



10 Admiralty Street #01-71
Northlink, Singapore 757695
Web: www.waterland.com.sg
Waterland Acra No: 48458200C

Sales Hotline: 6481 0531

Main Fax: 6484 0839

General Enquiry Email:
wland39@singnet.com.sg

Services Enquiry Email:
services@waterland.com.sg

MATERIAL SAFETY DATA SHEET

SECTION 1 IDENTIFICATION

PRODUCT NAME: SODIUM BISULFATE, ANHYDROUS GLOBULAR, TECHNICAL

GENERAL OR GENERIC
IDENTIFICATION: SODIUM ACID SULFATE, NITRE CAKE, SODIUM HYDROGEN
SULFATE

SECTION 2 PRODUCT INGREDIENTS

CHEMICAL FORMULA: NaHSO_4

HAZARDOUS COMPONENTS:

<u>INGREDIENT</u>	<u>PERCENT (BY WEIGHT)</u>	<u>PEL</u>	<u>TLV</u>
SODIUM BISULFATE	93.2	NONE ESTABLISHED	NONE ESTABLISHED
SODIUM SULFATE	6.5	NONE ESTABLISHED	NONE ESTABLISHED

SECTION 3 HAZARDOUS HEALTH DATA

PRINCIPLE HEALTH HAZARDS, INCLUDING SIGNIFICANT ROUTES, EFFECTS, AND SYMPTOMS OF OVEREXPOSURE AND MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE MAY BE:

EYE: MILD TO SEVERE IRRITANT, MAY CAUSE BURNS
IF NOT FLUSHED WITH WATER.

SKIN: MODERATE IRRITANT, MAY CAUSE BURNS IF NOT
FLUSHED WITH WATER.

INHALATION: IRRITANT. MAY IRRITATE OT BURN NOSE,
THROAT AND LUNGS. NO EXPOSURE LIMITS
ESTABLISHED.

INGESTION: IRRITANT. MAY IRRITATE OR BURN MOUTH, ESOPHAGUS OR STOMACH.

CARCINOGENICITY: NOT LISTED AS CARCINOGEN BY NTP, IARC OR OSHA.

SECTION 4**FIRST AID**

IN EYES: IMMEDIATELY FLUSH WITH WATER FOR FIFTEEN (15) MINUTES, LIFTING EYELIDS TO THOROUGHLY FLUSH. GET PROMPT MEDICAL ATTENTION.

ON SKIN: IMMEDIATELY FLUSH WITH WATER FOR FIFTEEN (15) MINUTES. IF BURN OCCURS, OBTAIN MEDICAL HELP.

IF INHALED: MOVE TO FRESH AIR LOCATION. IF IRRITATION OR DISCOMFORT PERSISTS, SEEK MEDICAL ATTENTION.

IF SWALLOWED: DRINK LARGE QUANTITIES OF MILK OR WATER. FOLLOW WITH MILK OF MAGNESIA. BEATEN EGGS OR VEGETABLE OIL. DO NOT INDUCE VOMITING. CONTACT PHYSICIAN IMMEDIATELY.

SECTION 5**FIRE AND EXPLOSION HAZARD DATA**

FLASH POINT: NOT APPLICABLE, WILL NOT BURN.

EXPLOSION LIMITS:
(UPPER): NOT APPLICABLE

(LOWER): NOT APPLICABLE

EXTINGUISHING MEDIA: WATER OR DRY CHEMICAL AS APPROPRIATE FOR COMBUSTIBLES IN AREA. AVOID WATER CONTACT TO MATERIAL IF POSSIBLE.

HAZARDOUS THERMAL DECOMPOSITION PRODUCTS: AT TEMPERATURES OVER 806° F, PRODUCT WILL DECOMPOSE, GENERATING OXIDES OF SULFUR.

UNUSUAL FIRE AND EXPLOSION HAZARDS: PRODUCT READILY DISSOLVES IN WATER TO FORM A WEAK SULFURIC ACID SOLUTION. NO GASES OR TOXIC FUMES ARE EMITTED FROM THIS REACTION, BUT PRECAUTIONS FOR EXPOSURE TO SULFURIC ACID SHOULD BE FOLLOWED.

SPECIAL FIRE
FIGHTING
PROCEDURES:

IF WATER IS USED TO EXTINGUISH
COMBUSTIBLES AND PRODUCT IS DISSOLVED IN
WATER FORMING SULFURIC ACID, WEAR ACID
PROTECTIVE EQUIPMENT. IF ELEVATED
TEMPERATURES (>570° F) ARE REACHED, SELF-
CONTAINED BREATHING APPARATUS SHOULD BE
WORN.

SECTION 6

SPILL OR LEAK PROCEDURES

SMALL SPILLS:

MATERIAL IS GRANULAR PRODUCT AND CAN BE
SWEPT UP FROM SURFACES.

LARGE SPILLS:

PICK UP AS MUCH MATERIAL AS POSSIBLE WITH
SHOVEL OR OTHER TOOL. NEUTRALIZE BALANCE
OF SPILL WITH WEAK ALKALINE SOLUTION AND
WASH DOWN TO SEWER IF FEDERAL, STATE OR
LOCAL REGULATIONS PERMIT.

SECTION 7

SAFE HANDLING AND STORAGE

- AVOID CONTACT WITH SKIN, EYES OR CLOTHING.
- DO NOT STORE WHERE EXPOSED TO MOIST CONDITIONS OR NEAR STRONG ALKALIS.
- KEEP CONTAINERS TIGHTLY CLOSED.
- WEAR ALL RECOMMENDED PROTECTIVE EQUIPMENT WHEN HANDLING.

