

# SOUTH AUSTRALIAN MINERAL COMMODITY LIST



**CATEGORY: CONSTRUCTION MATERIALS**

**ROYALTY: \$0.52 per tonne**

## Extractive Minerals

Under the *Mining Act 1971* extractive minerals means sand, gravel, stone, shell, shale or clay, but does not include –

- (a) any such materials that are mined for a prescribed purpose;
- (b) fire clay, bentonite or kaolin; or
- (c) proppant sand.

The definition of Prescribed Purpose is provided below.

Commodity	Description/comments	Grade and use
Basalt	Dark fine-grained volcanic rock	<ul style="list-style-type: none"> <li>• Aggregate – General purpose (<i>general purpose aggregate used for drainage, erosion control etc.</i>)</li> <li>• Ballast (<i>railway ballast</i>)</li> <li>• Concrete Aggregate (<i>crushed and screened rock used in concrete</i>)</li> <li>• Crusher Dust (<i>crushed rock used as a subbase for paving and slab fill etc.</i>)</li> <li>• Decorative Stone (<i>landscaping stone and aggregate, and exposed aggregate in concrete or wall panels</i>)</li> <li>• Filling (<i>crushed rock and rubble used for general filling including lower specification base</i>)</li> <li>• Road Base (<i>crushed rock used for road construction</i>)</li> <li>• Road Seal Aggregate (<i>crushed and screened rock used for road seal</i>)</li> <li>• Spalls (<i>Rip Rap and Breakwater Stone</i>)</li> <li>• Specification Sand</li> </ul>
Calcrete	Surface layer of rubble or sheet limestone up to 2 m thick common throughout South Australia	
Dolerite	Dark, medium-grained igneous rock	
Dolomite	Sedimentary rock containing sufficient of the mineral dolomite to be the dominant influence on the physical properties of the rock	
Gabbro	Dark coarse-grained igneous rock. Includes norite (Black Granite from Black Hill)	
Gneiss	Coarse grained, banded rock formed by the metamorphism of sedimentary or granitic rock. Usually of the same composition as granite	
Granite	Coarse-grained light-coloured igneous rock consisting chiefly of quartz, feldspar and mica	
Gravel (natural)	Creek or river gravel including buried deposits	
Limestone	Sedimentary rock containing sufficient calcium carbonate mineral (usually calcite) to be the dominant influence on the physical properties of the rock	
Marble	Metamorphic rock formed by alteration of limestone or dolomite	

Commodity	Description/comments	Grade and use
Meta-siltstone	Fine-grained homogeneous usually grey-coloured rock formed by metamorphism of siltstone	<ul style="list-style-type: none"> <li>Aggregate – General purpose (<i>general purpose aggregate used for drainage, erosion control etc.</i>)</li> </ul>
Pegmatite	Very coarse-grained light-coloured crystalline rock composed chiefly of minerals found in granite	<ul style="list-style-type: none"> <li>Ballast (<i>railway ballast</i>)</li> </ul>
Quartzite	Rock formed from the metamorphism of sandstone	<ul style="list-style-type: none"> <li>Concrete Aggregate (<i>crushed and screened rock used in concrete</i>)</li> </ul>
Rhyolite	Fine-grained volcanic rock similar to granite in composition	<ul style="list-style-type: none"> <li>Crusher Dust (<i>crushed rock used as a subbase for paving and slab fill etc.</i>)</li> </ul>
Sandstone	Sedimentary rock containing sand-sized particles of mainly quartz	<ul style="list-style-type: none"> <li>Decorative Stone (<i>landscaping stone and aggregate, and exposed aggregate in concrete or wall panels</i>)</li> </ul>
Schist	Medium-grained to coarse-grained metamorphic rock characterised by layers of mica minerals	<ul style="list-style-type: none"> <li>Filling (<i>crushed rock and rubble used for general filling including lower specification base</i>)</li> </ul>
Siltstone	Sedimentary rock composed mainly of silt-sized particle that is not easily split into thin layers. They are intermediate between sandstones and shales	<ul style="list-style-type: none"> <li>Road Base (<i>crushed rock used for road construction</i>)</li> <li>Road Seal Aggregate (<i>crushed and screened rock used for road seal</i>)</li> </ul>
Slate	Fine-grained metamorphic rock that splits into thin, smooth-surfaced layers	<ul style="list-style-type: none"> <li>Spalls (<i>Rip Rap and Breakwater Stone</i>)</li> <li>Specification Sand</li> </ul>
Sand	Mortar, plaster, and bricklaying sand	Building
	Concrete sand	Concrete
	General filling, garden sand, paving and landscaping sand, loam	Garden/filling
	Specification filling sand for pipeline trenches	Packing
	Road and track construction	Road base
Clay Clay – White Plastic Clay – Red Plastic	Natural plastic clay deposits deposited as sediment	
Shale	Fine-grained sedimentary rock composed mainly of clay-sized particles and is easily split into thin layers	<ul style="list-style-type: none"> <li>Filling</li> <li>Road base</li> </ul>
Shale – White	White or cream, pale-firing weathered shale	
Shale – Coloured	Red-firing or other darker coloured-firing weathered shale	
Shell Grit	Sand made up of shell fragments	

