 0.05 mg/m <sup>3</sup> Pb TWA: 0.01 mg/m <sup>3</sup> Cd TWA: 0.002 mg/m <sup>3</sup> Cd respirable particulate matter TWA: 0.5 mg/m <sup>3</sup> Sb TWA: 1 mg/m <sup>3</sup> Cu dust and mist TWA: 3 mg/m <sup>3</sup> W respirable particulate matter in the absence of cobalt TWA: 5 mg/m <sup>3</sup> Zr TWA: 0.02 mg/m <sup>3</sup> Mn respirable particulate matter TWA: 0.1 mg/m <sup>3</sup> Mn inhalable particulate matter	TWA: 10 µg/m <sup>3</sup> As TWA: 50 µg/m <sup>3</sup> Pb TWA: 0.5 mg/m <sup>3</sup> Sb TWA: 5 mg/m <sup>3</sup> Zr (vacated) TWA: 0.5 mg/m <sup>3</sup> Sb (vacated) TWA: 5 mg/m <sup>3</sup> Zr (vacated) STEL: 10 mg/m <sup>3</sup> Zr (vacated) Ceiling: 5 mg/m <sup>3</sup> Ceiling: 5 mg/m <sup>3</sup> Mn	IDLH: 5 mg/m <sup>3</sup> As IDLH: 9 mg/m <sup>3</sup> Cd dust and fume IDLH: 50 mg/m <sup>3</sup> Sb IDLH: 100 mg/m <sup>3</sup> Cu dust and mist IDLH: 500 mg/m <sup>3</sup> Mn IDLH: 25 mg/m <sup>3</sup> Zr IDLH: 100 mg/m <sup>3</sup> Pb IDLH: 10 mg/m <sup>3</sup> Ni Ceiling: 0.002 mg/m <sup>3</sup> As 15 min Ceiling: 0.05 mg/m <sup>3</sup> V dust and fume 15 min TWA: 0.5 mg/m <sup>3</sup> Sb TWA: 1 mg/m <sup>3</sup> Cu dust and mist TWA: 1 mg/m <sup>3</sup> Mn TWA: 5 mg/m <sup>3</sup> except Zirconium tetrachloride Zr TWA: 0.050 mg/m <sup>3</sup> Pb TWA: 0.015 mg/m <sup>3</sup> except Nickel carbonyl Ni STEL: 3 mg/m <sup>3</sup> Mn

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			STEL: 10 mg/m <sup>3</sup> Zr
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**Biological occupational exposure limits**

Chemical name	ACGIH
Zircon, cadmium orange 99749-34-5	5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical
Frits, chemicals 65997-18-4	200 µg/L - blood (Lead) - not critical 5 µg/g creatinine - urine (Cadmium) - not critical 5 µg/L - blood (Cadmium) - not critical

**Appropriate engineering controls**

**Engineering controls**                      Showers  
    Eyewash stations  
    Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**                      No special protective equipment required.

**Skin and body protection**                      No special protective equipment required.

**Respiratory protection**                      No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations**                      Handle in accordance with good industrial hygiene and safety practice.

**9. Physical and chemical properties****Information on basic physical and chemical properties**

**Physical state**                                      Liquid

**Appearance**

**Color**

**Odor**

**Odor threshold**

<u>Property</u>	<u>Values</u>	<u>Remarks - Method</u>
<b>pH</b>	No data available	None known
<b>Melting point / freezing point</b>	No data available	None known
<b>Initial boiling point and boiling range</b>	No data available	None known
<b>Flash point</b>	No data available	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapor pressure</b>	No data available	None known
<b>Relative vapor density</b>	No data available	None known
<b>Relative density</b>	No data available	None known
<b>Water solubility</b>	No data available	None known
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	410	None known
<b>Decomposition temperature</b>		None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known

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**Other information**  
**Explosive properties**  
**Oxidizing properties**  
**VOC Content (%)**No information available  
No information available  
No information available**10. Stability and reactivity**

<b>Reactivity</b>	No information available.
<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	None under normal processing.
<b>Conditions to avoid</b>	None known based on information supplied.
<b>Incompatible materials</b>	None known based on information supplied.
<b>Hazardous decomposition products</b>	None known based on information supplied.

**11. Toxicological information****Information on likely routes of exposure**

<b>Inhalation</b>	Specific test data for the substance or mixture is not available.
<b>Eye contact</b>	Specific test data for the substance or mixture is not available.
<b>Skin contact</b>	Specific test data for the substance or mixture is not available.
<b>Ingestion</b>	Specific test data for the substance or mixture is not available.