SECTION 8

PERSONAL PROTECTION DATA

VENTILATION:

LOCAL VENTILATION TO A DUST COLLECTOR IS
RECOMMENDED.

RESPORATORY
PROTECTION:

NIOSH OR MSA CERTIFIED DUST MASK SHOULD BE WORN
WHILE HANDLING PRODUCT TO CONTROL EXPOSURE
BELOW NUISANCE DUST LIMITS OF 10 MG/M³.

PROTECTION GLOVES:

WEAR ACID RESISTANT GLOVES SUCH AS RUBBER OR
NEOPRENE.

EYE PROTECTION:

SAFETY GLASSES OR GOGGLES.

OTHER PROTECTIVE
EQUIPMENT:

CLOTHES SHOULD COMPLETELY COVER SKIN TO AVOID
SKIN CONTACT. COATS, COVERALLS OR APRONS ARE
RECOMMENDED.

SECTION 9**PHYSICAL AND CHEMICAL PROPERTIES**

<u>PROPERTY</u>	<u>VALUE</u>
MELTING POINT	350° F
BULK DENSITY	83 LB / CU FT
SOLUBILITY	100%
PERCENT VOLATILE	NON-VOLATILE

DESCRIPTION: OFF-WHITE, BEAD-LIKE, GRANULAR DRY MATERIAL

SECTION 10**REACTIVITY DATA**

STABILITY:	STABLE
INCOMPATIBILITY:	AVOID CONTACT WITH STRONG ALKALINE MATERIALS SUCH AS CAUSTIC. REACTS WITH WATER TO FORM WEAK SULFURIC ACID SOLUTION. DO NOT MIX WITH LIQUID CHLORINE BLEACH. AMMONIA CLEANSERS OR SIMILAR PRODUCTS.
CONDITIONS TO AVOID:	STORE IN DRY AREA TO AVOID MOISTURE CONTACT.
HAZARDOUS DECOMPOSITION:	NONE, UNLESS HEATED OVER 806° F, AT WHICH SULFUR DIOXIDE AND SULFUR TRIOXIDE ARE FORMED.

SECTION 11**TOXICOLOGICAL INFORMATION**

NOTES TO PHYSICIAN:

EYES:	NATURAL WATERING OF EYES WILL DISSOLVE SODIUM BISULFATE FORMING A WEAK SULFURIC ACID SOLUTION WHICH MAY CAUSE BURNS. FLUSH EFFECTED AREA THOROUGHLY WITH WATER. DO NOT USE CHEMICAL ANTIDOTES OR NEUTRALIZING SOLUTIONS.
SKIN:	MILD BURNS MAY OCCUR IF NOT THOROUGHLY FLUSHED PREVIOUSLY.
INHALATION:	MILD BURNING SENSATIONS MAY OCCUR TO MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.
INGESTION:	BODY WATER CONTENT WILL REACT WITH SODIUM BISULFATE TO FORM A WEAK SULFURIC ACID SOLUTION, WHICH MAY BURN TISSUES IN MOUTH, ESOPHAGUS OR STOMACH. SOLUTION SHOULD BE DILUTED TO REDUCE BURNING EFFECT.

SECTION 12**ECOLOGICAL INFORMATION**

ANIMAL TEST DATA: 1) LD₅₀ RAT 2800 MG / KG.

2) THIS MATERIAL IS NEITHER CORROSIVE NOR DESTRUCTIVE TO THE SKIN OF NEW ZEALAND RABBITS. OCCASIONALLY, A VERY SLIGHT RASH MAY APPEAR.

SECTION 13**DISPOSAL CONSIDERATIONS**

WASTE DISPOSAL METHODS: COMPLY WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION 14**TRANSPORTATION INFORMATION**

HAZARD CLASSIFICATION (DOT): NOT CLASSIFIED AS HAZARDOUS

SECTION 15**REGULATORY INFORMATION**

CAS NUMBER: 7681-38-1

NIOSH REGISTRY NO.: UNKNOWN

OTHER REGISTRIES: ANABSTR, APILIT, APILIT2, APIPAT, APIPAT2, BEILSTEIN, BIOBUSINESS, BIOSIS, CA, CAOLD, CARREVIEWS, CASREACT, CEN, CHEMINFORMRX, CHEMLIST, CBNB, CIN, CJACS, CSCHEM, CSNB, DETHERM, DIPPR, DSL, EINECS, EMBASE, GMELIN, HSDB, IFICDB, IFIPAT, IFIUDB, IPA, JANAF, MEDLINE, MRCK, MSDS-OSH, MSDS-PEST, MSDS-SUM, PDLCOM, PIRA, PNI, PROMT, RTECS, TOXLINE, TOXLIT, TRCTHERMO, TSCA, USAN, VTB.

OSHA HAZARD COMMUNICATIONS HEALTH HAZARD CLASSIFICATION: IRRITANT

SECTION 312 OR SARA TITLE III HAZARD CATEGORY: ACUTE

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS) RATING:

<u>HEALTH</u>	<u>FLAMMABILITY</u>	<u>REACTIVITY</u>	<u>PROTECTIVE EQUIPMENT</u>
1	0	1	F

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATING:

<u>HEALTH</u>	<u>FLAMMABILITY</u>	<u>REACTIVITY</u>	<u>SPECIAL NOTICE</u>
1	0	1	NONE

