

1. IDENTIFICATION

| | |
|----------------------------|---|
| Product Name | Silver Impregnated Activated Carbon (Non-DG) |
| Other Names | No Data Available |
| Uses | No Data Available |
| Chemical Family | No Data Available |
| Chemical Formula | C |
| Chemical Name | Silver Impregnated Activated Carbon (Non-DG) |
| Product Description | No Data Available |

Contact Details of the Supplier of this Safety Data Sheet

| Organisation | Location | Telephone |
|-------------------------|--|------------------|
| Redox Pty Ltd | 2 Swettenham Road Minto NSW 2566 Australia | +61-2-97333000 |
| Redox Pty 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 | Long-term Hazard To The Aquatic Environment - Category 2 | | |
| Pictograms |  | | |
| Signal Word | Warning | | |
| Hazard Statements | H411 | Toxic to aquatic life with long lasting effects. | |
| Precautionary Statements | Prevention | P273 | Avoid release to the environment. |
| | Response | P391 | Collect spillage. |

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 |
|------------------|-------------------|------------|---------------|
| Activated Carbon | No Data Available | 7440-44-0 | >99.45 % |
| | Ag | 7440-22-4 | 0.45 - 0.55 % |

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

| | |
|--|---|
| Swallowed | Rinse mouth with water. Give 1/2 pint of warm water to drink. Do NOT induce vomiting. Seek medical attention urgently. |
| Eye | Promptly flush with running water for 15 minutes including water under eyelids. Obtain medical attention. |
| Skin | Wash affected area well with water. Remove clothing, clean and dry thoroughly before re-use. Get medical help if irritation develops. |
| Inhaled | Remove to fresh air. Get medical help if irritation develops. |
| Advice to Doctor | Treat symptomatically based on individual reactions of patient and judgement of doctor. |
| Medical Conditions Aggravated by Exposure | No information available on medical conditions aggravated by exposure to this product. |

5. FIRE FIGHTING MEASURES

General Measures

Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk. Avoid contact between spattered carbon and water. Do not release into sewerage system, pipes, water streaming and ground water.

Product is a non-flammable solid.

| | |
|---|--|
| Flammability Conditions | |
| Extinguishing Media | Water fog, foam, dry chemical. |
| Fire and Explosion Hazard | Product is a combustible solid. |
| Hazardous Products of Combustion | Material will burn in a fire, releasing combustion products of carbon monoxide and carbon dioxide. Other material adsorbed onto the carbon may also be released. |
| Special Fire Fighting Instructions | Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment. |
| Personal Protective Equipment | Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves). |
| Flash Point | No Data Available |
| Lower Explosion Limit | No Data Available |
| Upper Explosion Limit | No Data Available |
| Auto Ignition Temperature | >350 °C |
| Hazchem Code | No Data Available |

6. ACCIDENTAL RELEASE MEASURES

| | |
|---|--|
| General Response Procedure | Avoid accidents, clean up immediately. Slippery when spilt. Eliminate all sources of ignition. Increase ventilation. Avoid generating dust. Use clean, non-sparking tools and equipment. Notify safety personnel for large spills. |
| Clean Up Procedures | Contain and sweep/shovel up spills with dust binding material or use an industrial vacuum cleaner. Transfer to a suitable, labelled container and dispose of promptly. |
| Containment | Stop leak if safe to do so. Isolate the danger area. |
| Environmental Precautionary Measures | Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management. |
| Evacuation Criteria | Evacuate all unnecessary personnel. |
| Personal Precautionary Measures | Personnel involved in the clean-up should wear full protective clothing as listed in section 8. |

7. HANDLING AND STORAGE

| | |
|------------------|---|
| Handling | Follow good handling and housekeeping procedures, avoid spills, accumulation of dust and generation of airborne dust. Avoid prolonged contact with skin and eyes. Avoid inhalation of dust. Wear protective gloves and safety glasses or goggles. Use in a well ventilated area. |
| Storage | Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from incompatible materials as listed in section 10. Keep away from strong oxidisers, strong acids, ignition sources, combustible materials, and heat. This product is not classified dangerous for transport according to The Australian Code for the Transport of Dangerous Goods By Road and Rail. |
| Container | Store in original packaging as approved by manufacturer. |

