



FIRED UP KILNS
and pottery supplies

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Identification

Product Name: Palladium

Other means of identification

Product Code(s) FG00008

Synonyms 35456A, 35457B

Recommended use of the chemical and restrictions on use

Recommended use

Restrictions on use

Details of the supplier of the safety data sheet

Fired Up Kilns (AUS)
20 Helen Street, Heidelberg West 3081 Victoria Australia Tel +61 (0) 3 7013 9025 hello@firedupkilns.com.au

Emergency telephone number

AUS +61(0) 3 7013 9025 Office hours.

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SECTION 2: Hazards identification

Classification

Skin sensitization	Category 1
Carcinogenicity	Category 1B

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Hazard Statements

Danger

H317 - May cause an allergic skin reaction

H350 - May cause cancer

Physical state Liquid

Precautionary Statements - Prevention

Obtain special instructions before use

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

Use personal protective equipment as required

Avoid breathing dust/fume/gas/mist/vapors/spray

Contaminated work clothing must not be allowed out of the workplace

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see .? on this label)

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



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Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

45.81015 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

45.97015 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

53.91015 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

53.91015 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

51.41015 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Other information

Very toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

SECTION 3: Composition/information on ingredients

Not applicable.

Mixture

Chemical name	CAS No	Weight-%
Quartz	14808-60-7	10 - 20
Limestone	1317-65-3	3 - <5
Copper oxide (CuO)	1317-38-0	1 - <3
Zinc oxide (ZnO)	1314-13-2	1 - <3
Kaolin	1332-58-7	1 - <3
C.I. Pigment Blue 73	68187-40-6	1 - <3
Manganese	7439-96-5 1	1 - <3
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	0.1 -1

SECTION 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

Rinse mouth

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.

SECTION 5: Fire-fighting measures

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the 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.



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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.

SECTION 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.

SECTION 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.

SECTION 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
Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable particulate matter	TWA: 50 µg/m ³ (vacated) TWA: 0.1 mg/m ³ respirable dust : (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust
Limestone 1317-65-3	-	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Copper oxide (CuO) 1317-38-0	TWA: 1 mg/m ³ Cu dust and mist	-	IDLH: 100 mg/m ³ Cu dust and mist TWA: 0.1 mg/m ³ Cu fume



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Zinc oxide (ZnO) 1314-13-2	STEL: 10 mg/m3 respirable particulate matter TWA: 2 mg/m3 respirable particulate matter	TWA: 5 mg/m3 fume TWA: 15 mg/m3 total dust TWA: 5 mg/m3 respirable fraction (vacated) TWA: 5 mg/m3 fume (vacated) TWA: 10 mg/m3 total dust (vacated) TWA: 5 mg/m3 respirable fraction (vacated) STEL: 10 mg/m3 fume	IDLH: 500 mg/m3 Ceiling: 15 mg/m3 dust TWA: 5 mg/m3 dust and fume STEL: 10 mg/m3 fume
Kaolin 1332-58-7	TWA: 2 mg/m3 inhalable particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter	TWA: 15 mg/m3 total dust TWA: 5 mg/m3 respirable fraction (vacated) TWA: 10 mg/m3 total Dust TWA: 5mg/m3 respirable fraction	TWA: 10 mg/m3 total dust TWA: 5 mg/m3 respirable dust
C.I. Pigment Blue 73 68187-40-6	TWA: 0.02 mg/m3 Co inhalable particulate matter	-	-
Manganese 7439-96-5	TWA: 0.02 mg/m3 respirable particulate matter TWA: 0.1 mg/m3 inhalable particulate matter	(vacated) TWA: 1 mg/m3 fume (vacated) STEL: 3 mg/m3 fume (vacated) Ceiling: 5 mg/m3 Ceiling: 5 mg/m3 fume	IDLH: 500 mg/m3 TWA: 1 mg/m3 fume STEL: 3 mg/m3

Biological occupational exposure limits

Chemical name	ACGIH
C.I. Pigment Blue 73 68187-40-6	15 µg/L - urine (Cobalt) - end of shift at end of workweek

Appropriate engineering controls

Engineering controls

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Hand protection

Wear suitable gloves.

Skin and body protection

Wear suitable protective clothing.

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

Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state

Liquid

Appearance

Color

Odor

Odor threshold



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<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No 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
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
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
Autoignition temperature	410 °C / 770 °F	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
<u>Other information</u>		
Explosive properties	No information available	
Oxidizing properties	No information available	
VOC Content (%)	No information available	

SECTION 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.

