

1. IDENTIFICATION

Product Name	Activated Carbon (Non-DG)
Other Names	Activated Carbon - High Density Skeleton (AC - HDS); Carbon; EcoSorb CS; PICATIFF TA55
Uses	Adsorbent - for industrial, professional and consumer use.
Chemical Family	No Data Available
Chemical Formula	C
Chemical Name	Activated Carbon
Product Description	A porous, amorphous, high surface area adsorbent material composed largely of elemental Carbon.

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

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) Not Scheduled

Globally Harmonised System

Hazard Classification	NOT hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Signal Word	None

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	C	7440-44-0	100 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

- Swallowed** If swallowed: Rinse mouth, then drink plenty (at least 500 ml) of water. Do NOT induce vomiting. Immediately call a Poison Centre or doctor/physician. Never give anything by mouth to an unconscious person.
- Activated Carbon may cause congestion/blockage if large amounts are swallowed.
- Eye** Eye contact: Immediately flush eyes with running water for several minutes, occasionally lifting the upper and lower eyelids. 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** Skin contact: Remove material from skin immediately. Flush skin with running water for several minutes and/or 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. Apply resuscitation if victim is not breathing. Administer oxygen if breathing is difficult. Get medical advice/attention if experiencing respiratory symptoms, or if you feel unwell.
- Advice to Doctor** Treat symptomatically.
- Medical Conditions Aggravated by Exposure** Medication efficiency can be reduced by the adsorbing properties of Activated Carbon.

5. FIRE FIGHTING MEASURES

- General Measures** After a fire, smouldering hotspots within the activated carbon may be present for a long time, and may re-ignite after fire is extinguished. If safe to do so, move undamaged containers from fire area. Cool containers with flooding quantities of water until well after fire is out.
- Flammability Conditions** Combustible solid.
- Extinguishing Media** Use water spray or mist, Carbon dioxide (CO2), foam or powder for extinction. Do NOT use water jet in confined areas.
- Fire and Explosion Hazard** Dust may form explosive mixtures with air.
- Hazardous Products of Combustion** Fire will often produce a thick black smoke. In the event of fire, Carbon monoxide, Carbon dioxide and other decomposition products (from the saturated Activated Carbon) may be formed.
- Special Fire Fighting Instructions** Exposure to decomposition products may be hazardous to health. Activated Carbon which has been allowed to smoulder for a long time in a confined space may accumulate Carbon monoxide above its lower explosion limit.
- Personal Protective Equipment** Due to the toxicity of the gas emitted on thermal decomposition of the products, fire-fighting personnel are to be equipped with self-contained breathing apparatus.
- 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	In case of spillage, clean up immediately. Ensure adequate ventilation - Ventilate enclosed spaces before entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flame). Do not touch or walk through spilled material. Avoid breathing dust. Avoid contact with eyes and skin.
Clean Up Procedures	Use clean non-sparking tools to collect material and place it into suitable containers for later disposal. If appropriate, moisten first to prevent dusting.
Containment	Stop leak if safe to do so. Contain spillage - Prevent entry into waterways, drains or confined areas. Prevent dust cloud.
Decontamination	No information available.
Environmental Precautionary Measures	Prevent any material from entering drains or waterways.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away.
Personal Precautionary Measures	Workers are to be equipped with suitable personal protective equipment (see Section 8).

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash fountains should be provided within the immediate work area for emergency use. Ensure adequate ventilation (Local exhaust ventilation is recommended). Handle in accordance with good industrial hygiene and safety practice. Prevent dust generation. Keep away from heat and ignition sources. In case of spillage, clean up immediately. Avoid breathing dust. Avoid contact with eyes and skin. For personal protection, see Section 8.
Storage	Store in a cool, dry and well-ventilated area. Prevent access by unauthorised personnel. Keep container tightly closed. Keep away from heat and ignition sources. Keep away from strong oxidising agents, strong acids, solvents and combustible materials. Ensure adequate containment. Protect from moisture/humidity/dampness - Storage of wet activated carbon in a closed area can deplete Oxygen from air. - Whenever workers enter a vessel containing activated carbon, the oxygen content should be determined and work procedures for potentially low Oxygen areas should be followed.
Container	Keep in the original packaging, or packaging made of an identical material.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	Contains no substances with occupational exposure limit values. For dusts from solid substances without specific occupational exposure standards: - New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m ³ (total). TWA = 3 mg/m ³ (respirable). - OSHA PEL (Particulates not otherwise regulated): TWA = 15 mg/m ³ (total). TWA = 5 mg/m ³ (respirable). Derived no effect level (DNEL): - Workers, Inhalation (Short-term, local effects): 3 mg/m ³ - Workers, Inhalation (Long-term, systemic effects): 3 mg/m ³ - Consumers, Inhalation (Short-term, local effects): 0.5 mg/m ³ - Consumers, Inhalation (Long-term, systemic effects): 0.5 mg/m ³
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 a disposable half-mask dust filter (Category FFP2); Particle filter according to applicable standards: P (White). Eye/face protection: Wear protective goggles when handling powders or in case of dust emission. Hand protection: Wear suitable protective gloves in case of prolonged or repeated skin contact. Skin/body protection: No recommendation.
Special Hazards Precautions	Wet Activated Carbon depletes oxygen from air and, therefore, dangerously low levels of oxygen may be encountered. Whenever workers enter a vessel containing activated carbon, the oxygen content should be determined and work procedures for potentially low oxygen areas should be followed.
Work Hygienic Practices	Use personal protective equipment that is clean and has been properly maintained. Store personal protective equipment in a clean place, away from the work area. Never eat, drink or smoke during use. Work clothing should be laundered regularly. Remove and wash contaminated clothing before re-using.



