



MATERIAL SAFETY DATA SHEET

Date: February 8, 2005

N57 W13366 Carmen Avenue
Menomonee Falls WI 53051-6101
Phone (262)781 8940/Fax (262)781 8964

SECTION 1 – PRODUCT IDENTIFICATION

PRODUCT: ACRO NO-ACID FLUX

TRANSPORT EMERGENCY # 1-800-535-5053 INFOTRAC

SYNONYMS: SAL AMMONIAC: AMMONIUM MURITATE
MOLECULAR WEIGHT: 53.49
CHEMICAL FORMULA: NH₄CL

SECTION 2 INGREDIENTS AND HAZARDS

<u>CHEMICAL NAME</u>	<u>CAS #</u>	<u>% W/W</u>	<u>HAZARDOUS</u>
AMMUNIUM CHLORIDE	12125-02-9	99-100%	YES

SECTION 3 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: WARNING! CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT.
HARMFUL IF SWALLOWED OR INHALLED

Health: 1 – SLIGHT, Flammability: 0 – NONE, Reactivity: 0 – NONE, CONTACT RATING: 1 – SLIGHT.

LAB PROTECTIVE EQUIP: GOGGLES, LAB COAT.
STORAGE COLOR CODE: ORANGE (GENERAL STORAGE)

POTENTIAL HEALTH EFFECTS:

INHALATION: CAUSES IRRITATION TO THE RESPIRATORY TRACT. SYMPTOMS MAY INCLUDE COUGHING, SHORTNESS OF BREATH.

INGESTION: CAUSES IRRITATION TO THE GASTROINTESTINAL TRACT. SYMPTOMS MAY INCLUDE NAUSEA, VOMITING AND DIARRHEA.

SKIN CONTACT: CAUSES IRRITATION TO SKIN. SYMPTOMS INCLUDE REDNESS, ITCHING, AND PAIN.

EYE CONTACT: CAUSES IRRITATION, REDNESS, AND PAIN.

CHRONIC EXPOSURE: NO INFORMATION FOUND

AGGRAVATION OF PRE-EXISTING CONDITIONS: NO INFORMATION FOUND.

SECTION 4 – FIRST AID MEASURE

INHALATION:	REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN, GET MEDICAL ATTENTION
INGESTION:	INDUCE VOMTING IMMEDIATELY AS DIRECTED BY MEDICAL PERSONNEL. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL ATTENTION.
SKIN CONTACT:	IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES, REMOVE CONTAMIANATED CLOTHING AND SHOES. GET MEDICAL ATTENTION. WASH CLOTHING BEFORE REUSE. THOROUGHLY CLEAN SHOES BEFORE REUSE.
EYE CONTACT:	IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FAR AT LEAST 15 MINUTES, LIFTING UPPER AND LOWER EYELIDS OCCASIONALLY. GET MEDICAL ATTENTION

SECTION 5 – FIRE FIGHTING MEASURES

FIRE:	NOT CONSIDERED A FIRE HAZARD. AT FIRE TEMPERATURES AMMONIUM CHLORIDE BEGINS TO CORRODE METALS AND MAY DISSOCIATE INTO AMMONIA AND HYDROGEN CHLORIDE. MIXTURES OF ABOUT 16% TO 25% (BY VOLUME) AMMONIA GAS IN AIR ARE FLAMMABLE.
EXPLOSION:	NOT CONSIDERED TO BE AN EXPLOSION HAZARD
FIRE EXTINGUISHING MEDIA:	USE ANY MEANS SUITABLE FOR EXTINGUISHING SURROUNDING FIRE, WATER SPRAY MAY BE SUSE TO KEEP FIRE EXPOSED CONTAINERS COOL.
SPECIAL INFORMATION:	IN THE EVENT OF A FIRE, WEAR FULL PROTECTIVE CLOTHING AND NIOSH-APPROVED SELF-CONTAINED BREATING APPARATUS WITH FULL FACEPIECE OPERATED IN THE PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MODE.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

VENTILATE AREA OF LEAK OR SPILL. WEAR APPORPRIATE PERSONAL PROTECTIVE EQUIPMENT AS SPECIFIED IN SECTOIN 8. SPILLS: SWEEP UP AND CONTAINERIZE FOR RECLAMATION OR DISPOSAL. VACUMING OR WET SWEEPING MAY BE USED TO AVOID DUST DISPERSAL. US REGULATIONS (CERCLA) REQUIRE REPORTING SPILLS AND RELEASES TO SOIL, WATER AND AIR IN EXCESS OF REPORTABLE QUANTITIES. THE TOLL FREE NUMBER FOR THE US COAST GUARD NATIONAL RESPONSE CENTER IS (800) 424-8802

SECTION 7 – HANDLING AND STORAGE

KEEP IN A TIGHTLY CLOSED CONTAINER. PROTECT FROM PHYSICAL DAMAGE. STORE IN A COOL, DRY, VENTILATED AREA AWAY FROM SOURCES OF HEAT, MOISTURE AND INCOMPATIBILITIES. CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTY SINCE THEY RETAIN PRODUCT RESIDUSE (DUST, SOLIDS); OBSERVE ALL WARNING AND PRECAUTIONS LISTED FOR THE PRODUCT.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

