14 Blackstick Road
Killyhevlin Industrial Estate
Enniskillen, Co.Fermanagh
BT74 4EB
United Kingdom

PRODUCT SPECIFICATION

WHITE ROCK SALT

			SPECIFICATION	
Sodium Chloride	%	NaCl	99.00	Min
Moisture	%	H_2O	3.5	Max
Insoluble Matter	%		0.87	Max
Alkalinity as	%	Na_2CO3	0.003	Max
Sulphate as	%	Na_2SO_4	0.49	Max
Calcium	%	Ca	0.14	Max
Magnesium	mg/kg	Mg	307.00	Max
Cadmium	mg/kg	Cd	< 0.10	
Arsenic	mg/kg	As	< 0.10	
Copper	mg/kg	Cu	2.00	Max
Lead	mg/kg	Pb	< 0.30	
Mercury	mg/kg	Hg	< 0.01	
Iron	mg/kg	Fe	28.00	Max
Anti-Caking (European Code E536)	mg/kg		15.00	Max

Typical Particle Distribution	> 6.3 mm	=	0%
	1.5 – 6.3	=	85%
	< 1.5 mm	=	15%

Bulk Weight : 1.09 kg/l

WHITE ROCK SALT

Identification

Chemical name:	Sodium Chloride	Synonyms:	Halite
Formula:	NaCl	CA5 No:	7647-14-5
EINECS No:	213-598-3	Chemical Family:	Inorganic Salt

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Properties

The composition by weight is 39.4% sodium and 60.6% chlorine. Pure sodium chloride is a colourless crystalline solid.

- Melting point 802°C
- Boiling point 1413°C
- Density of crystalline solid at 20°C 2.165g/cc
- Vapour pressure 2.4mm Hg at 747°C
- Contains on water of crystallisation
- Absorbs moisture from damp atmospheres about 75% relative humidity.
- Does not react with alkalis at ordinary temperatures.
- Reacts with strong sulphuric acid or nitric acid to give hydrogen chloride gas.
- Under wet conditions, can corrode many common metals, particularly iron, aluminium and zinc. Stainless steel and monel resist attack.
- Salt has a preservative effect on timber.
- Salt can be treated with part per million levels on a non-toxic anti-caking additive.

Pure Dried Vacuum, White Rock and Marine Salt contains about 99% salt.

Health Hazards

Salt is an essential constituent of the diet. It provides important electrolytes and is the source of hydrochloric acid present in the gastric juices. The blood stress contains nearly 1% sodium chloride. In normal industrial use salt is not hazardous.

- **Skin** – dry salt and concentrated solutions can cause withdrawal of fluid from the skin and may, on prolonged contact produce irritation.
- **Eyes** – salt and salt solutions are not toxic to the eye but concentrations much above that of tears can cause a stinging sensation.
- **Inhalation** – very high concentration of salt dust may result in inflammation of the mucus membranes of the respiratory tract.

Ingestion

Acute and chronic toxic effects can result from the ingestion of excessive amounts of either salt or brine. Salt should not be used as an emetic to induce vomiting. High concentrations produce inflammatory reactions in the gastrointestinal tract and cause vomiting, diarrhoea, convulsions and collapse. Ingestion of hypertonic solutions can cause fatal disturbance of body electrolyte and fluid balance. Less than a tablespoon of salt may severely poison an infant and can sometimes prove fatal.

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Toxicity Date **LD50 3000mg/kg oral, rat.**

Safety Precautions

- Avoid prolonged contact with the skin and inhalation of dust concentrations, otherwise normal good handling and housekeeping practice is adequate.
- No special protective clothing is required.
- An eyewash bottle with clean water should be available.
- Salt dust is non-flammable but static electricity can be generated by pneumatic conveying, therefore pipes should be bonded and earthed, especially in environments where a spark could prove hazardous.
- Dry salt, because of its hygroscopic nature, should be stored in a dry atmosphere and away from concentrated acids.
- Coarse grade rock salt and marine salt can be stored in the open if desired, away from valued vegetation. A high concentration of salt can damage plant life.
- Spillages should be swept up or may be safely water-hosed to drain, subject to local regulations.

First Aid Treatments

- **Skin –** wash with plenty of water.
- **Eyes –** irrigate with eyewash or water.
- **Inhalation –** remove patient to fresh air. Keep warm and at rest. Give drinks if desired.
- **Ingestion –** vomiting will probably occur. Providing patient is conscious give plenty of liquid to drink. Obtain immediate medical attention especially if vomiting has not occurred.

Fire and Explosion Hazards

- Non-hazardous.
- Salt withstands temperatures up to its melting point and beyond without decomposing, but at very high temperatures (greater than approximately 800^{o}C) a vapour is omitted which is particularly irritating to the eyes.

Waste Disposal

Disposal should be in accordance with local, state or national legislation.