SAFETY DATA SHEET



Revision date 26-Mar-2024 Revision Number 2

1. Identification

Product identifier

Product Name LUG-1 Black

Other means of identification

Product Code(s) FG00439

UN number or ID number UN3082

Synonyms 41141N, 41169G, 41171H, 41199N

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
Carcinogenicity	Category 1B
Specific target organ toxicity (repeated exposure)	Category 2

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Hazard statements

Danger

H302 - Harmful if swallowed

H317 - May cause an allergic skin reaction

H350 - May cause cancer

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



Physical state Liquid

Precautionary Statements - Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/clothing and eye/face protection

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

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

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see .? on this label)

IF ON SKIN: Wash with plenty of water and soap

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

Wash contaminated clothing before reuse

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

Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Unknown acute toxicity

16.817 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Other information

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

3. Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
Spinels, chromium cobalt iron black	68186-97-0	10 - 20
Frits, chemicals	65997-18-4	3 - <5
Quartz	14808-60-7	1 - <3
Kaolin	1332-58-7	1 - <3
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 - 1

4. First-aid measures

Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get

medical advice/attention.

Inhalation Remove to fresh air.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.

Consult a physician.

Skin contact Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation

or allergic reactions see a physician.

Ingestion Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious

person. Call a physician.

Most important symptoms and effects, both acute and delayed

Symptoms Itching. Rashes. Hives.

Indication of any immediate medical attention and special treatment needed

Note to physicians May cause sensitization in susceptible persons. Treat symptomatically.

5. Fire-fighting measures

surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the

chemical

Product is or contains a sensitizer. May cause sensitization by skin contact.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge

None.

Special protective equipment and precautions for fire-fighters

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 Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal

protective equipment as required. Evacuate personnel to safe areas. Keep people away

from and upwind of spill/leak.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

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. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

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
Spinels, chromium cobalt iron	TWA: 0.02 mg/m ³ Co inhalable	TWA: 0.5 mg/m ³ Cr	IDLH: 25 mg/m ³ Cr(III)
black	particulate matter	(vacated) TWA: 0.5 mg/m ³ Cr	TWA: 0.5 mg/m ³ Cr
68186-97-0		-	_
Frits, chemicals	STEL: 10 mg/m³ Zr	TWA: 10 μg/m³ As	IDLH: 5 mg/m³ As
65997-18-4	TWA: 0.01 mg/m ³ As	TWA: 50 µg/m³ Pb	IDLH: 9 mg/m ³ Cd dust and
	TWA: 0.05 mg/m ³ Pb	TWA: 0.5 mg/m³ Sb	fume
	TWA: 0.01 mg/m ³ Cd	TWA: 5 mg/m³ Zr	IDLH: 50 mg/m ³ Sb
	TWA: 0.002 mg/m ³ Cd	(vacated) TWA: 0.5 mg/m ³ Sb	IDLH: 100 mg/m³ Cu dust and
	respirable particulate matter	(vacated) TWA: 5 mg/m ³ Zr	mist
	TWA: 0.5 mg/m ³ Sb	(vacated) STEL: 10 mg/m³ Zr	IDLH: 500 mg/m ³ Mn
	TWA: 1 mg/m ³ Cu dust and mist	(vacated) Ceiling: 5 mg/m ³	IDLH: 25 mg/m³ Zr
	TWA: 3 mg/m ³ W respirable	Ceiling: 5 mg/m³ Mn	IDLH: 100 mg/m ³ Pb
	particulate matter in the absence		IDLH: 10 mg/m³ Ni
	of cobalt		Ceiling: 0.002 mg/m³ As 15 min
	TWA: 5 mg/m ³ Zr		Ceiling: 0.05 mg/m ³ V dust and
	TWA: 0.02 mg/m ³ Mn respirable		fume 15 min
	particulate matter		TWA: 0.5 mg/m ³ Sb
	TWA: 0.1 mg/m ³ Mn inhalable		TWA: 1 mg/m³ Cu dust and
	particulate matter		mist
			TWA: 1 mg/m³ Mn
			TWA: 5 mg/m³ except Zirconium
			tetrachloride Zr
			TWA: 0.050 mg/m ³ Pb
			TWA: 0.015 mg/m³ except
			Nickel carbonyl Ni
			STEL: 3 mg/m³ Mn
			STEL: 10 mg/m³ Zr
Quartz	TWA: 0.025 mg/m³ respirable	TWA: 50 μg/m³	IDLH: 50 mg/m³ respirable dust
14808-60-7	particulate matter	(vacated) TWA: 0.1 mg/m ³	TWA: 0.05 mg/m³ respirable
		respirable dust	dust
		: (250)/(%SiO2 + 5) mppcf	
		TWA respirable fraction	

