MATERIAL SAFETY DATA SHEET
SODIUM CHLORIDE

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

SUPPLIER	:	**MPL PRODUCTS** 26 Baddesley Way, Canning Vale Western Australia Australia – 6155 ph: +61 421837661 e-mail : info@mplproducts.com.au website: mplproducts.com.au
PRODUCT USE	:	Drilling & Completion Fluid Chemical
SYNONYMS	:	NaCl, "common salt", halite, rocksalt, "rock salt", "sea salt", saline, salt, "Saxa table salt","dendritis white crystal", "Natrii chloridum", "solar salt", "vacuum salt", "PDV salt", "butter salt", "Merck 10241", "Sigma S9625", APS, "Chem-Supply sodium chloride LR SL046",

SECTION 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE
Not considered a dangerous substance according to directive 67/548/EEC and its amendments.

HAZARD RATINGS

Flammability	0
Toxicity	0
Body Contact	2
Reactivity	0
Chronic	0

SCALE: Min/Nil=0 Low=1 Moderate=2 High=3 Extreme=4

POTENTIAL HEALTH EFFECTS
ACUTE HEALTH EFFECTS
SWALLOWED
Although ingestion is not thought to produce harmful effects (as classified under EC Directives), the material may still be damaging to the health of the individual, following ingestion, especially where preexisting organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses
producing mortality rather than those producing morbidity (disease, ill health), Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern, Use as a food additive indicates good tolerance of small amounts, but excessive amounts or overuse may bring irritant and/or harmful effects.
EYE
Limited evidence exists, or practical experience suggests, that the material may cause eye irritation in a substantial number of individuals and/or is expected to produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals.
Repeated or prolonged eye contact may cause temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur; the material may produce moderate eye irritation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

SKIN

Limited evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis.
Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions, The material may accentuate any pre existing skin condition, Contact with cuts, abraded skin is painful, but this is transient.
The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.

INHALED
The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting, Not normally a hazard due to non volatile nature of product.

CHRONIC HEALTH EFFECTS Principal routes of exposure are usually by inhalation of generated dust and skin contact, Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following. As with any chemical product, contact with unprotected bare skin; inhalation of vapour, mist or dust in work place atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice, Repeated overexposure may cause kidney damage.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	INT HAZ	%
sodium chloride	7647-14-5	None	>97
EC NO: 231-598-3			

Section 4 - FIRST AID MEASURES

SWALLOWED
Rinse mouth out with plenty of water.
For advice, contact a Poisons Information Centre or a doctor.
· If swallowed do NOT induce vomiting.
· If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
· Observe the patient carefully.
· Never give liquid to a person showing signs of being sleepy or with reduced awareness;
i.e. becoming unconscious
· Give water to rinse out mouth, then provide liquid slowly and as much as casualty can
comfortably drink.
· Seek medical advice.

EYE
If this product comes in contact with the eyes:
Wash out immediately with fresh running water.
Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.

SKIN
If skin or hair contact occurs: Flush skin and hair with running water (and soap if available).
Seek medical attention in event of irritation.

INHALED
If dust is inhaled, remove from contaminated area.
Encourage patient to blow nose to ensure clear passage of breathing.
If irritation or discomfort persists seek medical attention.

NOTES TO PHYSICIAN
Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA
There is no restriction on the type of extinguisher which may be used.
Use extinguishing media suitable for surrounding area.

FIRE FIGHTING
Alert Fire Brigade and tell them location and nature of hazard.
Wear breathing apparatus plus protective gloves for fire only.
Prevent, by any means available, spillage from entering drains or water courses.
Use fire fighting procedures suitable for surrounding area.
DO NOT approach containers suspected to be hot.
Cool fire exposed containers with water spray from a protected location.
If safe to do so, remove containers from path of fire.
Equipment should be thoroughly decontaminated after use.

FIRE/EXPLOSION HAZARD
Non combustible.
Not considered a significant fire risk, however containers may burn.
Decomposes on heating and produces toxic fumes of: chlorides and caustic compounds.

FIRE INCOMPATIBILITY
No known incompatibility with normal range of industrial materials.

