

SAFETY DATA SHEET



ILUKA

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name **ACTIVATED CARBON**

Synonyms AC1-1000 • AC1-1100 • AC1-1200 • AC1-800 • AC1-900 • AC2-1000 • AC2-700 • AC2-800 • AC2-900 • AC3-700 • AC3-800 • AC3-900 • AC4-1000 • AC4-1200 • CHAR • GRANULAR ACTIVATED CARBON

1.2 Uses and uses advised against

Uses ABSORBENT • FILTRATION AID

1.3 Details of the supplier of the product

Supplier name **ILUKA RESOURCES LIMITED**

Address Level 23, 140 St Georges Terrace, Perth, WA, 6000, AUSTRALIA

Telephone +61 8 9360 4700

Fax +61 8 9360 4777

Website <http://www.iluka.com>

1.4 Emergency telephone numbers

Emergency +61 8 9780 3555; +61 13 11 26 (PIC)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

NOT CLASSIFIED AS HAZARDOUS UNDER OSHA HAZARD COMMUNICATION STANDARD 29 CFR 1910.1200

2.2 GHS Label elements

No signal word, pictograms, hazard or precautionary statements have been allocated.

2.3 Other hazards

No information provided.

HMIS

Health		1
Flammability		1
Physical Hazard		0
Personal Protection		0

NFPA



3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

Ingredient	CAS Number	EC Number	Content
ACTIVATED CARBON	7440-44-0	231-153-3	100%

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye If in eyes, rinse cautiously with water for several minutes, or until particle is removed. Remove contact lenses if present and easy to do - continue rinsing.

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Inhalation	If inhaled move to fresh air and keep comfortable.
Skin	If skin or hair contact occurs, brush off loose particles. If on clothing, brush off loose particles. If irritation occurs, seek medical advice.
Ingestion	If swallowed, rinse mouth and get medical attention if you feel unwell.
First aid facilities	Eye wash facilities should be available.

4.2 Most important symptoms and effects, both acute and delayed

See section 11 for more detailed information on health effects and symptoms.

4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Use an extinguishing agent suitable for the surrounding fire.

5.2 Special hazards arising from the substance or mixture

Combustible. May evolve carbon oxides and hydrocarbons when heated to decomposition. Dust may form explosive mixtures with air.

5.3 Advice for firefighters

Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

5.4 Hazchem code

None allocated.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Contact emergency services where appropriate.

6.2 Environmental precautions

Prevent product from entering drains and waterways.

6.3 Methods of cleaning up

Contain spillage, then collect and place in suitable containers for reuse or disposal. Avoid generating dust. Eliminate ignition sources.

6.4 Reference to other sections

See Sections 8 and 13 for exposure controls and disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well ventilated area, removed from incompatible substances, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use.

7.3 Specific end uses

No information provided.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m ³	ppm	mg/m ³
Inhalable dust	ACGIH TLV (US)	--	10	--	--
Respirable dust	ACGIH TLV (US)	--	3	--	--

Biological limits

No biological limit values have been entered for this product.

8.2 Exposure controls

Engineering controls Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain dust levels below the recommended exposure standard.

PPE

- Eye / Face** Wear safety glasses and if there is a potential for dust, wear dust-proof goggles.
- Hands** Wear industrial grade gloves when handling material.
- Body** Where heavy contamination is likely, wear coveralls.
- Respiratory** In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.



9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	BLACK GRANULAR SOLID
Odour	ODOURLESS
Flammability	COMBUSTIBLE
Flash point	NOT RELEVANT
Boiling point	NOT AVAILABLE
Melting point	NOT AVAILABLE
Evaporation rate	NON VOLATILE
pH	NOT RELEVANT
Vapour density	NOT AVAILABLE
Specific gravity	0.6 to 0.8
Solubility (water)	INSOLUBLE
Vapour pressure	NOT RELEVANT
Upper explosion limit	NOT RELEVANT
Lower explosion limit	NOT RELEVANT
Partition coefficient	NOT AVAILABLE
Autoignition temperature	NOT AVAILABLE
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE
Odour threshold	NOT AVAILABLE

9.2 Other information

Bulk density	0.34 to 0.47 g/cc
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10. STABILITY AND REACTIVITY

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10.1 Reactivity

Carefully review all information provided in sections 10.2 to 10.6

10.2 Chemical stability

Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions

Polymerization will not occur. Finely divided particles can cause dust explosions, particularly in confined areas.

10.4 Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources.

10.5 Incompatible materials

May ignite or explode in contact with oxidising agents (e.g. hypochlorites) and metals.

10.6 Hazardous decomposition products

May evolve carbon oxides and hydrocarbons when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity	Non-toxic. There are no known hazards resulting from accidental ingestion of this product as may occur during normal handling. Ingestion of large quantities may cause irritation to the gastrointestinal system, mainly as a result of abrasion.
Skin	Not classified as a skin irritant. Contact may result in mechanical irritation.
Eye	Not classified as an eye irritant. Contact may result in mechanical irritation.
Sensitisation	Not classified as causing skin or respiratory sensitisation.
Mutagenicity	No evidence of mutagenic effects.
Carcinogenicity	No evidence of carcinogenic effects.
Reproductive	Not classified as a reproductive toxin.
STOT - single exposure	Not classified as causing organ damage from single exposure.
STOT - repeated exposure	The normal grain size of the product precludes it from being an inhalation hazard, however precautions should be taken to avoid inhaling any generated dust. Activated carbon and activated carbon dusts are normally non-hazardous, however they are abrasive and may cause some discomfort to the eyes, nose and throat. Prolonged and repeated exposure to high concentrations of dust may lead to some respiratory impairment.
Aspiration	This product is a solid and aspiration hazards are not expected to occur.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

The material is unlikely to cause any environmental damage. It is insoluble in water, and apart from some temporary discolouration, it will not contaminate waterways.