**Symptoms related to the physical, chemical and toxicological characteristics****Symptoms** No information available.**Acute toxicity****Numerical measures of toxicity**  
No information available**The following values are calculated based on chapter 3.1 of the GHS document**

<b>ATEmix (oral)</b>	1,568.70 mg/kg
<b>ATEmix (dermal)</b>	7,295.40 mg/kg
<b>ATEmix (inhalation-dust/mist)</b>	9.02 mg/l

- 15.177 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 16.177 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 33.177 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
- 33.177 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
- 19.847 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Kaolin 1332-58-7	> 5000 mg/kg ( Rat )	> 5000 mg/kg ( Rat )	-
Frits, chemicals 65997-18-4	> 2000 mg/kg ( Rat )	> 2000 mg/kg ( Rat )	-
1,3,5-Triazine-1,3,5-(2H,4H,6H)-t riethanol 4719-04-4	= 763 mg/kg ( Rat )	> 4000 mg/kg ( Rat )	= 0.4 mg/L ( Rat ) 4 h = 0.338 mg/L ( Rat ) 4 h

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

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**Skin corrosion/irritation** No information available.**Serious eye damage/eye irritation** No information available.**Respiratory or skin sensitization** No information available.**Germ cell mutagenicity** No information available.**Carcinogenicity** No information available.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Zircon, cadmium orange 99749-34-5	A2	Group 1	Known	X
Quartz 14808-60-7	A2	Group 1	Known	X
Frits, chemicals 65997-18-4	A1 A3 A2	Group 1 Group 2B Group 2A	Known Reasonably Anticipated	X

**Legend****ACGIH (American Conference of Governmental Industrial Hygienists)**

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

**IARC (International Agency for Research on Cancer)**

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

**NTP (National Toxicology Program)**

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

**OSHA (Occupational Safety and Health Administration of the US Department of Labor)**

X - Present

**Reproductive toxicity** No information available.**STOT - single exposure** No information available.**STOT - repeated exposure** No information available.**Target organ effects** Liver, Kidney, Respiratory system, Eyes, Skin, Central nervous system, Blood, Central Vascular System (CVS), Lungs, Nasal Cavities, Lymphatic System, prostate, Gastrointestinal tract (GI).**Aspiration hazard** No information available.**Other adverse effects****Interactive effects****12. Ecological information****Ecotoxicity**

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Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 4719-04-4	-	LC50: =16.07mg/L (96h, Danio rerio)	-	-

**Persistence and degradability****Bioaccumulation****Component Information****Other adverse effects** No information available.**13. Disposal considerations****Disposal methods****Waste from residues/unused products** Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.**Contaminated packaging** Do not reuse empty containers.**California Hazardous Waste Status** This product contains one or more substances that are listed with the State of California as a hazardous waste.**14. Transport information****DOT** Not regulated**UN number or ID number** UN3082  
**Packing group** III**15. Regulatory information****International Inventories****TSCA** Contact supplier for inventory compliance status.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
Zircon, cadmium orange	99749-34-5	-	Unknown *
Zircon	14940-68-2	Present	Active
Nepheline syenite	37244-96-5	-	Unknown *
Kaolin	1332-58-7	Present	Active
Quartz	14808-60-7	Present	Active
Frits, chemicals	65997-18-4	Present	Active
Smectite-group minerals	12199-37-0	Present	Active



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Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	Present	Active
Ethanolamine	141-43-5	Present	Active

\*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

<b>DSL/NDSL</b>	Contact supplier for inventory compliance status.
<b>EINECS/ELINCS</b>	Contact supplier for inventory compliance status.
<b>ENCS</b>	Contact supplier for inventory compliance status.
<b>IECSC</b>	Contact supplier for inventory compliance status.
<b>KECL</b>	Contact supplier for inventory compliance status.
<b>PICCS</b>	Contact supplier for inventory compliance status.
<b>AIC</b>	Contact supplier for inventory compliance status.
<b>NZIoC</b>	Contact supplier for inventory compliance status.

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AIC** - Australian Inventory of Industrial Chemicals

**NZIoC** - New Zealand Inventory of Chemicals

**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Zircon, cadmium orange - 99749-34-5	0.1
Frits, chemicals - 65997-18-4	0.1
	1.0

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Zircon, cadmium orange 99749-34-5	-	X	-	-
Frits, chemicals 65997-18-4	-	X	-	-

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

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**US State Regulations****U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Zircon, cadmium orange 99749-34-5	X	-	X
Kaolin 1332-58-7	X	X	X
Quartz 14808-60-7	X	X	X
Frits, chemicals 65997-18-4	X	-	X
Ethanolamine 141-43-5	X	X	X

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

**16. Other information**

<b>NFPA</b>	Health hazards 0	Flammability 0	Instability 0	Special hazards -
<b>HMIS</b>	Health hazards 2	Flammability 0	Physical hazards 0	Personal protection X

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend Section 8: Exposure controls/personal protection**

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)  
 Ceiling Maximum limit value \* Skin designation

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 EPA (Environmental Protection Agency)  
 Acute Exposure Guideline Level(s) (AEGL(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 National Institute of Technology and Evaluation (NITE)  
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Library of Medicine's PubMed database (NLM PUBMED)  
 National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
 Organization for Economic Co-operation and Development Screening Information Data Set  
 World Health Organization

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**Revision Note****Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other

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materials or in any process, unless specified in the text.

**End of Safety Data Sheet**