AIRBORNE EXPOSURE LIMITS; AMMONIUM CHLORIDE: -ACHIH THRESHOLD LIMIT VALUE (TLV); 10MG/M3 (TWA) 20 MG/M3 (STEL) FUME

VENTILATION SYSTEM: A SYSTEM OF LOCAL AND/OR GENERAL EXHAUST IS RECOMMENDED TO KEEP EMPLOYEE EXPOSURES BELOW THE AIRBORNE EXPOSURE LIMITS. LOCAL EXHAUST VENTILATION IS GENERALLY PREFERRED BECAUSE IT CAN CONTROL THE EMISSIONS OF THE CONTAMINANT AT ITS SOURCE, PREVENTING DISPERSION OF IT INTO THE GENERAL WORK AREA. PLEASE REFER TO THE ACHIH DOCUMENT, "INDUSTRIAL VENTILATION, A MANUAL OF RECOMMENDED PRACTICES:", MOST RECENT EDITION, FOR DETAILS.

PERSONAL RESPIRATORS (NIOSH APPROVED): IF THE EXPOSURE LIMIT IS EXCEEDED, A HALF-FACE DUST/MIST RESPIRATOR MAY BE WORN FOR UP TO TEN TIMES THE EXPOSURE LIMIT OR THE MAXIMUM USE CONCENTRATION SPECIFIED BY THE APPROPRIATE REGULATORY AGENCY OR RESPIRATOR SUPPLIER, WHICHEVER IS LOWEST. A FULL-FACE PIECE DUST/MIST RESPIRATOR MAY BE WORN UP TO 50 TIMES THE EXPOSURE LIMIT, OR THE MAXIMUM USE CONCENTRATION SPECIFIED BY THE APPROPRIATE REGULATORY AGENCY, OR RESPIRATOR SUPPLIER, WHICHEVER IS LOWEST. FOR EMERGENCIES OR INSTANCES WHERE THE EXPOSURE LEVELS ARE NOT KNOWN, USE A FULL FACEPIECE POSITIVE-PRESSURE, AIR-SUPPLIED RESPIRATOR. WARNING: AIR-PURIFYING RESPIRATORS DO NOT PROTECT WORKERS IN OXYGEN-DEFICIENT ATMOSPHERES.

SKIN PROTECTION: WEAR IMPERVIOUS PROTECTIVE CLOTHING. INCLUDING BOOTS, GLOVES, LAB COAT, APRON OR COVERALLS, AS APPROPRIATE, TO PREVENT SKIN CONTACT.

EYE PROTECTION: USE CHEMICAL SAFETY GOGGLES AND/OR FULL FACE SHIELD WHERE DUSTING OR SPLASHING OF SOLUTIONS IS POSSIBLE. MAINTAIN EYE WASH FOUNTAIN AND QUICK-DRENCH FACILITIES IN WORK AREA.

SECTION 9– PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	WHITE POWDER,	ODOR:	COLORLESS,
BOILING POINT:	520C (968F),	MELTING POINT:	338C (640F),
SOLUBILITY:	29.7G/100G WATER @ OC (32F),	VAPOR DENSITY (AIR=1):	1.9,
SPECIFIC GRAVITY:	1.53,	VAPOR PRESSURE (MM HG)	1.0 @ 160C (320F),
PH:	5.5 (1% AQ.SOL.) 5.1 (3% AQ.SOL.),	EVAPORATION RATE (BUAC=1):	NO INFORMATION FOUND,
% VOLATILES BY VOLUME @ 21C (70F):	0		

SECTION 10 – STABILITY AND REACTIVITY

STABILITY: STABLE UNDER ORDINARY CONDITIONS OF USE AND STORAGE

HAZARDOUS DECOMPOSITION PRODUCTS: INVOLVEMENT IN A FIRE CAUSES DECOMPOSITION TO FORM HYDROGEN CHLORIDE AND AMMONIA.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

INCOMPATIBILITIES: CONCENTRATED ACIDS, STRONG BASES, SILVER SALTS, POTASSIUM CHLORATE, AMMONIUM NITRATE, BROMINE TRIFLUORIDE AND IODINE HEPTAFLUORIDE, AMMONIUM CHLORIDE REACTS EXPLOSIVELY WITH POTASSIUM CHLORATE OR BROMINE TRIFLUORIDE, AND VIOLENTLY WITH BROMINE PENTAFLUORIDE, AMMONIUM COMPOUNDS, NITRATES, AND IODINE HEPTAFLUORIDE. EXPLOSIVE NITROGEN TRICHLORIDE MAY RESULT FROM REACTION OF AMMONIUM CHLORIDE AND HYDROGEN CYANIDE.

CONDITIONS TO AVOID: HEAT, MOISTURE, INCOMPATIBLES.

SECTION 11 – TOXICOLOGICAL INFORMATION

ORAL RAT LD50: 1650 MG/KG INVESTIGATED AS A MUTAGEN.