**CATEGORY: PRESCRIBED PURPOSE****ROYALTY: 3.5% of sales value**

The following are **prescribed purposes** under paragraph (a) of the definition of **extractive minerals** in section 6(1) of the *Mining Act 1971*:

- (a) chemical, cement, lime and glass manufacture;
- (b) metallurgical flux, refractories and industrial fillers;
- (c) foundries, fertiliser, agricultural, jewellery and crafted ornamental uses;
- (d) the production of dimension stone.

Commodity	Description/Comments	Grade and use
Basalt	Cut or block stone used for building stone, monumental and ornamental purposes including walling, paving, roofing and bench tops	Dimension stone ( <i>stone that is cut, trimmed and finished to specific dimensions and shapes and includes cut stone, ashlars, monumental stone, roofing slate and flagging stone</i> )
Calcrete		
Dolomite		
Gneiss		
Granite		
Gravel (natural)		
Ironstone		
Limestone		
Marble		
Meta-siltstone		
Metasomatite		
Norite		
Quartzite		
Sandstone		
Slate		

**CATEGORY: INDUSTRIAL MINERALS****ROYALTY: 3.5% of sales value**

Commodity	Description/comments	Grade and use
Alunite	Production of alum	
Andalusite	Refractory products eg. refractory bricks	
Anatase	Rare polymorph of rutile	
Barite	Barium chemicals, filler, medical	Industrial
	Oil drilling mud	Drilling
Bentonite	Drilling mud, binder, purifier, absorbent, carrier for fertilisers or pesticides	
Calcrete	Surface layer of rubble or sheet limestone up to 2 m thick used for fertiliser	Agricultural
Celestite	Source of strontium used in ceramic and glass manufacture	
Cement Shale	Manufacture of cement including low alkali cement	
Diamond	Abrasives	
Dolomite	Metallurgical flux, glass making flux, chemical, fertiliser	<ul style="list-style-type: none"> <li>• Industrial</li> <li>• Agricultural</li> </ul>