PERSONAL PROTECTION
Glasses: Safety Glasses. Chemical goggles.
Gloves: 1.NATURAL RUBBER 2.NITRILE

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS
Clean up all spills immediately. Avoid contact with skin and eyes.
Avoid generating and breathing dust.
Sweep up.
Place in suitable containers for disposal.

MAJOR SPILLS
Clear area of personnel and move upwind.
Alert Fire Brigade and tell them location and nature of hazard.
Control personal contact by using protective equipment and dust respirator.
Prevent spillage from entering drains, sewers or water courses.
Avoid generating dust.
Sweep, shovel up. Recover product wherever possible.
Put residues in labelled plastic bags or other containers for disposal.
If contamination of drains or waterways occurs, advise emergency services.

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS

+ + + + + +

+: May be stored together
O: May be stored together with specific preventions
X: Must not be stored together

Section 7 - HANDLING AND STORAGE PROCEDURE FOR HANDLING

Avoid generating and breathing dust.
· Limit all unnecessary personal contact.
· Wear protective clothing when risk of exposure occurs.
· Use in a well-ventilated area.
· When handling DO NOT eat, drink or smoke.
· Always wash hands with soap and water after handling.
· Avoid physical damage to containers.
· Use good occupational work practice.
· Observe manufacturer's storing and handling recommendations.

SUITABLE CONTAINER
Multi-ply paper bag with sealed plastic liner or heavy gauge plastic bag.
NOTE: Bags should be stacked, blocked, interlocked, and limited in height so that they are stable and secure against sliding or collapse. Check that all containers are clearly labelled and free from leaks. Packing as recommended by manufacturer.

STORAGE INCOMPATIBILITY
Food grade materials must be protected from all possible contaminants.
Keep dry and segregate from strong acids.

STORAGE REQUIREMENTS
· Keep dry.
· Store under cover.
· Protect containers against physical damage.
· Observe manufacturer's storing and handling recommendations.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS
The following materials had no OELs on our records

sodium	CAS:7647-14-5 CAS:8028-77-1 CAS:11062-32-1 CAS:11062-43-4
chloride:	CAS:418758-90-4

MATERIAL DATA
PERSONAL PROTECTION




EYE
Safety glasses with side shields; or as required,
Chemical goggles.
Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].
HANDS/FEET
No special equipment needed when handling small quantities.
OTHERWISE: Wear chemical protective gloves, eg. PVC.
OTHER
Overalls.
Eyewash unit.
GLOVE SELECTION INDEX
Glove selection is based on a modified presentation of the:
" Forsberg Clothing Performance Index" .
The effect(s) of the following substance(s) are taken into account in the computer generated selection: sodium chloride

Protective Material	CPI *
NATURAL RUBBER	A
NATURAL+NEOPRENE	A
NITRILE	A

* CPI Chemwatch Performance Index
A: Best Selection
B: Satisfactory; may degrade after 4 hours continuous immersion
C: Poor to Dangerous Choice for other than short term immersion
NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation.
* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long term or frequent use, A qualified practitioner should be consulted.

RESPIRATOR

Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
10 x ES	P1 Airline*	- -	PAPR-P1 -
50 x ES	Air-line**	P2	PAPR-P2
100 x ES	-	P3	-
		Air-line*	-
100+ x ES	-	Air-line**	PAPR-P3

* - Negative pressure demand ** - Continuous flow.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required. For further information consult site speci c CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

ENGINEERING CONTROLS

Use in a well ventilated area.

Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction, Exhaust ventilation should be designed to prevent accumulation and recirculation of particulates in the workplace.

If in spite of local exhaust an adverse concentration of the substance in air could occur, respiratory protection should be considered. Such protection might consist of:

(a) : particle dust respirators, if necessary, combined with an absorption cartridge;

(b) : F i lter respirators with absorption cartridge or canister of the right type;

(c) : fresh air hoods or masks

Build up of electrostatic charge on the dust particle, may be prevented by bonding and grounding.

Powder handling equipment such as dust collectors, dryers and mills may require additional protection measures such as explosion venting.

Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to efficiently remove the contaminant.