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

| | |
|----------------|--|
| General | <p>No exposure standard has been established for this product by the Australian Safety and Compensation Council (ASCC). However, the exposure standard for dust not otherwise specified is 10mg/m³ (for inspirable dust) and 3mg/m³ (for respirable dust).</p> <p>Supplier Information: Maximum permissible exposure limit for inert dust: 6 mg/m³. When exceeded, an irritation of respiratory tract is possible.</p> <p>NOTE: The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week.</p> <p>These exposure standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.</p> <p>No Data Available</p> |
|----------------|--|

| | |
|--------------------------------------|---|
| Exposure Limits | |
| Biological Limits | No information available on biological limit values for this product. |
| 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 | RESPIRATOR: Wear an effective dust mask where dusts/vapours are generated and engineering controls are inadequate (AS1715/1716). EYES: Wear safety glasses with side shields, safety goggles or a face shield, especially in dusty conditions. Provide an eye wash station nearby (AS1336/1337). HANDS: Wear gloves (AS2161). CLOTHING: Long-sleeved overalls and safety footwear (AS3765/2210). |
| Work Hygienic Practices | Do not eat, drink or smoke while handling this product. |

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---------------------------------------|---|
| Physical State | Solid |
| Appearance | Extruded, Granules, Powder |
| Odour | Typical |
| Colour | Black |
| pH | 7 - 11 |
| 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 | Insoluble |
| Specific Gravity | No Data Available |
| Flash Point | No Data Available |
| Auto Ignition Temp | >350 °C |
| Evaporation Rate | No Data Available |
| Bulk Density | approx. 200 - 700g/L |
| Corrosion Rate | No Data Available |
| Decomposition Temperature | No Data Available |
| Density | 200 - 700 kg/m ³ |
| 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 | No Data Available |
| VOC Volume | No Data Available |
| Additional Characteristics | TGA/TDA under air: 307 deg C (medium reactivity) MIE of dust cloud: >1200mJ (low propensity) Explosivity severity: P max: 6.3 bar (20l sphere) VMP: 175 bar/s Kmax or Kst: 47 bar.m.s ⁻¹ Class: St1 |
| Potential for Dust Explosion | Under normal conditions no danger of explosion. In unfavorable conditions may form an explosive dust / air mixture |

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|---|-------------------|
| Fast or Intensely Burning Characteristics | No Data Available |
| Flame Propagation or Burning Rate of Solid Materials | No Data Available |
| Non-Flammables That Could Contribute Unusual Hazards to a Fire | No Data Available |
| Properties That May Initiate or Contribute to Fire Intensity | No Data Available |
| Reactions That Release Gases or Vapours | No Data Available |
| Release of Invisible Flammable Vapours and Gases | No Data Available |

10. STABILITY AND REACTIVITY

| | |
|---|--|
| General Information | Combustible solid. |
| Chemical Stability | Product is stable under normal conditions of use, storage and temperature. |
| Conditions to Avoid | Heat, high temperature and ignition sources, strong oxidisers and combustible materials |
| Materials to Avoid | Keep away from strong oxidisers, strong acids, ignition sources, combustible materials, and heat. |
| Hazardous Decomposition Products | On burning, this product will emit toxic fumes, including those of CO and CO ₂ emissions. |
| Hazardous Polymerisation | None |

11. TOXICOLOGICAL INFORMATION

| | |
|----------------------------|---|
| General Information | The limit value for particulates Not Otherwise Classified is 10 mg/m ³ |
| Eye/Irritant | Prolonged or repeated exposure to dust may cause eye irritation. |
| Inhalation | Prolonged or repeated exposure to dust may cause respiratory tract irritation. Never enter a confined space containing activated carbon as it will adsorb oxygen and asphyxiation may result. |
| Carcinogen Category | No Data Available |

12. ECOLOGICAL INFORMATION

| | |
|----------------------------------|---|
| Ecotoxicity | No specific effects on environment. DO not throw into natural environment in case of environment modification. Insoluble in aqueous environment, the product is separable by filtration or sedimentation. |
| Persistence/Degradability | No Data Available |
| Mobility | Dust in the air. |
| Environmental Fate | Avoid contact between spattered carbon and water. No throw into sewerage system, pipes, water streaming and ground water. |
| Bioaccumulation Potential | No Data Available |
| Environmental Impact | No Data Available |

13. DISPOSAL CONSIDERATIONS

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|----------------------------|---|
| General Information | Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility. |
|----------------------------|---|

Special Precautions for Land Fill Contact a specialist disposal company or the local waste regulator for advice.