**CATEGORY: INDUSTRIAL MINERALS****ROYALTY: 3.5% of sales value**

Commodity	Description/comments	Grade and use
Diatomite	Filtration, abrasive, filler, insulation, horticulture	
Feldspar	Glass and ceramics manufacture, fillers	
Fire Clay	A refractory naturally occurring secondary clay	
Garnet	Abrasives	
Graphite	Refractory crucibles, lubricant, protective paint	
Gypsum	<ul style="list-style-type: none"> <li>Plaster and plasterboard</li> <li>Fertiliser</li> </ul>	<ul style="list-style-type: none"> <li>Plasterboard</li> <li>Cement</li> <li>Agricultural</li> </ul>
Ilmenite	Titanium compounds	
Kaolin	Refractory bricks (fire clay), ceramics, cement, fillers, paint, paper	
Kyanite	Refractory products e.g. spark plugs	
Leucoxene	Titanium compounds	
Limesand	Comprised mostly of shell and coral fragments from marine organisms. Flux in iron and Ag-Pb smelting.	<ul style="list-style-type: none"> <li>Agricultural</li> <li>Chemical</li> <li>Flux</li> </ul>
Limestone	<ul style="list-style-type: none"> <li>Soda ash (<i>sodium carbonate</i>) production</li> <li>Fertiliser</li> <li>Metallurgical and glass</li> <li>Filler</li> </ul>	<ul style="list-style-type: none"> <li>Chemical</li> <li>Agricultural</li> <li>Cement</li> <li>Flux</li> <li>Whiting</li> </ul>
Magnesite	Chemical, pharmaceuticals, refractories	
Marble	<ul style="list-style-type: none"> <li>Soda ash (sodium carbonate) production</li> <li>Fertiliser</li> <li>Metallurgical and glass</li> <li>Filler</li> </ul>	<ul style="list-style-type: none"> <li>Chemical</li> <li>Agricultural</li> <li>Cement</li> <li>Flux</li> <li>Whiting</li> </ul>
Mica	Insulating material, filler	
Micaceous Hematite	Pigment	
Monazite	Contains Rare Earth Elements	
Palygorskite	Absorbent, drilling mud	
Peat	Agricultural, garden	
Phosphate	Phosphorous fertilisers	
Potash	Source of potassium for fertilisers	
Proppant sand	Sand used to keep an induced hydraulic fracture open during or following a fracturing treatment	

Commodity	Description/comments	Grade and use
Rutile	Welding rods, titanium alloys	
Salt	Soda ash production, food, water treatment	
Shell Grit	<ul style="list-style-type: none"> <li>• Glass manufacture, cement</li> <li>• Fertiliser</li> </ul>	<ul style="list-style-type: none"> <li>• Industrial</li> <li>• Agricultural</li> </ul>
Silica	<ul style="list-style-type: none"> <li>• Rocks containing mainly silica - quartzite, flint, vein quartz etc.</li> <li>• Used for silicon alloys, steelmaking flux and abrasives.</li> </ul>	<ul style="list-style-type: none"> <li>• Filter</li> <li>• Foundry</li> <li>• Glass</li> </ul>
Silica Sand	<ul style="list-style-type: none"> <li>• Water filtration medium</li> <li>• Foundry moulds and cores for metal casting</li> <li>• Paint, paper, plastics, ceramics</li> </ul>	
Sillimanite	Refractories	
Talc	<ul style="list-style-type: none"> <li>• Pharmaceutical, cosmetic</li> <li>• Paint, paper, plastics, ceramics</li> </ul>	<ul style="list-style-type: none"> <li>• Pharmaceutical</li> <li>• Filling</li> </ul>
Vermiculite	Various uses including insulation, lightweight filler, and horticulture	
Wollastonite	Asbestos substitute, filler	
Xenotime	Can contain Rare Earth Elements	
Zircon	Source of zirconium	

**CATEGORY: GEMS AND SEMI-PRECIOUS STONES** **ROYALTY: 3.5% of sale value**

Commodity	Description/comments	Grade and use
Amethyst		No use defined
Calcite	Banded varieties	
Chrysoprase		
Diamond		
Jade		
Opal		
Quartz	Includes clear and smoky quartz (morion) crystals	
Sapphire		
Scholzite	Mineral specimens	
Talc	Carving stone	
Tourmaline		
Staurolite		
Topaz		

**CATEGORY: REFINED METALS** **ROYALTY: 3.5% of sale value**

Commodity	Description/comments	Grade and use
Cobalt		No use defined
Copper		
Gold		
Lead		
Silver		
Steel / Pig Iron		
Thorium		
Zinc		

**CATEGORY: SPECIFIED MINERAL ORES AND CONCENTRATES** **ROYALTY: 5% of sale value**

Commodity	Description/comments	Grade and use
Iron Ore – Hematite (DSO)	High-grade ore	No use defined
Iron Ore – Magnetite (DSO)	Low-grade ore	
Iron Ore – Magnetite concentrate		
Heavy Mineral Concentrate	Includes the minerals anatase, ilmenite, leucoxene, monazite, rutile and zircon	
Rare Earth Elements (REE)	REE mineral concentrate or processed REE product	
Coal		
Contained copper in ore, concentrate or cement		
Contained gold in ore or concentrate		
Contained silver in ore or concentrate		
Contained lead in concentrate		
Contained zinc in concentrate		
Uranium Oxide		

## Declared Minerals

In accordance with the Notice under section 17(13) of the *Mining Act 1971* on 17 December 2020 (Government Gazette No. 97 page 5894).

<p>Declared Refined Metals</p> <p>3.5 per cent royalty rate</p>	<ul style="list-style-type: none"> <li>Refined metallic minerals with a metal content of at least 95 percent (including copper, gold, silver, cobalt, lead and zinc).</li> <li>A mineral is refined if it is changed to another substance by a process, including, for example, leaching, refining, smelting and solvent extraction electro winning (SX-EW).</li> </ul>	
<p>Declared Mineral Ores and Concentrates</p> <p>5 per cent royalty rate</p>	<ul style="list-style-type: none"> <li>Iron ore and other iron bearing substances including goethite, hematite lump and fines and magnetite ore, pellet and concentrate</li> <li>Uranium oxide concentrate</li> <li>Heavy mineral sand ores and concentrates</li> <li>Coal including lignite</li> <li>Other metallic mineral ores and concentrates (including concentrates containing copper, uranium, gold, silver, cobalt, molybdenum, rare earth oxides (including mixed rare earth carbonates), manganese, lead and zinc).</li> </ul>	
<p>Declared Industrial Minerals or Construction Materials</p> <p>3.5 per cent royalty rate</p>	<ul style="list-style-type: none"> <li>Alunite</li> <li>Andalusite</li> <li>Barite</li> <li>Bentonite</li> <li>Cassiterite</li> <li>Celestite</li> <li>Cement Shale</li> <li>Diamond</li> <li>Diatomite</li> <li>Feldspar</li> <li>Fire clay</li> <li>Garnet</li> <li>Graphite</li> <li>Gypsum</li> <li>Ilmenite</li> <li>Kaolin (including Halloysite)</li> <li>Kyanite</li> <li>Leucoxene</li> <li>Lime Sand</li> </ul>	<ul style="list-style-type: none"> <li>Magnesite</li> <li>Mica</li> <li>Micaceous Hematite</li> <li>Monazite</li> <li>Palygorskite</li> <li>Peat</li> <li>Phosphate</li> <li>Potash</li> <li>Proppant Sand</li> <li>Pyrite</li> <li>Rutile (including Anatase)</li> <li>Salt</li> <li>Silica</li> <li>Silica Crystals</li> <li>Silica Sand</li> <li>Sillimanite</li> <li>Talc</li> <li>Titanium</li> </ul>
<p>Gems and semi-precious stones (including amethyst, calcite, chrysoprase, diamond, jade, opal, quartz, sapphire, scholzite, staurolite, topaz and tourmaline)</p> <p>Any other mineral that would be an extractive mineral for the purposes of the <i>Mining Act 1971</i> but for the fact it is mined for a prescribed purpose under paragraph (a) of the definition of extractive minerals in section 6(1) of the <i>Mining Act 1971</i>.</p>		

**Important:** This commodity list is not a comprehensive list of all minerals found within South Australia. Mineral or commodity omissions do not preclude those minerals from the operation of the *Mining Act 1971*.

Section 17(4) of the *Mining Act 1971* and Regulation 9 of the *Mining Regulations 2020* contain the applicable royalty rates.

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