Type of Contaminant:	**Air Speed:**
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).	2.5-10 m/s (500-2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	**Upper end of the range**
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 4 10 m/s (800 2000 f/min) for extraction of crusher dusts generated 2 metres distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES
Solid.
Mixes with water.

Molecular Weight: 58.44
Melting Range (C): 801
Solubility in water (g/L): Miscible
pH (1% solution): Not available
(%vol): Not applicable.
(air=1): Not available.
Lower Explosive Limit (%): Not applicable
Autoignition Temp (C): Not applicable
State: Divided solid

Boiling Range (C): 1413
Specific Gravity (water=1): 2.165
pH (as supplied): 6.7-7.3
Vapour Pressure (kPa): Negligible @ 25 Volatile Component
Evaporation Rate: Not applicable Relative Vapour Density
Flash Point (C): Non flammable
Upper Explosive Limit (%): Not applicable
Decomposition Temp (C): Not applicable
Viscosity: Not available

APPEARANCE
Odourless, colourless, transparent crystals or white crystalline powder; completely soluble in water.
Available as Rocksalt (crude), Technical, Pure, Food grade, BP grades; also solar salt, vacuum salt, sea salt and common salt. A saturated solution of solar salt is approximately pH 8 and vacuum salt is pH 9.5 11.0

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY
· Presence of incompatible materials.
· Product is considered stable.
· Hazardous polymerisation will not occur.

Section 11 - TOXICOLOGICAL INFORMATION

Sodium chloride
TOXICITY AND IRRITATION

TOXICITY
Oral (rat) LD50: 3000 mg/kg
Oral (human) TDLo: 12357 mg/kg/23d
Oral Lowest Toxic Dose (Human): 8.2 mg/kg

IRRITATION
Skin (rabbit): 500 mg/24h - Mild
Eye (rabbit): 10 mg - Moderate
Eye (rabbit):100 mg/24h - Moderate

Section 12 - ECOLOGICAL INFORMATION

TLm 96 > 1000 ppm

Section 13 - DISPOSAL CONSIDERATIONS

· Recycle wherever possible or consult manufacturer for recycling options.
· Consult State Land Waste Management Authority for disposal.
· Bury residue in an authorised landfill.
· Recycle containers if possible, or dispose of in an authorised landfill.
According to the European Waste Catalogue, Waste Codes are not product specific but application specific. Waste Codes should be assigned by the User based on the application in which the product is used.

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM : None
NOTREGULATEDFORTRANSPORTOFDANGEROUSGOODS:ADR,IATA, IMDG

Section 15 - REGULATORY INFORMATION

RISK
None under normal operating conditions.
SAFETY

Safety Codes	Safety Phrases
S24	Avoid contact with skin.
S39	Wear eye/face protection.
S26	In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.

REGULATIONS
sodium chloride (CAS: 7647-14-5) is found on the following regulatory lists;
European Customs Inventory of Chemical Substances (English)
European Inventory of Existing Commercial Substances - EINECS
European Union (EU) Inventory of Ingredients used in Cosmetic Products
OECD Representative List of High Production Volume (HPV) Chemicals
No data available for sodium chloride as CAS: 8028-77-1, CAS: 11062-32-1, CAS: 11062-43-4 , CAS: 418758-90-4.
This safety data sheet is in compliance with the following
EU legislation and its adaptations – as far as
applicable : 67/548/EEC, 1999/45/EC, 76/769/EEC,
98/24/EC, 92/85/EEC, 94/33/EC, 91/689/EEC, 1999/13/EC,
as well as the following British legislation:
The Control of Substances Hazardous to Health Regulations (COSHH) 2002 COSHH Essentials
The Management of Health and Safety at Work Regulations 1999

SECTION 16 - OTHER INFORMATION

Individuals handling this product should be informed of the recommended safety precautions and should have access to this information.
This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any other processes. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy; reliability; or completeness. It is the user's responsibility to satisfy themselves as to the suitability and completeness of such information for their own particular use. We do not accept liability for any loss or damage that may occur from the use of this information nor do we offer warranty against patent infringement.

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Customers are responsible for compliance with local, state, and federal regulations that may be pertinent in the storage, application, and disposal of this product.