		(40) ((0) 0:00 0) / 0	
		: (10)/(%SiO2 + 2) mg/m ³	
		TWA respirable fraction	
Kaolin	TWA: 2 mg/m³ particulate	TWA: 15 mg/m ³ total dust	TWA: 10 mg/m ³ total dust
1332-58-7	matter containing no asbestos	TWA: 5 mg/m³ respirable	TWA: 5 mg/m ³ respirable dust
	and <1% crystalline silica,	fraction	
	respirable particulate matter	(vacated) TWA: 10 mg/m³ total	
		dust	
		(vacated) TWA: 5 mg/m ³	
		respirable fraction	

Biological occupational exposure limits

Chemical name	ACGIH
Spinels, chromium cobalt iron black	15 μg/L - urine (Cobalt) - end of shift at end of workweek
68186-97-0	
Frits, chemicals	200 μg/L - blood (Lead) - not critical
65997-18-4	5 μg/g creatinine - urine (Cadmium) - not critical
	5 μg/L - blood (Cadmium) - not critical

Appropriate engineering controls

Showers Engineering controls

Eyewash stations Ventilation systems.

Individual protection measures, such as personal protective equipment

Wear safety glasses with side shields (or goggles). Eye/face protection

Wear suitable gloves. Hand protection

Skin and body protection Wear suitable protective clothing.

No protective equipment is needed under normal use conditions. If exposure limits are Respiratory protection

exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and

immediately after handling the product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state

Appearance

Color Odor

Odor threshold

Property Remarks • Method Values

рΗ No data available None known Melting point / freezing point No data available None known Initial boiling point and boiling rangeNo data available None known Flash point No data available None known **Evaporation rate** No data available None known **Flammability** No data available None known Flammability Limit in Air None known

Liquid

Upper flammability or explosive

No data available

limits

Lower flammability or explosive No data available

limits

No data available None known Vapor pressure

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Relative vapor density No data available None known Relative density No data available None known Water solubility No data available None known Solubility(ies) No data available None known **Partition coefficient** No data available None known No data available **Autoignition temperature** None known None known **Decomposition temperature** No data available None known Kinematic viscosity Dynamic viscosity No data available None known

Other information

Explosive properties

Oxidizing properties

VOC Content (%)

No information available
No information available
No information available

10. Stability and reactivity

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of hazardous reactions
None under normal processing.

Conditions to avoid None known based on information supplied.

Incompatible materials None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available.

Skin contact May cause sensitization by skin contact. Specific test data for the substance or mixture is

not available. Repeated or prolonged skin contact may cause allergic reactions with

susceptible persons. (based on components).

Ingestion Specific test data for the substance or mixture is not available. Harmful if swallowed. (based

on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Itching. Rashes. Hives.

Acute toxicity

Numerical measures of toxicity

No information available

The following values are calculated based on chapter 3.1 of the GHS document

 ATEmix (oral)
 1,684.30 mg/kg

 ATEmix (dermal)
 28,390.30 mg/kg

 ATEmix (inhalation-dust/mist)
 24.50 mg/l

Unknown acute toxicity

16.817 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Spinels, chromium cobalt iron black 68186-97-0	-	-	> 5.09 mg/L (Rat)4 h
Frits, chemicals 65997-18-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Kaolin 1332-58-7	> 5000 mg/kg (Rat)	> 5000 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

Skin corrosion/irritationNo information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization May cause sensitization by skin contact.

Germ cell mutagenicity No information available.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for

ingredients. May cause cancer.