9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Granules
Odour	None
Colour	Black
pH	7 - 11 (aqueous solution)
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 in water [OECD Guideline 105]
Specific Gravity	No Data Available
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	200 - 700 kg/m ³ [ASTM D2854]
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	No Data Available
Potential for Dust Explosion	Dusts can form an explosive mixture with air.
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	Combustible solid.
Reactions That Release Gases or Vapours	In the event of fire, Carbon monoxide, Carbon dioxide and other decomposition products (from the saturated Activated Carbon) may be formed.
Release of Invisible Flammable Vapours and Gases	No information available.



10. STABILITY AND REACTIVITY

Chemical Stability	Stable under the recommended handling and storage conditions
Conditions to Avoid	Prevent dust generation. Keep away from heat and ignition sources.
Materials to Avoid	Incompatible with strong oxidising agents, strong acids, solvents and combustible materials.
Hazardous Decomposition Products	Thermal decomposition may release/form: Carbon monoxide, Carbon dioxide and other decomposition products (from the saturated Activated Carbon).
Hazardous Polymerisation	No information available.

11. TOXICOLOGICAL INFORMATION

General Information	This substance does not present a health hazard with the exception of possible occupational exposure thresholds (see Section 8). Information on possible routes of exposure: - Ingestion: When large amounts are ingested orally, congestion may occur. - Inhalation: In the event of dust formed by mechanical action, this dust may cause irritation by inhalation. - Eye contact: In the event of dust formed by mechanical action, this dust may cause irritation in contact with eyes. Based on the physical and chemical properties of activated carbons, the absence of effects on toxicological studies and the therapeutic use of activated carbons as adsorbing agents for the treatment of acute poisoning and acute diarrhoea, it can be expected that Activated Carbon is not absorbed via the oral, dermal and inhalation routes.
Acute	
Ingestion	Acute toxicity - Oral: - LD50, Rat: >2,000 mg/kg [OECD Guideline 423].
Inhalation	Acute toxicity - Inhalation (dust/mist): - LC50, Rat: >64.4 mg/l [OECD Guideline 403].
Skin Irritant	Skin corrosion/irritation: - Rabbit: No observed effect [OECD Guideline 404].
Eye Irritant	Eye damage/irritation: - Corneal haze: Rabbit (72 h): Average score = 0 [OECD Guideline 405]. - Iritis: Rabbit (72 h): Average score = 0 [OECD Guideline 405]. - Conjunctival redness: Rabbit (72 h): Average score = 0.67 [OECD Guideline 405]. - Conjunctival oedema: Rabbit (72 h): Average score: 0.33 [OECD Guideline 405].
Sensitisation	Respiratory/skin sensitisation: - Local lymph node assay (LLNA), Mouse: Non-sensitising [OECD Guideline 429].
Mutagenicity	Germ cell mutagenicity: - Bacterial Reverse Mutation Assay (in vitro): Negative [OECD Guideline 471]. - Ames test (in vitro) with/without metabolic activation: Negative (Species: S. typhimurium TA1535).
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	No toxicity is expected.
Persistence/Degradability	Activated Carbon - HDS type is a refractory material, and not amenable to break down by any natural chemical or enzymatic processes; and cannot be rendered into a soluble form capable of being absorbed.
Mobility	No information available (The substance is insoluble).
Environmental Fate	No Data Available
Bioaccumulation Potential	The substance has a very low potential to bioaccumulate in aquatic species (BCF: <10). The substance has no logKow, the particle size will impede passing membranes (particle size: >0.5µm) and is not soluble in water. The bioaccumulation study is thus unfeasible.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information Dispose of contents/container in accordance with local/regional/national regulations. Recycle or dispose of waste via a certified contractor. Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Special Precautions for Land Fill Contaminated packaging: Empty containers completely. Keep labels on containers. Recycle or dispose via a certified contractor.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG 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 SP-223
Comments NON-DANGEROUS GOODS: Not regulated for LAND transport.
 SP-223: Does not meet the defined criteria, after having been submitted to the 4.2 test.

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 SP-223; SP-925
EMS No Data Available
Marine Pollutant No
Comments NON-DANGEROUS GOODS: Not regulated for SEA transport.

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 SP-A3 (223)
Comments NON-DANGEROUS GOODS: Not regulated for AIR transport.
 SP-A3: Does not meet the defined criteria, after having been submitted to the 4.2 test.

