



PRODUCT: **SALT** (SA) REVISION: 4 DATED: 23/08/17

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PRODUCT SPECIFICATION

Product Name	Salt (P.D.V.)
Alternative Name	Sodium Chloride, vacuum salt, compacted salt, Halite
Product Grade	PDV – Pure Dried Vacuum
Specification Reference	SA/4 (17/08/0026452)
Compliance	Conforms to BS998:1990 ‘Vacuum Salt for Food Use’ Complies with EU Food Safety legislation and is suitable for food use

SALES SPECIFICATION BS998: 1990 Standard

Property	
Moisture	0.2% max as H ₂ O
Sodium Sulphate	3000 mg/kg max as Na ₂ SO ₄
Calcium	100 mg/kg max as Ca
Magnesium	100 mg/kg max as Mg
Arsenic	0.5 mg/kg max as As
Cadmium	0.2 mg/kg max as Cd
Copper	2 mg/kg max as Cu
Iron	10 mg/kg max as Fe
Lead	1 mg/kg max as Pb
Mercury	0.05 mg/kg max as Hg
Anti-caking agent (E535)	15 mg/kg as [Fe(CN) ₆] ⁴⁻ 21.5 mg/kg max as Na ₄ Fe(CN) ₆
Assay (dry basis)	99.6% min as NaCl

FURTHER ANALYSIS (not stipulated in BS998:1990)

Physical analysis	
+1400µm	0% max retained
+850µm	8% max retained
+425µm	56% max retained
+300µm	91% max retained
Bulk density	1.22 – 1.32 g/cm ³

NOTES

Exclusion of Liability

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SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

1.1 Product Identifier

Product Name	Salt
Alternative Name	Sodium Chloride, vacuum salt, compacted salt, Halite
Chemical Formula	NaCl
CAS Number	7647-14-5
EC Number	231598-3
Tariff Number	250100990
REACH Registration Number	Exempted from Registration according to Article 2 (7)b and Annex V of REACH

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified use(s) Chemical manufacture, food industry, animal feed industry, water treatment

Uses advised against No uses advised against have been identified

1.3 Details of the supplier of the safety data sheet

Tennants Distribution Limited
Hazelbottom Road
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Tel: 44(0)161 205 4454
Fax: 44(0) 161 203 4298
Email: msds@tennantsdistribution.com

1.4 Emergency telephone number

Tel: 44(0) 844 3350001 (24 hours)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (EC 1272/2008)

Not classified

Classification (1999/45/EEC)

Not classified.

2.2 Label elements

Label In Accordance With (EC) No. 1272/2008

No labelling required

Label in Accordance with (1999/45/EEC)

No label required

2.3 Other Hazards

Unlikely to cause harmful effects under normal conditions of handling

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance

Main Constituent	Sodium Chloride
Formula	NaCl
CAS No.	7647-14-5
EC No.	231-598-3
Wt Percent	>99.9% w/w (on dry basis)
Contains	part per million (ppm) levels of a non-toxic anti-caking additive, Sodium hexacyanoferrate (II – E535

3.2 Hazardous Ingredients

Contains no hazardous ingredients in accordance with EC Regulation 1907/2006

4. FIRST AID MEASURES

4.1 Description of first aid measures

General Advice

No known delayed effects

Inhalation



remove patient from exposure
Ingestion Do not induce vomiting. Wash out mouth with water and give 200 – 300 ml (half a pint) of water to drink. Obtain medical advice if ill effects occur
Skin contact Wash skin with water
Eye contact Remove contact lenses if worn. Rinse eye thoroughly with eye wash solution or clean water for at least 10 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. If symptoms develop seek medical attention
4.2. Most important symptoms and effects, both acute and delayed No further information
4.3. Indication of any immediate medical attention and special treatment needed No further information given
5. FIRE FIGHTING MEASURES
5.1 Extinguishing Media Extinguishing media The product is non-flammable. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment Unsuitable extinguishing media None.
5.2 Special hazards arising from the substance or mixture Salt withstands temperatures up to its melting point and beyond without decomposing, but at very high temperatures (greater than approximately 800°C), a vapour may be emitted which is particularly irritating to the eyes
5.3 Advice for fire-fighters No special precautions required Protective equipment for fire-fighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
6. ACCIDENTAL RELEASE MEASURES
6.1 Personal precautions, protective equipment and emergency procedures <ul style="list-style-type: none">• avoid prolonged contact with the skin and inhalation of dust concentrations• no special protective clothing is required• normal good handling and housekeeping practice is adequate• an eyewash bottle with clean water should be available
6.2 Environmental precautions Spillages or uncontrolled discharges into watercourses must be IMMEDIATELY alerted to the Environment Agency or other appropriate regulatory body
6.3 Methods and material for containment and cleaning up Clear up spillages. Use vacuum suction, or shovel into containers for disposal. Store material in a suitable, correctly labelled closed container, preferably for re-use, otherwise for disposal
6.4 Reference to other sections For personal protection, see section 8. For waste disposal, see section 13.
7. HANDLING AND STORAGE
7.1 Precautions for safe handling Avoid prolonged skin contact keep dust levels to a minimum, salt 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 atmospheric levels should be controlled in compliance with the workplace exposure limit (see Section 8.1)
7.1.2 Advice on good occupational hygiene Normal good handling and housekeeping practice is adequate.
7.2 Conditions for safe storage, including any incompatibilities Due to its hygroscopic nature, dried vacuum salt should be stored in a dry atmosphere and away from concentrated acids absorbs moisture if the relative humidity is greater than 75%
8. EXPOSURE CONTROLS/PERSONAL PROTECTION
8.1 Control parameters Occupational Exposure Limits Listed by H & SE (Guidance Note EH40) WEL Recommended Limits: Total Inhalable Dust is: 10 mg/m ³ (8h TWA). Respirable Dust is: 4 mg/m ³ (8h TWA)
8.2 Exposure controls Engineering Measures Static electricity can be generated by pneumatic conveying; therefore pipes should be bonded and



earthed, especially in environments where a spark could prove hazardous

Hand protection

Protective gloves to be worn if prolonged contact is anticipated. Dry salt and concentrated solutions can cause withdrawal of fluid from the skin

