SAFETY DATA SHEET
DIATOMACEOUS EARTH
REVISION 6, DATE 17 JAN 20

1. IDENTIFICATION

Product Name	**Diatomaceous Earth**
Other Names	Calcined diatomaceous earth [CAS#91053-39-3]; Diatomaceous earth, flux calcined; Kieselguhr; RADIOLITE F20; RADIOLITE F40; Soda ash, flux-calcined
Uses	Filtration, clarifying, and decolourising; insulation; absorbent; mild abraisive; drilling-mud thickener; extender in paints, rubber and plastic products; ceramics; paper coating; anticaking agent in fertilisers; asphalt compositions; chromatography; refractories; acid-proof liners; catalyst carrier.
Chemical Family	No Data Available
Chemical Formula	SiO2
Chemical Name	Kieselguhr, soda ash, flux calcined
Product Description	This product may contain up to 44% crystalline silica.

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) Not Scheduled

Globally Harmonised System

Hazard Classification Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Hazard Categories Carcinogenicity - Category 1A

Specific Target Organ Toxicity (Repeated Exposure) - Category 1

Pictograms

Signal Word Danger

Hazard Statements		**H350i**	May cause cancer by inhalation.
		H372	Causes damage to lungs through prolonged or repeated exposure via inhalation.
Precautionary Statements	Prevention	**P260**	Do not breathe fume/gas/mist/vapours/spray.
		P270	Do not eat, drink or smoke when using this product.
		P264	Wash hands thoroughly after handling.
		P201	Obtain special instructions before use.
		P280	Wear protective gloves/protective clothing/eye protection/face protection.
	Response	**P314**	Get medical attention if you feel unwell.
		P308 + P313	IF exposed or concerned: Get medical attention.
	Storage	**P405**	Store locked up.
	Disposal	**P501**	Dispose of contents/container in accordance with local / regional / national / international regulations.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Diatomaceous earth, flux-calcined	SiO2	68855-54-9	100 %
May contain: Quartz	SiO2	14808-60-7	<=4 %
May contain: Cristobalite	SiO2	14464-46-1	0 - <=40 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth, then drink plenty of water. Do not induce vomiting. Get medical advice/attention if you feel unwell.
Eye	IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice/attention.
Skin	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation occurs, get medical advice/attention.
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if respiratory symptoms persist or if you feel unwell.
Advice to Doctor	Treat symptomatically.
Medical Conditions Aggravated by Exposure	No information available.

5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out.
Flammability Conditions	Non-combustible; Material does not burn.
Extinguishing Media	If material is involved in a fire, use extinguishing media appropriate to surrounding fire conditions.
Fire and Explosion Hazard	No information available.
Hazardous Products of Combustion	Fire or heat may produce irritating, toxic and/or corrosive fumes.
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may pollute waterways.
Personal Protective Equipment	Wear self-contained breathing apparatus (SCBA) and chemical splash suit. SCBA and structural firefighter's uniform may provide limited protection.
Flash Point	No Data Available
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation. Do not touch or walk through spilled material - Slippery when spilt. Avoid accidents, clean up immediately. Avoid generating dust. Do not breathe dust and avoid contact with eyes, skin and clothing.
Clean Up Procedures	Collect (sweep or vacuum up) and seal in properly labelled containers or drums for disposal (see SECTION 13).
Containment	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas. Cover with damp absorbent (inert material, sand or soil).
Decontamination	Wash area down with excess water.
Environmental Precautionary Measures	Prevent entry into drains and waterways. If contamination of sewers or waterways has occurred, advise local emergency services.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away.
Personal Precautionary Measures	Use personal protective equipment as required (see SECTION 8).

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Minimise dust generation and accumulation. Do not breathe dust and avoid contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8).
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep containers tightly closed when not in use - check regularly for spills. Keep away from foodstuffs and incompatible materials (see SECTION 10).
Container	Keep in the original container. Continue to follow all SDS/label warnings when handling empty containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	For Silica-Amorphous, Diatomaceous earth (un-calcined) (CAS No. 61790-53-2): - Safe Work Australia Exposure Standard: TWA = 10 mg/m3; This value is for inhalable dust containing no asbestos and < 1% crystalline silica (a). For Silica-Crystalline (respirable dust): - Safe Work Australia Exposure Standard for Cristobalite (CAS No. 14464-46-1): TWA = 0.05 mg/m3; (Carc. 1A). - Safe Work Australia Exposure Standard for Quartz (CAS No. 14808-60-7): TWA = 0.05 mg/m3; (Carc. 1A).
Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.
Personal Protection Equipment	- Respiratory protection: Wear respiratory protection in case of inadequate ventilation or if an inhalation risk exists. Recommended: Dust mask/particulate filter respirator (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses with side-shields or goggles. - Hand protection: Handle with gloves. Recommended: Impervious gloves. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Overalls, safety shoes.
Special Hazards Precaustions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Fine powder
Odour	Odourless
Colour	White
pH	9 - 10.5
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	No Data Available
Freezing Point	No Data Available
Solubility	Negligible solubility in water
Specific Gravity	2.3 (Water = 1)
Flash Point	No Data Available
Auto Ignition Temp	No Data Available

Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	NIL
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	No information available.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	Non-combustible; Material does not burn.
Reactions That Release Gases or Vapours	Fire/decomposition may produce irritating, toxic and/or corrosive fumes.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	Reacts with hydrofluoric acid.
Chemical Stability	Stable under normal conditions of use.
Conditions to Avoid	Avoid generating dust.
Materials to Avoid	Incompatible/reactive with hydrofluoric acid.
Hazardous Decomposition Products	Fire/decomposition may produce irritating, toxic and/or corrosive fumes.
Hazardous Polymerisation	Hazardous polymerisation will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	- Acute toxicity: No adverse effects expected; however, large amounts may cause nausea and vomiting. - Skin corrosion/irritation: May cause mechanical irritation. Can cause skin to dry out. - Eye damage/irritation: May cause physical discomfort/irritation to the eyes due to particulate nature.