12.2 Persistence and degradability

Non-biodegradable.

12.3 Bioaccumulative potential

No information provided.

12.4 Mobility in soil

No information provided.

12.5 Results of PBT and vPvB assessment

No information provided.

12.6 Other adverse effects

Carbon is very widely distributed in nature. It is found in abundance in the sun, stars, comets and atmospheres of most planets. It is continually formed in the earth's atmosphere, and is rapidly oxidised to carbon dioxide which is used by plants for photosynthesis. It is not anticipated to have a detrimental effect on the environment.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal Disposal must be in accordance with Federal, State and Local Council regulations. If approved, may be transferred to an approved landfill site. Consult and comply with current regulations.

Legislation Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF DOT, IMDG OR IATA

	LAND TRANSPORT (DOT)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
14.1 UN Number	None allocated.	None allocated.	None allocated.
14.2 Proper Shipping Name	None allocated.	None allocated.	None allocated.
14.3 Transport hazard class	None allocated.	None allocated.	None allocated.
14.4 Packing Group	None allocated.	None allocated.	None allocated.

14.5 Environmental hazards

No information provided.

14.6 Special precautions for user

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

US EPCRA and CAA Regulatory Information

The following components are subject to the Emergency Planning and Community Right-to-Know Act (EPCRA) and Section 112(r) of the Clean Air Act (CAA):

None of the components of this product are listed on the SARA/CERCLA/CASA lists.

Carcinogenicity

The following components are reported to be carcinogenic:

None of the components of this product are listed on the NTP/IARC/OSHA lists.

Canada - WHMIS

This material is not a controlled product under Canadian WHMIS regulations.

Inventory listings

AUSTRALIA: AICS (Australian Inventory of Chemical Substances)

All components are listed on AICS, or are exempt.

CANADA: DSL (Canadian Domestic Substances List)

All components are listed on the DSL, or are exempt.

UNITED STATES: TSCA (US Toxic Substances Control Act)

All components are listed on the TSCA inventory, or are exempt.

16. OTHER INFORMATION

16.1 Additional information

COMBUSTIBLE - EXPLOSIVE CARBONACEOUS DUST: Carbonaceous/organic dusts have the potential, with dispersion, to present an explosion hazard if an ignition source exists. All equipment used to handle, transfer or store this product MUST BE cleaned thoroughly prior to cutting, welding, drilling or exposure to any other form of heat or ignition sources. If bulk stored, containers should be ventilated on a routine basis to avoid vapour accumulation (where applicable, eg for flocculants).

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as form of product, method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

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HEALTH EFFECTS FROM EXPOSURE:

It should be noted that the effects from exposure to this product will depend on several factors including: form of product; frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

16.2 Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAA	Clean Air Act
CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CNS	Central Nervous System
EC No.	EC No - European Community Number
EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
EPCRA	Emergency Planning and Community Right-to-Know Act
GHS	Globally Harmonized System
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m ³	Milligrams per Cubic Metre
NTP	U.S. National Toxicology Program
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm	Parts Per Million
RCRA	Resource Conservation and Recovery Act
RQ	Reportable Quantity measured in pounds (304, CERCLA)
SARA	Superfund Amendments and Reauthorization Act
STEL	Short-Term Exposure Limit
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
TLV	Threshold Limit Value
TPQ	Threshold Planning Quantity measured in pounds (302)
TQ	Threshold Quantity measured in pounds (CAA)
TWA	Time Weighted Average

16.3 Summary Of Codes

RQ	Reportable Quantity measured in pounds (304, CERCLA)
TQ	Threshold Quantity measured in pounds (CAA)
TPQ	Threshold Planning Quantity measured in pounds (302)
^	Reporting threshold has changed since November 1998.
+	Member of PAC category.
#	Member of diisocyanate category.
X	Indicates that this is a second name for a chemical already included on this consolidated list. May also indicate that the same chemical with the same CAS number appears on another list with a different chemical name.
*	RCRA carbamate waste: statutory one-pound RQ applies until RQs are adjusted.
**	This chemical was identified from a Premanufacture Review Notice (PMN) submitted to EPA. The submitter has claimed certain information on the submission to be confidential, including specific chemical identity.
***	Indicates that no RQ is assigned to this generic or broad class, although the class is a CERCLA hazardous substance. See 50 Federal Register 13456 (April 4, 1985). Values in Section 313 column represent Category Codes for reporting under Section 313.
c	Although not listed by name and CAS number, this chemical is reportable under one or more of the EPCRA section 313 chemical categories.
s	Indicates that this chemical is currently under a administrative stay of the EPCRA section 313 reporting requirements, therefore, no Toxics Release Inventory reports are required until the stay is removed.
!	Member of the dioxin and dioxin-like compounds category.

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16.4 Report status

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

16.5 Prepared by

Risk Management Technologies
5 Ventnor Ave, West Perth
Western Australia 6005
Phone: +61 8 9322 1711
Fax: +61 8 9322 1794
Email: info@rmt.com.au
Web: www.rmt.com.au

Prepared in accordance to OSHA Hazard Communication standard, 29 CFR 1920.1200.

[End of SDS]