Eye protection

Wear chemical safety goggles in situations where contact with the eyes may occur

Skin protection

No special protective equipment required. Skin should be washed to remove salt

Respiratory Protection

If the process is such that salt dust is generated, a disposable face mask should be worn

Environmental Exposure Controls

Contain any spillage. Avoid discharges to the environment where possible

Environmental Exposure Controls

Avoid release to the environment.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	White/colourless crystalline solid
Odour	Odourless
Odour threshold	Not applicable
pH	10.0 approx. (10% solution)
Melting point	802°C
Boiling point	1413°C
Flash pint	Non flammable
Evaporation rate	No data
Flammability	Non flammable
Upper flammability limit	Non flammable
Lower flammability limit	Non flammable
Vapour pressure	2.4 mm Hg @ 747°C
Vapour density	Not applicable
Relative density	Up to 2.165 g cm ⁻³ @ 20°C
Water solubility	3.59 g/100 g @ 0°C; 39.2 g/100g @ 100°C
Partition coefficient	Not applicable
Auto-ignition temperature	Non flammable
Decomposition temperature	No available data
Viscosity	Not applicable (solid)
Explosive properties	Not applicable
Oxidising properties	Not applicable

10. STABILITY AND REACTIVITY

Reactivity

Reacts with strong sulphuric acid or nitric acid

Chemical stability

Stable under normal storage and handling conditions

Possibility of hazardous reactions

Reacts with strong sulphuric acid or nitric acid

Conditions to avoid

Control with strong sulphuric acid or nitric acid (hydrogen chloride gas is emitted)

Materials to avoid

under wet conditions can corrode many common metals particularly iron, aluminium and zinc

Hazardous decomposition products

Trace amounts of hydrogen chloride gas may be evolved at temperatures in excess of 800°C

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

High concentrations of dust may be irritant to the respiratory tract Oral LD50, rat 3000 mg/kg
May cause vomiting and diarrhoea. The swallowing of small amounts is unlikely to have any adverse effects. Salt is an essential constituent of the diet and provides important body electrolytes and is the source of hydrochloric acid present in gastric juices. The blood stream contains nearly 1% sodium chloride.

Skin

Repeated or prolonged contact may result in dryness leading to mild irritation



Eyes Dust may cause irritation
Mutagenicity Not considered to be a mutagen
Carcinogenicity Not considered to be a carcinogen
Reproductive toxicity No reproductive effects have been identified
Long term exposure Repeated ingestion of excessive amounts may cause disturbance of body electrolyte and fluid balance
12. ECOLOGICAL INFORMATION
12.1. Toxicity A maximum value of 412 mg/l ensures the protection of all aquatic life (Source: Water Research Centre – September 1990) Acute aquatic toxicity (Fish) 96h LC50: 6750 mg/l Acute aquatic toxicity (Daphnia) 48 hr EC50: 2024 mg/l Acute aquatic toxicity (Algae) 72hr IC50: 3014 mg/l Sub-acute aquatic toxicity (Fish): 433 mg/l Sub-acute aquatic toxicity (Daphnia): 1062 mg/l BOD 5 day: 0 mg/l COD: 0 mg/l Earthworm toxicity: 1000 hg/cm ²
12.2 Persistence and degradability In water: Not applicable (quickly dissociates) In soil: Not applicable (inorganic substance) In sediment: Not applicable (inorganic substance)
12.3 Bioaccumulative potential No potential for bioaccumulation
12.4 Mobility in soil Predicted to have high mobility in soil due to its high solubility in water
12.5 Results of PBT and vPvB assessment According to Annex XIII of REACH Regulation, inorganic substances do not require assessment
12.6 Other adverse effects No other adverse effects identified
13. DISPOSAL CONSIDERATIONS
13.1. Waste treatment methods If recycling spilled product is not practicable, dispose of in compliance with local or national regulations Packaging: Where possible, recycling is preferred to disposal or incineration
14. TRANSPORT INFORMATION
Not classified as dangerous goods in accordance with ADR/RID/IMDG/IATA
15. REGULATORY INFORMATION
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Not classified as dangerous for supply or conveyance
16. OTHER INFORMATION
Abbreviations and acronyms WEL : Workplace exposure limit TWA : Time Weighted Average PBT : Persistent, Bioaccumulative, Toxic vPvB : very Persistent, very Bioaccumulative ADR : European Agreement Concerning the International Carriage of Dangerous Goods by Road RID : International Rule for Transport of Dangerous Substances by Rail ADN : European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterway IMO/IMDG :International Maritime Organization/International Maritime Dangerous Goods Code ICAO/IATA :International Civil Aviation Organization/International Air Transport Association
Source of key data used to compile the data sheet Supplier information
Modifications from last revision The Specification has been revised. The Safety Data Sheet remains the same Date: 23/08/17 Copyright© Tennants Distribution Ltd (2017)