-----/CANCER LISTS-----NTP CARCINOGEN-----

<u>INGREDIENT</u>	<u>KNOWN</u>	<u>ANTICIPATED</u>	<u>IARC CATEGORY</u>
AMMONIUM CHLORIDE (12125-02-9)	NO	NO	NONE

SECTION 12 – ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE: NO INFORMATION FOUND.
 ENVIRONMENTAL TOXICITY: NO INFORMATION FOUND.

SECTION 13 – DISPOSAL CONSIDERATIONS

WHATEVER CANNOT BE SAVED FOR RECOVERY OR RECYCLING SHOULD BE MANAGED IN AN APPROPRIATE AND APPROVED WASTE DISPOSAL FACILITY. PROCESSING, USE OR CONTAMINATION OF THIS PRODUCT MAY CHANGE THE WASTED MANAGEMENT OPTOINS. STATE AND LOCAL DISPOSAL REGULATOINS MAY DIFFER FROM FEDERAL DISPOSAL REGULATOINS.

DISPOSE OF CONTAINER AND UNUSED CONTENTS IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REQUIREMENT.

SECTION 14 – TRANSPORT INFORMATION

NOT REGULATED.

SECTION 15 – REGULATORY INFORMATION

-----/CHEMICAL INVENTORY STATUS -----

INGREDIENT	TSCA	EC	JAPAN	AUSTRALI	KOREA	DSL	NOSL	PHIL
AMONIUM CLORIDE (12125-02-9)	YES	YES	YES	YES	YES	YES	NO	YES

-----/FEDERAL, STATE & INTERNATIONAL REGULATONS -----PART 1/-----

--SARA 302-- -----SARA 313-----

INGREDIENT	RQ	TPQ	LIST	CHEMICAL CATG
AMONIUM CLORIDE (12125-02-9)	NO	NO	NO	NO

-----/FEDERAL, STATE & INTERNATIONAL REGULATONS -----PART 2/-----

--RCRA-- --TSCA-

INGREDIENT	CERCLA	261.33	8(0)
AMONIUM CLORIDE (12125-02-9)	5000	NO	NO

CHEMICAL WEAPONS CONVENTION: NO TSCA 12(B): NO CDTA: NO
 SARA 311/312:: ACUTE: YES CHRONIC: NO FIRE: NO PRESSURE: NO
 REACTIVITY: NO (PURE/ SOLID)

AUSTRALIAN HAZCHEM CODE: NO INFORMATION FOUND.
 POISON SCHEDULE: NO INFORMATION FOUND

WHMIS: THIS MSDS HAS BEEN PREPARED ACCOURING TO THE HAZARD CRITERIA OF THE CONTROLLED PRODUCTS REGULATIONS (CPR) AND THE MSDS CONTAINS ALL OF THE INFORATION REQUIRED BY THE CPR.

SECTION 16 – OTHER INFORMATION

NFPA RATINGS: HEALTH = 2, FLAMMABILITY = 0, REACTIVITY = 0.

LABEL HAZARD WARNING: WARNING! CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT, HARMFUL IF SWALLOWED OR INHALED.

LABEL PRECAUTIONS: AVOID CONTACT WITH EYES, SKIN AND CLOTHING. AVOID BREATHING DUST. WASH THOROUGHLY AFTER HANDLING. KEEP CONTAINER CLOSED. USE ONLY WITH ADEQUATE VENTILATION.

LABEL FIRST AID: IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES OR SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. WASH CLOTHING BEFORE REUSE. IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. IF SWALLOWED, INDUCE VOMITING IMMEDIATELY AS DIRECTED BY MEDICAL PERSONNEL. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. IN ALL CASES, GET MEDICAL ATTENTION.

----- NOTICE -----

ALL INFORMATION APPEARING HEREIN IS BASE UPON DATA OBTAINED FROM THE MANUFACTURER AND/OR RECOGNIZED TECHNICAL SOURCES. WHILE THE INFORMATION IS BELIEVED TO BE ACCURATE, ACRO SALES & ENGINEERING, INC. MAKES NO REPRESENTATIONS AS TO ITS ACCURACY OR SUFFICIENCY. CONDITIONS OF USE ARE BEYOND ACRO SALES & ENGINEERING, INC. CONTROL AND THEREFORE USERS ARE RESPONSIBLE TO VERIFY THIS DATA UNDER THEIR OWN OPERATING CONDITIONS TO DETERMINE WHETHER THE PRODUCT IS SUITABLE FOR THEIR PARTICULAR PURPOSES AND THEY ASSUME ALL RISKS OF THEIR USE, HANDLING, AND DISPOSAL OF THE PRODUCT, OR FROM THE PUBLICATION OR USE OF, OR RELIANCE UPON, INFORMATION CONTAINED HEREIN. THIS INFORMATION RELATES ONLY TO THE PRODUCT DESIGNATED HEREIN, AND DOES NOT RELATE TO ITS USE IN COMBINATION WITH ANY OTHER MATERIAL OR IN AN OTHER PROCESS.

This Material Safety Data Sheet is offered solely for your information, consideration and investigation. Acro Sales & Engineering, Inc. provides no warranties, either express or implied and assumes no responsibilities for the accuracy or completeness of the data contained in the document