# **Chem-Impex International Inc.**

Tel: (630) 766-2112 E-mail: <u>sales@chemimpex.com</u> Shipping and Correspondence: 935 Dillon Drive Wood Dale, IL 60191 USA

Fax: (630) 766-2218 Web site: <u>www.chemimpex.com</u> Manufacturing site: 825 Dillon Drive Wood Dale, IL 60191 USA

# SAFETY DATA SHEET

#### SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #:	35359
NAME:	Aluminum sulfate
SYNONYMS:	Aluminum trisulfate
24 HOUR EMERGENCY TELEPHONE:	(800) 535-5053(USA) 352-323-3500 (INTERNATIONAL)
TO REQUEST AN MSDS:	(800) 869-9290
CUSTOMER SERVICE:	(630) 766-2112

#### SECTION 2. HAZARDS IDENTIFICATION

#### CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS) CORROSIVE TO METALS (CATEGORY 1), H290 SERIOUS EYE DAMAGE (CATEGORY 1), H318 FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

**GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS** 

PICTOGRAM



SIGNAL WORD

DANGER

#### HAZARD STATEMENT(S)

H290	MAY BE CORROSIVE TO METALS.
H318	CAUSES SERIOUS EYE DAMAGE.

#### **PRECAUTIONARY STATEMENT(S)**

P234	KEEP ONLY IN ORIGINAL CONTAINER.
P280	WEAR EYE PROTECTION/ FACE PROTECTION.
P305 + P351 + P338 +	IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL
P310	MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND
	EASY TO DO. CONTINUE RINSING. IMMEDIATELY CALL A
	POISON CENTER/DOCTOR.
P390	ABSORB SPILLAGE TO PREVENT MATERIAL DAMAGE.
P406	STORE IN CORROSIVE RESISTANT CONTAINER WITH A
	RESISTANT INNER LINER.

HAZARDS NOT **OTHERWISE** CLASSIFIED (HNOC) **OR NOT COVERED** BY GHS

# SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

NONE

$Al_2(SO_4)_3$
342.15
10043-01-3

PURITY:  $\geq$ 99% Metals basis (Al :  $\geq$ 15%)

## HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION
Aluminum sulfate		
	MET. CORR. 1; EYE DAM. 1;	<= 100 %
	H290, H318	

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

#### SECTION 4. FIRST-AID MEASURES

#### **DESCRIPTION OF FIRST AID MEASURES**

GENERAL ADVICE	CONSULT A PHYSICIAN. SHOW THIS SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE.MOVE OUT OF DANGEROUS AREA.
IF INHALED	IF BREATHED IN, MOVE PERSON INTO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. CONSULT A PHYSICIAN.
IN CASE OF SKIN CONTACT	WASH OFF WITH SOAP AND PLENTY OF WATER. CONSULT A PHYSICIAN.
IN CASE OF EYE CONTACT	RINSE THOROUGHLY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND CONSULT A PHYSICIAN.
IF SWALLOWED	NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. RINSE MOUTH WITH WATER. CONSULT A PHYSICIAN.
MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED	THE MOST IMPORTANT KNOWN SYMPTOMS AND EFFECTS ARE DESCRIBED IN THE LABELLING (SEE SECTION 2.2) AND/OR IN SECTION 11
INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED	NO DATA AVAILABLE

## SECTION 5. FIRE AND EXPLOSION DATA

#### **EXTINGUISHING MEDIA**

SUITABLE EXTINGUISHING MEDIA	USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY CHEMICAL OR CARBON DIOXIDE.
SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE	SULPHUR OXIDES, ALUMINUM OXIDE
ADVICE FOR FIREFIGHTERS	WEAR SELF-CONTAINED BREATHING APPARATUS FOR FIREFIGHTING IF NECESSARY.
FURTHER INFORMATION	NO DATA AVAILABLE

# SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES	WEAR RESPIRATORY PROTECTION. AVOID DUST FORMATION. AVOID BREATHING VAPOURS, MIST OR GAS. ENSURE ADEQUATE VENTILATION. EVACUATE PERSONNEL TO SAFE AREAS. AVOID BREATHING DUST. FOR PERSONAL PROTECTION SEE SECTION 8.
ENVIRONMENTAL PRECAUTIONS	DO NOT LET PRODUCT ENTER DRAINS.
METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP	PICK UP AND ARRANGE DISPOSAL WITHOUT CREATING DUST. SWEEP UP AND SHOVEL. KEEP IN SUITABLE, CLOSED CONTAINERS FOR DISPOSAL.
REFERENCE TO OTHER SECTIONS	FOR DISPOSAL SEE SECTION 13.

# SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING	AVOID FORMATION OF DUST AND AEROSOLS.FURTHER PROCESSING OF SOLID MATERIALS MAY RESULT IN THE FORMATION OF COMBUSTIBLE DUSTS. THE POTENTIAL FOR COMBUSTIBLE DUST FORMATION SHOULD BE TAKEN INTO CONSIDERATION BEFORE ADDITIONAL PROCESSING OCCURS. PROVIDE APPROPRIATE EXHAUST VENTILATION AT PLACES WHERE DUST IS FORMED. FOR PRECAUTIONS SEE SECTION 2.2.
CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES	KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND WELL-VENTILATED PLACE. HYGROSCOPIC. STORE UNDER INERT GAS. KEEP IN A DRY PLACE.
SPECIFIC END USE(S)	Store at RT APART FROM THE USES MENTIONED IN SECTION 1.2 NO OTHER SPECIFIC USES ARE STIPULATED

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### **CONTROL PARAMETERS**

#### COMPONENTS WITH WORKPLACE CONTROL PARAMETERS

COMPONENT	CAS-NO.	VALUE	CONTROL	BASIS
			PARAMETERS	
Aluminum sulfate	10043-01-3	TWA	2 MG/M3	USA. NIOSH
				RECOMMENDED
				EXPOSURE LIMITS
		PEL	2 MG/M3	CALIFORNIA
				PERMISSIBLE EXPOSURE
				LIMITS FOR CHEMICAL
				CONTAMINANTS
				(TITLE 8, ARTICLE 107)

## **EXPOSURE CONTROLS**

APPROPRIATE	HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE
ENGINEERING	AND SAFETY PRACTICE. WASH HANDS BEFORE BREAKS AND
CONTROLS	AT THE END OF WORKDAY.

#### PERSONAL PROTECTIVE EQUIPMENT

EYE/FACEFACE SHIELD AND SAFETY GLASSES USE EQUIPMENT FORPROTECTIONEYE PROTECTION TESTED AND APPROVED UNDER<br/>APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH<br/>(US) OR EN 166(EU).