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

National/Regional Inventories

Australia (AICS)	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

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 ACCARB0100, ACCARB0101, ACCARB0200, ACCARB0201, ACCARB0300, ACCARB0301, ACCARB0400, ACCARB0401, ACCARB0440, ACCARB0450, ACCARB0451, ACCARB0455, ACCARB0460, ACCARB0470, ACCARB0500, ACCARB0501, ACCARB0510, ACCARB0600, ACCARB0700, ACCARB0701, ACCARB0710, ACCARB0800, ACCARB0801, ACCARB0900, ACCARB0901, ACCARB1000, ACCARB1001, ACCARB1002, ACCARB1003, ACCARB1004, ACCARB1005, ACCARB1006, ACCARB1007, ACCARB1008, ACCARB1009, ACCARB1010, ACCARB1011, ACCARB1012, ACCARB1013, ACCARB1014, ACCARB1015, ACCARB1016, ACCARB1100, ACCARB1101, ACCARB1200, ACCARB1201, ACCARB1250, ACCARB1255, ACCARB1300, ACCARB1301, ACCARB1302, ACCARB1303, ACCARB1350, ACCARB1400, ACCARB1401, ACCARB1450, ACCARB1500, ACCARB1501, ACCARB1502, ACCARB1503, ACCARB1505, ACCARB1600, ACCARB1700, ACCARB1701, ACCARB1800, ACCARB1801, ACCARB1802, ACCARB1803, ACCARB1804, ACCARB1805,



ACCARB1900, ACCARB1901, ACCARB2000, ACCARB2001, ACCARB2100, ACCARB2200, ACCARB2201, ACCARB2202, ACCARB2300, ACCARB2301, ACCARB2400, ACCARB2401, ACCARB2402, ACCARB2500, ACCARB2501, ACCARB2502, ACCARB2510, ACCARB2515, ACCARB2516, ACCARB2517, ACCARB2518, ACCARB2600, ACCARB2700, ACCARB2800, ACCARB2900, ACCARB3000, ACCARB3001, ACCARB3100, ACCARB3101, ACCARB3200, ACCARB3205, ACCARB3210, ACCARB3300, ACCARB3301, ACCARB3302, ACCARB3500, ACCARB3501, ACCARB3600, ACCARB3601, ACCARB3602, ACCARB3650, ACCARB3670, ACCARB3680, ACCARB3700, ACCARB3701, ACCARB3705, ACCARB3850, ACCARB4000, ACCARB4001, ACCARB4002, ACCARB4010, ACCARB4020, ACCARB4030, ACCARB4031, ACCARB4040, ACCARB4050, ACCARB4060, ACCARB4061, ACCARB4100, ACCARB4101, ACCARB4200, ACCARB4201, ACCARB4300, ACCARB4301, ACCARB4400, ACCARB4401, ACCARB4402, ACCARB4500, ACCARB4600, ACCARB4700, ACCARB4701, ACCARB4800, ACCARB4801, ACCARB5000, ACCARB5010, ACCARB5100, ACCARB5200, ACCARB5300, ACCARB5500, ACCARB5550, ACCARB5555, ACCARB5600, ACCARB5700, ACCARB5701, ACCARB5800, ACCARB5801, ACCARB5900, ACCARB5901, ACCARB5902, ACCARB6000, ACCARB6100, ACCARB6200, ACCARB6201, ACCARB6300, ACCARB6400, ACCARB6500, ACCARB6600, ACCARB6601, ACCARB6700, ACCARB6701, ACCARB6800, ACCARB6801, ACCARB6900, ACCARB6901, ACCARB6902, ACCARB7000, ACCARB7100, ACCARB7101, ACCARB7200, ACCARB7201, ACCARB7300, ACCARB7301, ACCARB7400, ACCARB7401, ACCARB7450, ACCARB7500, ACCARB7501, ACCARB7600, ACCARB7601, ACCARB7700, ACCARB7701, ACCARB7800, ACCARB7801, ACCARB7900, ACCARB7901, ACCARB8000, ACCARB8001, ACCARB8002, ACCARB8003, ACCARB8004, ACCARB8050, ACCARB8100, ACCARB8101, ACCARB8102, ACCARB8200, ACCARB8201, ACCARB8300, ACCARB8301, ACCARB8302, ACCARB8303, ACCARB8400, ACCARB8401, ACCARB8420, ACCARB8450, ACCARB8500, ACCARB8501, ACCARB8502, ACCARB8600, ACCARB8601, ACCARB8602, ACCARB8700, ACCARB8701, ACCARB8800, ACCARB8801, ACCARB8850, ACCARB8851, ACCARB8852, ACCARB9000, ACCARB9100, ACCARB9200, ACCARB9300, ACCARB9400, ACCARB9500, ACCARB9600, ACCARB9700, ACCARB9800, ACCARB9900

Revision

3

Revision Date

07 Jan 2016

Key/Legend

< 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
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