SECTION 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

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Itching. Rashes. Hives.
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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) 40,983.90 mg/kg

ATEmix (dermal) 16,779.50 mg/kg

ATEmix (inhalation-dust/mist) 110.80 mg/l

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45.97015 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

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Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Copper oxide (CuO) 1317-38-0	-	> 2000 mg/kg (Rat)	-
Zinc oxide (ZnO) 1314-13-2	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 5700 mg/m3 (Rat) 4 h
Kaolin 1332-58-7	> 5000 mg/kg (Rat)	> 5000 mg/kg (Rat)	-
C.I. Pigment Blue 73 68187-40-6	-	-	= 5.3 mg/L (Rat) 4 h > 5.3 mg/L (Rat) 4 h
Manganese 7439-96-5	= 9 g/kg (Rat)	-	> 5.14 mg/L (Rat) 4 h
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol 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/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization May cause an allergic skin reaction.

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.

Chemical name	ACGIH	IARC	NTP	OSHA
Quartz 14808-60-7	A2	Group1	Known	X
C.I. Pigment Blue 73 68187-40-6	A3	Group 2B	Reasonably Anticipated	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - 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



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Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Target organ effects	Kidney, Respiratory system, Eyes, Skin, Central nervous system, Blood, Lungs, Gastrointestinal tract (GI).
Aspiration hazard	No information available.
Other adverse effects	
Interactive effects	

SECTION 12: Ecological information

Ecotoxicity	Very toxic to aquatic life with long lasting effects.
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Chemical name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Zinc oxide (ZnO) 1314-13-2	-	LC50: =1.55mg/L (96h, Danio rerio)	-	-
Manganese 7439-96-5	-	LC50: >3.6mg/L (96h, Oncorhynchus mykiss)	-	-
1,3,5-Triazine-1,3,5-(2H,4 H,6H)-triethanol 4719-04-4	-	LC50: =16.07mg/L (96h, Danio rerio)	-	-

Persistence and degradability

Bioaccumulation	There is no data for this product.
Other adverse effects	No information available.

SECTION 13: Disposal considerations

Disposal methods

Waste from residues/unused products Dispose of waste in accordance with environmental legislation. Dispose of waste 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.

SECTION 14: Transport information

DOT	Not regulated
UN number or ID number	UN3082
Packing group	III



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SECTION 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
Quartz	14808-60-7	Present	Active
Nepheline syenite	37244-96-5	-	Unknown *
Limestone	1317-65-3	Present	Active
Copper oxide (CuO)	1317-38-0	Present	Active
Kaolin	1332-58-7	Present	Active
Zinc oxide (ZnO)	1314-13-2	Present	Active
C.I. Pigment Blue 73	68187-40-6	Present	Active
Iron oxide (Fe ₃ O ₄)	1317-61-9	Present	Active
Manganese	7439-96-5	Present	Active
Sodium carboxymethyl cellulose	9004-32-4	Present	Active
Smectite-group minerals	12199-37-0	Present	Active
1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	4719-04-4	Present	Active
Aluminum oxide (Al ₂ O ₃)	1344-28-1	Present	Active
D-gluco-Heptonic acid, monosodium salt, (2.xi.)-	31138-65-5	Present	Active
Iron oxide (Fe ₂ O ₃)	1309-37-1	Present	Active
Copper(I) oxide	1317-39-1	Present	Active
Barium oxide	1304-28-5	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

DSL/NDSL

Contact supplier for inventory compliance status.

EINECS/ELINCS

Contact supplier for inventory compliance status.

ENCS

Contact supplier for inventory compliance status.

IECSC

Contact supplier for inventory compliance status.

KECL

Contact supplier for inventory compliance status.

PICCS

Contact supplier for inventory compliance status.

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



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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 %
Copper oxide (CuO) - 1317-38-0	1.0
Zinc oxide (ZnO) - 1314-13-2	1.0
C.I. Pigment Blue 73 - 68187-40-6	0.1
Manganese - 7439-96-5	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 does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

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	-	-	X
Quartz 14808-60-7	X	X	X
Limestone 1317-65-3	X	X	X
Copper oxide (CuO) 1317-38-0	X	-	X
Kaolin 1332-58-7	X	X	X
Zinc oxide (ZnO) 1314-13-2	X	X	X
C.I. Pigment Blue 73 68187-40-6	X	-	X
Manganese 7439-96-5	X	X	X
Aluminum oxide (Al ₂ O ₃) 1344-28-1	X	X	X
Iron oxide (Fe ₂ O ₃) 1309-37-1	X	X	X
Copper(I) oxide 1317-39-1	X	-	X
Barium oxide 1304-28-5	X	-	X
Ethanolamine 141-43-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable



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SECTION 16: Other information

NFPA	Health hazards 2	Flammability 1	Instability 0	Special hazards -
HMIS	Health hazards 2 *	Flammability 1	Physical hazards 0	Personal protection X
<i>Chronic Hazard Star Legend</i>		<i>* = Chronic Health Hazard</i>		

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) (AELG(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 13-Sep-2022

Revision Note

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