SKIN PROTECTION	HANDLE WITH GLOVES. GLOVES MUST BE INSPECTED PRIOR TO USE. USE PROPER GLOVE REMOVAL TECHNIQUE (WITHOUT TOUCHING GLOVE''S OUTER SURFACE) TO AVOID SKIN CONTACT WITH THIS PRODUCT. DISPOSE OF CONTAMINATED GLOVES AFTER USE IN ACCORDANCE WITH APPLICABLE LAWS AND GOOD LABORATORY PRACTICES. WASH AND DRY HANDS. FULL CONTACT MATERIAL: NITRILE RUBBER MINIMUM LAYER THICKNESS: 0.11 MM BREAK THROUGH TIME: 480 MIN MATERIAL TESTED:DERMATRIL (KCL 740, SIZE M) SPLASH CONTACT MATERIAL: NITRILE RUBBER MINIMUM LAYER THICKNESS: 0.11 MM BREAK THROUGH TIME: 480 MIN MATERIAL TESTED:DERMATRIL (KCL 740, SIZE M) IF USED IN SOLUTION, OR MIXED WITH OTHER SUBSTANCES, AND UNDER CONDITIONS WHICH DIFFER FROM EN 374, CONTACT THE SUPPLIER OF THE CE APPROVED CLOVES. THIS
	CONTACT THE SUPPLIER OF THE CE APPROVED GLOVES. THIS RECOMMENDATION IS ADVISORY ONLY AND MUST BE EVALUATED BY AN INDUSTRIAL HYGIENIST AND SAFETY OFFICER FAMILIAR WITH THE SPECIFIC SITUATION OF ANTICIPATED USE BY OUR CUSTOMERS. IT SHOULD NOT BE CONSTRUED AS OFFERING AN APPROVAL FOR ANY SPECIFIC USE SCENARIO.
BODY PROTECTION	COMPLETE SUIT PROTECTING AGAINST CHEMICALS, THE TYPE OF PROTECTIVE EQUIPMENT MUST BE SELECTED ACCORDING TO THE CONCENTRATION AND AMOUNT OF THE DANGEROUS SUBSTANCE AT THE SPECIFIC WORKPLACE.
<b>RESPIRATORY</b> <b>PROTECTION</b>	WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE USE A FULLFACE PARTICLE RESPIRATOR TYPE N100 (US) OR TYPE P3 (EN 143) RESPIRATOR CARTRIDGES AS A BACKUP TO ENGINEERING CONTROLS. IF THE RESPIRATOR IS THE SOLE MEANS OF PROTECTION, USE A FULL-FACE SUPPLIED AIR RESPIRATOR. USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR CEN (EU).
CONTROL OF ENVIRONMENTAL EXPOSURE	DO NOT LET PRODUCT ENTER DRAINS.

# SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

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#### INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	White crystals
ODOUR	NO DATA AVAILABLE
ODOUR THRESHOLD	NO DATA AVAILABLE
PH	NO DATA AVAILABLE
MELTING	
POINT/FREEZING POINT	
INITIAL BOILING POINT	
AND BOILING RANGE	
FLASH POINT	
EVAPORATION RATE	NO DATA AVAILABLE
FLAMMABILITY (SOLID,	THE PRODUCT IS NOT FLAMMABLE FLAMMABILITY
GAS)	(SOLIDS)
UPPER/LOWER	NO DATA AVAILABLE
FLAMMABILITY OR	
EXPLOSIVE LIMITS	
VAPOUR PRESSURE	NO DATA AVAILABLE
VAPOUR DENSITY	NO DATA AVAILABLE
RELATIVE DENSITY	
WATER SOLUBILITY	1,000 G/L AT 20 C - OECD TEST GUIDELINE 105 -
	COMPLETELY MISCIBLE
PARTITION COEFFICIENT:	NO DATA AVAILABLE
N- OCTANOL/WATER	
AUTO-IGNITION	NO DATA AVAILABLE
TEMPERATURE	
DECOMPOSITION	NO DATA AVAILABLE
TEMPERATURE	
VISCOSITY	NO DATA AVAILABLE
EXPLOSIVE PROPERTIES	NOT EXPLOSIVE
OXIDIZING PROPERTIES	THE PRODUCT HAS BEEN SHOWN NOT TO BE
	OXIDIZING IN A TEST FOLLOWING DIRECTIVE
	67/548/EEC (METHOD A17, OXIDIZING PROPERTIES).

#### **OTHER SAFETY INFORMATION**

# SECTION 10. STABILITY AND REACTIVITY

REACTIVITY	NO DATA AVAILABLE
CHEMICAL STABILITY	STABLE UNDER RECOMMENDED STORAGE CONDITIONS.
POSSIBILITY OF HAZARDOUS REACTIONS	NO DATA AVAILABLE
CONDITIONS TO AVOID	AIR EXPOSURE TO MOISTURE
INCOMPATIBLE MATERIALS	INCOMPATIBLE WITH STRONG BASES AND OXIDIZING AGENTS., AMMONIA, WATER, AMINES

HAZARDOUS DECOMPOSITION PRODUCTS HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS. - SULPHUR OXIDES, ALUMINUM OXIDE OTHER DECOMPOSITION PRODUCTS - NO DATA AVAILABLE IN THE EVENT OF FIRE: SEE SECTION 5

## SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS	
ACUTE TOXICITY	LD50 ORAL - RAT - MALE AND FEMALE - > 2,000 MG/KG (OECD TEST GUIDELINE 401)
	INHALATION: NO DATA AVAILABLE
	LD50 DERMAL - RABBIT - MALE AND FEMALE - > 5,000 MG/KG (OECD TEST GUIDELINE 402)
	NO DATA AVAILABLE
SKIN CORROSION/IRRITATION	SKIN RABBIT RESULT: NO SKIN IRRITATION - 4 H (OECD TEST GUIDELINE 404)
SERIOUS EYE DAMAGE/EYE IRRITATION	EYES RABBIT RESULT: IRREVERSIBLE EFFECTS ON THE EYE (OECD TEST GUIDELINE 405)
RESPIRATORY OR SKIN SENSITISATION	LOCAL LYMPH NODE ASSAY (LLNA) MOUSE RESULT: NEGATIVE (OECD TEST GUIDELINE 429)
GERM CELL MUTAGENICITY	AMES TEST ESCHERICHIA COLI/SALMONELLA TYPHIMURIUM RESULT: NEGATIVE IN VITRO MAMMALIAN CELL GENE MUTATION TEST MOUSE LYMPHOMA CELLS RESULT: NEGATIVE MICRONUCLEUS TEST HUMAN LYMPHOCYTES RESULT: NEGATIVE OECD TEST GUIDELINE 474 RAT - MALE AND FEMALE RESULT: NEGATIVE (IN ANALOGY TO SIMILAR PRODUCTS)

RAT CYTOGENETIC ANALYSIS

#### CARCINOGENICITY

IARC: NTP: OSHA:	NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS PROBABLE, POSSIBLE OR CONFIRMED HUMAN CARCINOGEN BY IARC. NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A KNOWN OR ANTICIPATED CARCINOGEN BY NTP. NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS ON OSHA S LIST OF REGULATED CARCINOGENS.
REPRODUCTIVE TOXICITY	NO DATA AVAILABLE
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	NO DATA AVAILABLE
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	NO DATA AVAILABLE
ASPIRATION HAZARD	NO DATA AVAILABLE
ADDITIONAL INFORMATION	REPEATED DOSE TOXICITY - RAT - MALE - ORAL - NO OBSERVED ADVERSE EFFECT LEVEL - 18 MG/KG - LOWEST OBSERVED ADVERSE EFFECT LEVEL - 90 MG/KG (IN ANALOGY TO SIMILAR PRODUCTS)
	RTECS: BD1700000
	TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.
	STOMACH - IRREGULARITIES - BASED ON HUMAN EVIDENCE

# SECTION 12. ECOLOGICAL INFORMATION

TOXICITY TOXICITY TO FISH

SEMI-STATIC TEST LC50 - DANIO RERIO (ZEBRA FISH) -> 87.5 MG/L - 96 H (OECD TEST GUIDELINE 203)

TOXICITY TO DAPHNIA AND	STATIC TEST EC50 - DAPHNIA MAGNA (WATER FLEA) -
OTHER AQUATIC	> 200 MG/L - 48 H
INVERTEBRATES	(OECD TEST GUIDELINE 202)
TOXICITY TO ALGAE	STATIC TEST ERC50 - PSEUDOKIRCHNERIELLA
	SUBCAPITATA (MICROALGAE) - 0.24 MG/L - 72 H
	(OECD TEST GUIDELINE 201)
TOXICITY TO BACTERIA	STATIC TEST EC50 - ACTIVATED SLUDGE - > 200 MG/L -
	3 H
	(OECD TEST GUIDELINE 209)
PERSISTENCE AND	THE METHODS FOR DETERMINING
DEGRADABILITY	BIODEGRADABILITY ARE NOT APPLICABLE TO
	INORGANIC SUBSTANCES.
BIOACCUMULATIVE	NO DATA AVAILABLE
POTENTIAL	
MOBILITY IN SOIL	NO DATA AVAILABLE
<b>RESULTS OF PBT AND</b>	PBT/VPVB ASSESSMENT NOT AVAILABLE AS
VPVB ASSESSMENT	CHEMICAL SAFETY ASSESSMENT NOT
	REQUIRED/NOT CONDUCTED
<b>OTHER ADVERSE EFFECTS</b>	NO DATA AVAILABLE