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

	The table below maleated michiel each agency has noted any mg. carem as a caremogen.			
Chemical name	ACGIH	IARC	NTP	OSHA
Spinels, chromium cobalt iron black 68186-97-0	А3	Group 2B Group 3	Reasonably Anticipated	X
Frits, chemicals 65997-18-4	A1 A3 A2	Group 1 Group 2B Group 2A	Known Reasonably Anticipated	Х
Quartz 14808-60-7	A2	Group 1	Known	Х

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

Group 3 - Not Classifiable as to Carcinogenicity in 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

May cause damage to organs through prolonged or repeated exposure.

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

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

Persistence and degradability

Bioaccumulation There is no data for this product.

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 packagingDo 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

UN number or ID number UN3082

Proper shipping name Environmentally hazardous substance, liquid, n.o.s.

Transport hazard class(es) 9
Packing group III

Special Provisions 8, 146, 173, 335, IB3, T4, TP1, TP29

DOT Marine Pollutant PP

Marine pollutant Frits, chemicals

Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III,

Marine pollutant

Emergency Response Guide

Number

171

TDG

UN number or ID number UN3082

UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.

Transport hazard class(es) 9
Packing group III
Special Provisions 16, 99

Marine pollutant name Frits, chemicals.

Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

MEX

UN number or ID number UN3082

UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.

Transport hazard class(es) 9
Packing group III

Technical Name Frits, chemicals

Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

Special Provisions 274, 331, 335

ICAO (air)

UN number or ID number UN3082

UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.

Transport hazard class(es) 9
Packing group

Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

Special Provisions A97, A158, A197, A215

<u>IATA</u>

UN number or ID number UN3082

UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.

Transport hazard class(es) 9
Packing group |||

Technical Name Frits, chemicals

Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

Special Provisions A97, A158, A197

ERG Code 9L

IMDG

UN number or ID number UN3082

UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.

Transport hazard class(es)

Packing group

EmS-No

Special Provisions

Marine pollutant

9

III

F-A, S-F

274, 335, 969

P

Marine Pollutant Frits, chemicals

Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III,

Marine pollutant

RID

UN number or ID number UN3082

UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.

Transport hazard class(es) 9
Packing group III
Classification code M6

Special Provisions 274, 335, 375, 601

Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

ADR

UN number or ID number UN3082

UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.

Transport hazard class(es) 9
Packing group III
Classification code M6
Tunnel restriction code (-)

Special Provisions 274, 335, 601, 375

Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III, (-)

ADN

UN number or ID number UN3082

UN proper shipping name Environmentally hazardous substance, liquid, n.o.s.

Transport hazard class(es) 9
Packing group III
Classification code M6

Special Provisions 274, 335, 375, 601

Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Frits, chemicals), 9, III

Equipment Requirements PP

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
Spinels, chromium cobalt iron black	68186-97-0	Present	Active
Frits, chemicals	65997-18-4	Present	Active
Feldspar	68476-25-5	Present	Active
Kaolin	1332-58-7	Present	Active
Quartz	14808-60-7	Present	Active
Smectite-group minerals	12199-37-0	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-trietha nol	4719-04-4	Present	Active
Ethanolamine	141-43-5	Present	Active

DSL/NDSL Contact supplier for inventory compliance status. Contact supplier for inventory compliance status. **EINECS/ELINCS ENCS** Contact supplier for inventory compliance status. Contact supplier for inventory compliance status. **IECSC** Contact supplier for inventory compliance status. **KECL** Contact supplier for inventory compliance status. **PICCS AIIC** Contact supplier for inventory compliance status. **NZIoC** 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

AIIC - 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 %
Spinels, chromium cobalt iron black - 68186-97-0	0.1
	1.0

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
Spinels, chromium cobalt iron black 68186-97-0	-	X	-	-
Frits, chemicals 65997-18-4	-	Х	-	-

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.

US State Regulations

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	Х
Spinels, chromium cobalt iron black 68186-97-0	X	-	X
Frits, chemicals 65997-18-4	Х	-	Х
Feldspar 68476-25-5	X	-	X
Kaolin 1332-58-7	X	Х	Х
Quartz 14808-60-7	Х	Х	X
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA Health hazards 2 Flammability 0 Instability 0 Special hazards -Health hazards 2 * Flammability 0 Personal protection X **HMIS** Physical hazards 0

Chronic Hazard Star Legend * = Chronic Health Hazard

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)

Skin designation Ceiling Maximum limit value

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

Revision date

26-Mar-2024

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

End of Safety Data Sheet