14. TRANSPORT INFORMATION

General Information

UN1362: Not Classified as Dangerous Goods Due to Special provisions 223 (A3) and 925:

SP 223 (A3):

If the chemical or physical properties of a substance covered by this description are such that, when tested, it does not meet the established defining criteria for the class or division listed in Column C, or any other class or division, it is not subject to these Regulations.

SP 925:

The provisions of this Code do not apply to:

- non-activated carbon blacks of mineral origin;
- a consignment of carbon if it passes the tests for self-heating substances as reflected in the UN Manual of Tests and Criteria (see 33.3.1.3.3), and is accompanied by a certificate from a laboratory accredited by the competent authority, stating that the product to be loaded has been correctly sampled by trained staff from that laboratory and that the sample was correctly tested and has passed the test; and
- carbons made by a steam activation process

Third party testing demonstrates that dangerous self-heating can occur with this material in a 100 mm sample cube at 140 deg C, but did not occur in a sample cube of 25 mm at 140 deg C, nor in a sample cube of 100 mm at a temperature of 120 deg C.

Land Transport (Australia)

ADG Code

| | |
|-----------------------------|-------------------|
| Proper Shipping Name | ACTIVATED CARBON |
| 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 | 223; 925 |

Land Transport (Malaysia)

ADR

| | |
|-----------------------------|-------------------|
| Proper Shipping Name | ACTIVATED CARBON |
| 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 | 223;925 |

Land Transport (Malaysia)

ADR

| | |
|-----------------------------|-------------------|
| Proper Shipping Name | ACTIVATED CARBON |
| 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 | 223; 925 |

Land Transport (New Zealand)

NZS5433

| | |
|-----------------------------|-------------------|
| Proper Shipping Name | ACTIVATED CARBON |
| 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 | 223; 925 |

Land Transport (Sri Lanka)

| | |
|-----------------------------|-------------------|
| Proper Shipping Name | ACTIVATED CARBON |
| 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 | 223; 925 |

Land Transport (United States of America)

US DOT

| | |
|-----------------------------|-------------------|
| Proper Shipping Name | ACTIVATED CARBON |
| 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 | 223;925 |

Sea Transport

IMDG Code

| | |
|-----------------------------|-------------------|
| Proper Shipping Name | ACTIVATED CARBON |
| 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 | 223; 925 |
| EMS | No Data Available |
| Marine Pollutant | No |

Air Transport

IATA DGR

| | |
|-----------------------------|-------------------|
| Proper Shipping Name | ACTIVATED CARBON |
| 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 | A3 (223) |

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 HSR001271

National/Regional Inventories

| | |
|----------------------------------|----------------|
| Australia (AICS) | Listed |
| Canada (DSL) | Not Determined |
| Canada (NDSL) | Not Determined |
| China (IECSC) | Not Determined |
| Europe (EINECS) | 931-328-0 |
| 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 |

Additional Information IMPORTANT TRANSPORT INFORMATION: Product is classified as UN1362, Dangerous Goods Classification 4.2 (Substances liable to spontaneous combustion). However, this product has been tested and it does not meet the established defining criteria for the UN classification 4.2, therefore following special provisions apply to the below listed international transport regulations: ROAD/RAIL TRANSPORT: Special Provision 223 (ADG7) SEA TRANSPORT : Special Provisions 223, 925 (IMDG 34) AIR TRANSPORT : Special provision A3 (DGR 2009, 50th Edition)

16. OTHER INFORMATION

| | |
|------------------------------|--|
| Related Product Codes | ACCARB3350 |
| Revision | 2 |
| Revision Date | 21 Sep 2015 |
| Reason for Issue | Updated sds |
| Key/Legend | <p>< Less Than > Greater Than AICS Australian Inventory of Chemical Substances atm Atmosphere CAS Chemical Abstracts Service (Registry Number) cm² 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/cm³ 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/m³ 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 m³ Cubic Metre mbar Millibar mg Milligram mg/24H Milligrams per 24 Hours mg/kg Milligrams per Kilogram mg/m³ 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 Health 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</p> |

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