#### SECTION 13. DISPOSAL CONSIDERATIONS

#### WASTE TREATMENT METHODS

**PRODUCT**OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS<br/>TO A LICENSED DISPOSAL COMPANY. CONTACT A<br/>LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE<br/>TO DISPOSE OF THIS MATERIAL.

CONTAMINATEDDISPOSE OF AS UNUSED PRODUCT.PACKAGING

# SECTION 14. TRANSPORT INFORMATION

DOT (US)	
PROPER SHIPPING NAME:	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
	(Aluminum sulfate)
UN NUMBER:	3260
CLASS:	8
PACKING GROUP:	III
REPORTABLE QUANTITY	5000 LBS
(RQ):	

POISON INHALATION HAZARD:	NO
IMDG	
PROPER SHIPPING NAME:	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Aluminum sulfate)
UN NUMBER:	3260
CLASS:	8
PACKING GROUP:	III
EMS-NO:	F-A, S-B
ΙΑΤΑ	
	CORROSINE SOLID ACIDIC INORCANIC NOS
PROPER SHIPPING NAME:	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Aluminum sulfate)
UN NUMBER:	3260
CLASS:	8
PACKING GROUP:	III
FACKING UNUUF.	111

# SECTION 15. REGULATORY INFORMATION

SARA 302 COMPONENTS	NO CHEMICALS IN TI SUBJECT TO THE REP OF SARA TITLE III, SE	ORTING REQUIREMENTS
SARA 313 COMPONENTS	CHEMICAL COMPON NUMBERS THAT EXC	S NOT CONTAIN ANY ENTS WITH KNOWN CAS EED THE THRESHOLD (DE 3 LEVELS ESTABLISHED BY ION 313.
SARA 311/312 HAZARDS	ACUTE HEALTH HAZ HAZARD	ARD, CHRONIC HEALTH
MASSACHUSETTS RIGHT TO KNOW	W COMPONENTS	
Aluminum sulfate	CAS-NO. 10043-01-3	REVISION DATE 2/16/1993
PENNSYLVANIA RIGHT TO KNOW	COMPONENTS	
Aluminum sulfate	CAS-NO. 10043-01-3	REVISION DATE 2/16/1993
NEW JERSEY RIGHT TO KNOW CO	MPONENTS	
	CAS-NO.	<b>REVISION DATE</b>
Aluminum sulfate	10043-01-3	2/16/1993
<b>CALIFORNIA PROP. 65 COMPONEN</b> THIS PRODUCT DOES NOT CONTAIN CALIFORNIA TO CAUSE CANCER, BI	ANY CHEMICALS KNO	

CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS, OR ANY OTHER REPRODUCT HARM.

# SECTION 16. OTHER INFORMATION

#### FULL TEXT OF H-STATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3. H290 MAY BE CORROSIVE TO METALS

11290	MAT DE CORROSIVE TO METALS.
H318	CAUSES SERIOUS EYE DAMAGE.

MSDS LEGEND	
MW:	MOLECULAR WEIGHT
MF:	MOLECULAR FORMULA
VOC:	VOLATILE ORGANIC COMPOUNDS
ACGIH:	AMERICAN CONFERENCE OF GOVERNMENENTAL INDUSTRIAL
	HYGINISTS
CAS:	CHEMICAL ABSTRACTS SERIVE REGISTRY NUMBER
OSHA:	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PEL:	PERMISSIBLE EXPOSURE LIMIT (OSHA)
TLV:	THRESHOLD LIMIT VALUE (ACGIH)
IMPORTANT:	

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