- Respiratory/skin sensitisation: No information available.
- Germ cell mutagenicity: No information available.
- Carcinogenicity: May cause cancer by inhalation. For amorphous silica: This material has been classified by the International Agency for Research on Cancer (IARC) as a Group 3 agent - The agent is not classifiable as to its carcinogenicity to humans. For crystalline silica (inhaled in the form of respirable quartz or cristobalite from occupational sources): This material has been classified by the International Agency for Research on Cancer (IARC) as a Group 1 agent - The agent is carcinogenic to humans.
- Reproductive toxicity: No information available.
- STOT (single exposure): Breathing in dust may result in respiratory irritation.
- STOT (repeated exposure): Causes damage to organs through prolonged or repeated inhalation exposure. Long-term exposure to mineral dust which contains crystalline silica can cause the lung disease silicosis.
- Aspiration toxicity: No information available.

Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	This material is not expected to be harmful to aquatic life; However, used material which has become contaminated may have significantly different characteristics based on the contaminant and should be evaluated accordingly.
Persistence/Degradability	No information available.
Mobility	No information available.
Environmental Fate	Prevent entry into drains and waterways.
Bioaccumulation Potential	No information available.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of contents/container in accordance with local/regional/national regulations.
Special Precautions for Land Fill	Used material which has become contaminated may have significantly different characteristics based on the contaminant and should be evaluated accordingly.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	Diatomaceous Earth
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (Malaysia)
ADR Code

Proper Shipping Name	Diatomaceous Earth
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (New Zealand)
NZS5433

Proper Shipping Name	Diatomaceous Earth
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (United States of America)
US DOT

Proper Shipping Name	Diatomaceous Earth
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Sea Transport
IMDG Code

Proper Shipping Name	Diatomaceous Earth
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
EMS	No Data Available
Marine Pollutant	No

Comments	NON-DANGEROUS GOODS: Not regulated for SEA transport.

Air Transport
IATA DGR

Proper Shipping Name	Diatomaceous Earth
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for AIR transport.

National Transport Commission (Australia)
Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

15. REGULATORY INFORMATION

General Information	No Data Available
Poisons Schedule (Aust)	Not Scheduled

Environmental Protection Authority (New Zealand)
Hazardous Substances and New Organisms Amendment Act 2015

Approval Code	Additives Process Chemicals and Raw Materials Carcinogenic Group Standard 2020 HSR002512

National/Regional Inventories

Australia (AIIC)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	Not Determined
Europe (REACh)	Not Determined
Japan (ENCS/METI)	Not Determined
Korea (KECI)	Not Determined
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Listed

Philippines (PICCS)	Not Determined
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Not Determined

16. OTHER INFORMATION

Related Product Codes	DIEART1025, DIEART1027, DIEART2100, DIEART2200, DIEART2300, DIEART3200, DIEART4200, DIEART5200, DIEART5201, DIEART5202, DIEART5600, DIEART6100, DIEART6101, DIEART6102, DIEART6150, DIEART6200, DIEART6201, DIEART6205, DIEART6210, DIEART6250, DIEART6251, DIEART6252, DIEART6300, DIEART6400, DIEART6450, DIEART6600, DIEART6700, DIEART7200, DIEART8400, DIEART9100, DIEART9200, DIEART9700, DIEART9800
Revision	6
Revision Date	17 Jan 2020
Reason for Issue	updated sds
Key/Legend	< Less Than > Greater Than **AICS** Australian Inventory of Chemical Substances **atm** Atmosphere **CAS** Chemical Abstracts Service (Registry Number) **cm^2** Square Centimetres **CO2** Carbon Dioxide **COD** Chemical Oxygen Demand **deg C (°C)** Degrees Celcius **EPA (New Zealand)** Environmental Protection Authority of New Zealand **deg F (°F)** Degrees Farenheit **g** Grams **g/cm^3** Grams per Cubic Centimetre **g/l** Grams per Litre **HSNO** Hazardous Substance and New Organism **IDLH** Immediately Dangerous to Life and Health **immiscible** Liquids are insoluable in each other. **inHg** Inch of Mercury **inH2O** Inch of Water **K** Kelvin **kg** Kilogram **kg/m^3** Kilograms per Cubic Metre **lb** Pound **LC50** LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours. **LD50** LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals. **ltr** or **L** Litre **m^3** Cubic Metre **mbar** Millibar **mg** Milligram **mg/24H** Milligrams per 24 Hours **mg/kg** Milligrams per Kilogram **mg/m^3** Milligrams per Cubic Metre **Misc** or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present. **mm** Millimetre **mmH2O** Millimetres of Water **mPa.s** Millipascals per Second

N/A Not Applicable
NIOSH National Institute for Occupational Safety and Health
NOHSC National Occupational Heath and Safety Commission
OECD Organisation for Economic Co-operation and Development
Oz Ounce
PEL Permissible Exposure Limit
Pa Pascal
ppb Parts per Billion
ppm Parts per Million
ppm/2h Parts per Million per 2 Hours
ppm/6h Parts per Million per 6 Hours
psi Pounds per Square Inch
R Rankine
RCP Reciprocal Calculation Procedure
STEL Short Term Exposure Limit
TLV Threshold Limit Value
tne Tonne
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight