

Rio Tinto



Dampier Salt

Who is Dampier Salt?

- Dampier Salt is owned by three companies - Rio Tinto (68%), Marubeni Corporation (22%), Sojitz (10%)
- Dampier Salt is the world's largest exporter of solar salt.
- We have three salt farms - Dampier, Port Hedland and Lake MacLeod.
- We also have a corporate office in Perth.
- We employ approximately 420 people.
- Western Australia's hot dry climate and usually low rainfall are ideal for solar salt production.



What is salt?

- Salt is also called sodium chloride.
- It is a chemical compound with the formula NaCl.
- For every gram of salt, almost 40 per cent is sodium (Na) and over 60 per cent is chlorine (Cl).
- Salt has low toxicity (it is safe to eat) and is completely non-flammable.
- If you look at table salt under a microscope, you can see that it consists of many cube-shaped crystals.



How do we make salt?

- Dampier Salt produces salt by natural solar evaporation of sea water.
- It takes about 60 million tonnes of sea water to produce one million tonne of salt.
- It takes about 18 months to move the sea water through the series of ponds and to grow the salt ready for harvesting.
- Salt is harvested – similar to wheat – where a harvester scrapes the salt up and puts it into a truck.
- The salt is then washed and stockpiled ready for shipping to customers.



How salt is produced



Pumping of sea water

It takes about 60 tonnes of sea water to make 1 tonne of salt. The sea water is pumped into a concentration pond where the water evaporates, leaving the salt behind.



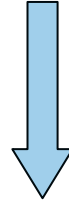
Pre-concentration of brine in ponds

As the water evaporates, the salinity or salt content of the water increases until saturated with salt. This very salty water is called brine.



The brine is pumped to the crystallisers

Growth of salt in crystallisers



Salt is harvested using purpose built harvesters

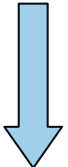
Harvesting salt from crystallisers



Haul trucks take the salt to the washplant

Washing salt to remove impurities

Salt is washed, then left to drain



Salt is transported by road trucks to the port stockpile area. The shiploader loads salt onto vessels.

Shiploading



What do we use salt for?

- The salt we produce is used in three main industries:
 - 70 per cent is used by the chemical industry to produce caustic soda, soda ash and chlorine. These chemicals are then used in the processing and manufacturing of other products such as PVC, aluminium, soaps and detergents.
 - 20 per cent is used in food processing and human consumption.
 - 10 per cent has other uses.
- The main uses of our salt include:
 - plastics
 - glass
 - detergents and soaps
 - textiles
 - industrial chemicals
 - food processing
 - road de-icing
- Our salt is essential to the automotive, construction and electronic industries.
- We do not sell salt for commercial purposes such as putting salt on your hot chips.

Who buys our salt?



- We sell 9.5 million tonnes of salt each year.
- Most of it is sold to Asian countries.
- The salt is transported by trucks to nearby ports. It is then loaded onto ships and delivered to customers by sea.

Our employees – the way we work

- Dampier Salt seeks to achieve a sustainable injury-free workplace by recognising our employee's health and safety as a core value.
- All employees are employed locally and Dampier Salt is actively engaged in each of the local communities. Our employees volunteer in a wide range of community programs including:
 - Volunteer Sea Rescue
 - Rural Bush Fire Brigade
 - St Johns Ambulance
 - and a large number of local sporting clubs.
- We seek to use renewable energy resources. Sun and wind energy comprise around 99 per cent of the total energy required to grow, process and ship our salt.
- Dampier Salt also supports VET programmes in conjunction with local schools and takes on a select number of apprentices each year across our sites.

