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|--|-----------------|
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| PVS ITEM # | PVS TECH DATA # |
| | |

CONTROLLED DOCUMENT
IF STAMPED IN RED



SAI GLOBAL
Quality
ISO 9001

ANHYDROUS SODIUM SULPHATE

DETERGENT GRADE PRODUCT INFORMATION SHEET WITH TRACE CONSTITUENTS

Meets FCC and Kosher Requirements
Effective: January 1, 2017

Location.....Chaplin Plant
Material Source.....Natural Lake Deposit
Process.....Multiple Effect Evaporators

NOTE: The chemical, screen and physical data are average values for production for a recent twelve month period and are not to be construed as guarantees. Individual shipments may be subject to normal variation from the typical.

AVERAGE CHEMICAL ANALYSIS:

| | | |
|-------------------------|----------------------------------|--------|
| Sodium Sulphate..... | *Na ₂ S ₀₄ | 99.33% |
| Calcium Sulphate..... | CaS ₀₄ | 0.10% |
| Magnesium Sulphate..... | MgS ₀₄ | 0.27% |
| Sodium Carbonate..... | Na ₂ C ₀₃ | 0.00% |
| Sodium Bicarbonate..... | NaHC ₀₃ | 0.03% |
| Sodium Chloride..... | NaCl | 0.25% |
| Water Insolubles..... | | .02% |

* Minimum 99.0% by Difference

TYPICAL TRACE CONSTITUENTS:

| | | |
|---------------|-----------|--------|
| Moisture..... | | 0.035% |
| Iron..... | Fe in ppm | 2.216 |

AVERAGE SCREEN ANALYSIS:

| U.S. Screen Sieve Size | Percent of Total | Percent Cumulative |
|------------------------|------------------|--------------------|
| + 20 | 0.3% | 0.3% |
| - 20 + 40 | 1.8% | 2.1% |
| - 40 + 60 | 9.4% | 11.5% |
| - 60 + 100 | 36.5% | 48.0% |
| - 100 + 200 | 38.2% | 86.2% |
| - 200 | 13.8% | 100.0% |

MATERIAL DATA:

Chemical Name.....Anhydrous Sodium Sulphate
Chemical Formula.....Na₂S₀₄
Molecular Weight.....142.04
CAS Number.....7757-82-6

PHYSICAL DATA:

Appearance.....White Granular Powder
Specific Gravity.....2.7
Melting Point.....882°C
pH of Solution..... 6.13 @ 1% by weight
6.64 @ 5% by weight
7.17 @ 10% by weight
Bulk Density.....87.11 lb/cu.ft Free Flow
Solubility @ 20°C.....15.9 % by weight
Reflectance.....89.6 avg ASTM E 97
Angle of Repose.....32°

NUTRITION DATA:

Sodium.....32.26%
Sulphur.....22.52%
Magnesium.....0.055%
Calcium.....0.029%

MISCELLANEOUS:

Packaging.....50 pound Bags and Supersacs
Bulk Shipments.....100-114 ton Rail Hopper Cars
and 25 - 50 ton Bulk Trucks
Railroads.....Canadian Pacific Railway
Canadian National Railway
Food Chemicals.....Meets FCC Specifications,
Tenth Edition, 2016
Kosher.....Certified as Kosher
ISO9001:2008.....Certified System - QMI SAI Global

The listed information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of the information for their particular purpose.

Please contact us regarding any questions you may have concerning this information, or regarding any other data not detailed in this publication.

Information concerning the handling and use of this product is provided in the Material Safety Data Sheet (MSDS) available by contacting SASKATCHEWAN MINING & MINERALS INC. The MSDS must be fully read and understood prior to any exposure, handling or use of the product.

| TRACE CONSTITUENTS - Chaplin | | | | |
|-------------------------------------|---------------|--------------------|-------------------------------------|---------|
| ELEMENT | SYMBOL | TEST METHOD | CONCENTRATIONS (ppm or ug/g) | |
| ALUMINUM | Al | ICP-AES | 4.0 | TOTAL |
| ANTIMONY | Sb | ICP-MS | <0.2 | TOTAL |
| ARSENIC | As | ICP-AES | <0.5 | TOTAL |
| BORON | B | ICP-AES | <0.5 | TOTAL |
| BROMIDE | Br | ICP-AES | <0.5 | TOTAL |
| CADMIUM | Cd | ICP-AES | <0.001 | INSOLS |
| CADMIUM | Cd | ICP-AES | <0.001 | SOLUBLE |
| CHROMIUM | Cr | ICP-AES | 0.023 | INSOLS |
| CHROMIUM | Cr | ICP-AES | 0.005 | SOLUBLE |
| COBALT | Co | ICP-AES | <0.001 | INSOLS |
| COBALT | Co | ICP-AES | 0.003 | SOLUBLE |
| COPPER | Cu | ICP-AES | 0.004 | INSOLS |
| COPPER | Cu | ICP-AES | 0.024 | SOLUBLE |
| IRON | Fe | ICP-AES | 2.15 | INSOLS |
| IRON | Fe | ICP-AES | 0.066 | SOLUBLE |
| LEAD | Pb | ICP-AES | 0.004 | INSOLS |
| LEAD | Pb | ICP-AES | 0.003 | SOLUBLE |
| MANGANESE | Mn | ICP-AES | 0.5 | TOTAL |
| MERCURY | Hg | AA | <0.002 | TOTAL |
| NICKEL | Ni | ICP-AES | 0.011 | INSOLS |
| NICKEL | Ni | ICP-AES | 0.026 | SOLUBLE |
| PHOSPHORUS | P | ICP-AES | <1 | TOTAL |
| PLATINUM | Pt | ICP-AES | <0.2 | TOTAL |
| POTASSIUM | K | ICP-AES | 240 | |
| SELENIUM | Se | ICP-AES | <0.5 | TOTAL |
| SILICON | Si | GRAVIMETRIC | 10 | INSOLS |
| TELLURIUM | Te | ICP-MS | <0.5 | TOTAL |
| ZINC | Zn | ICP-AES | 0.009 | INSOLS |
| ZINC | Zn | ICP-AES | 0.038 | SOLUBLE |

- AA TEST METHOD - Atomic absorption.
- ICP-AES TEST METHOD - Inductively coupled plasma - atomic emissions spectroscopy.
- ICP-MS TEST METHOD - Inductively coupled plasma - mass spectroscopy
- <0.001 denotes concentrations below the confident detection limits of the test used.
- PPM and UG/G are equivalent measurements.
- The above results were obtained for a single typical sample. Concentrations for individual shipments may vary from the above.