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DATE OF ISSUE
9/10/2003SUPERSEDES
3/18/2002

SECTION I - GENERAL INFORMATION

Chemical Name & Synonyms	Trade Name & Synonyms SUPER CHEM-ZYME V PLUS
Chemical Family: AQUEOUS BACTERIAL SUSPENSION	Formula Mixture --> X
Manufacturer's Name: CHEMSEARCH DIV. OF NCH CORP.	
Address: BOX 152170 IRVING, TX 75015	
Prepared By: K Dickinson/Chemist	Product Code Number 0092
	Emergency Phone Number 800-424-9300

SECTION II - HAZARDOUS INGREDIENTS
THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

Chemical Name (Ingredients)	Hazard	TLV	PEL	STEL	CAS #
ISOPROPYL ALCOHOL	IRRITANT	400 PPM 1	400 PPM 2	500 PPM	67-63-0
COCOAMIDOPROPYL BETAINE	IRRITANT	NOT EST 1	NOT EST 2	NOT EST	61789-40-0
SODIUM CHLORIDE	IRRITANT	NOT EST 1	NOT EST 2	NOT EST	7647-14-5
SUBTILISIN	SENSITIZER	NOT EST 1	NOT EST 2	0.00006\$ 1	9014-01-1
BACTERIAL SPORES	IRRITANT	NOT EST 1	NOT EST 2	NOT EST	68038-70-0

\$ CEILING LIMIT IN MG/M3

SECTION III - PHYSICAL DATA

Boiling Point (F):	212°	Specific Gravity (H2O=1):	1.04
Vapor Pressure (MM HG):	15.6	Color:	TAN
Density (Air=1):	0.6	Odor:	CITRUS
100% :	9.0	Clarity:	OPAQUE
% Volatile by Volume:	91	Evaporation Rate (BU A/C=1):	0.57
H2O Solubility:	APPRECIABLE	Viscosity:	SEMI-VISCOUS

SECTION IV - FIRE AND EXPLOSION HAZARD

Flash Point >200°F / SETAFLASH	Flammable Limits ISOPROPYL ALCOHOL	LEL 2.0%	UEL 12.7%
Extinguishing Media X --Foam X --Alcohol Foam X --CO2 X --Dry Chemical X --Water Spray --Other			
Special Fire Fighting Procedures: FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. EXTINGUISHING MEDIA SHOULD BE CHOSEN BASED ON THE NATURE OF THE SURROUNDING FIRE.			
Unusual Fire and Explosion Hazards: NONE KNOWN.			
Aerosol Level (NFPA 30B):	N/A		
NFPA 704 Hazard Rating 1 --Health 1 --Flammability 0 --Instability --Special	(0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)		

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value:
400 PPM AS ISOPROPYL ALCOHOL 1.

Effects of Overexposure:

-Acute (Short Term Exposure)
SKIN CONTACT: MAY CAUSE IRRITATION SEEN AS ITCHING AND REDNESS. WHILE THE BACTERIA IN THIS PRODUCT ARE NON-PATHOGENIC, CONTACT WITH OPEN SORES OR CUTS CAN CAUSE OPPORTUNISTIC INFECTIONS IN IMMUNO-SUPPRESSED INDIVIDUALS.
EYE CONTACT: CAUSES IRRITATION SEEN AS STINGING, REDNESS AND TEARING.
INHALATION: MAY CAUSE ALLERGIC REACTIONS IN SENSITIZED INDIVIDUALS. SYMPTOMS INCLUDE SHORTNESS OF BREATH, WHEEZING AND COUGHING. HIGH VAPOR CONCENTRATIONS MAY CAUSE HEADACHE, DIZZINESS AND CENTRAL NERVOUS SYSTEMS EFFECTS.
INGESTION: CAUSES IRRITATION TO THE MOUTH AND THROAT. SYMPTOMS INCLUDE NAUSEA, VOMITING AND DIARRHEA.

-Chronic (Long Term Exposure)
MAY CAUSE RESPIRATORY SENSITIZATION IN SOME INDIVIDUALS. THE ENZYMES RELEASE BRADYKININ AND HISTAMINE, LEADING TO BRONCHOSPASM. RELEASE OF "SLOW REACTING SUBSTANCE" MAY BE THE CAUSE OF DELAYED BRONCHOSPASM. CHRONIC OVEREXPOSURE OF SODIUM CHLORIDE BY INGESTION CAUSES ELEVATED BLOOD PRESSURE. MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE ARE PRE-EXISTING RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA AND DERMATITIS.
TARGET ORGANS: LUNGS, CENTRAL NERVOUS SYSTEM AND PULMONARY SYSTEM.

Primary Routes of Entry: X --Inhalation --Ingestion --Absorption

SECTION V - HEALTH HAZARD DATA (Continued)

Emergency and First Aid Procedures:

-Inhalation:

REMOVE FROM THE AREA TO FRESH AIR. IF NOT BREATHING, CLEAR THE AIRWAY AND START MOUTH TO MOUTH ARTIFICIAL RESPIRATION. GET IMMEDIATE MEDICAL ATTENTION.

-Eye Contact:

THE EYES WITH WATER. REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING WITH PLENTY OF WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

-Skin Contact:

WASH AFFECTED AREAS WITH PLENTY OF SOAP AND WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

-Ingestion:

GIVE 3 TO 4 GLASSES OF WATER, BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. SEEK MEDICAL ATTENTION IF DISCOMFORT OCCURS.

-Notes to Physician:

THE BACTERIA IN THIS PRODUCT, BACILLUS SP., ARE NOT NORMALLY PATHOGENIC; BUT AS WITH ANY BACTERIA, OPPORTUNISTIC INFECTIONS IN IMMUNOCOMPROMISED INDIVIDUALS CAN OCCUR FOLLOWING EXPOSURE TO BROKEN SKIN.

SECTION VI - TOXICITY INFORMATION

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:

IARC--> No NTP--> No OSHA--> No ACGIH--> No OTHER--> No

ISOPROPYL ALCOHOL

ORL-HMN LDLo: 3570 MG/KG 3.
ORL-RAT LD50: 5045 MG/KG 3.
IHL-RAT LC50: 16000 PPM/8H 3.
SKN-RBT LD50: 12800 MG/KG 3.
SKN-RBT-SDT: 500 MG MILD 3.
EYE-RBT-SDT: 10 MG MODERATE 3.

COCOAMIDOPROPYL BETAINE

NO TOXICITY DATA AVAILABLE.

SODIUM CHLORIDE

ORL-HMN TDLo: 12,357 MG/KG/23D-C 3.
ORL-RAT LD50: 3 GM/KG 3.
IHL-RAT LC50: >42 GM/M3/1H 3.
SKN-RBT LD50: >10 GM/KG 3.
SKN-RBT-SDT: 500 MG/24H MILD 3.
EYE-RBT-SDT: 100 MG/24H MODERATE 3.

SUBTILISIN

ORL-RAT LD50: 3700 MG/KG 3.
EYE-RBT-SDT: 3 MG MODERATE 3.

RIAL SPORES

NO TOXICITY DATA AVAILABLE.

SECTION VII - REACTIVITY DATA

Stability: X <--Stable <--Unstable

Conditions to Avoid:

AVOID EXTREME TEMPERATURES AND DISINFECTANTS.

Incompatibility (Materials to Avoid):

STRONG OXIDIZING AGENTS SUCH AS CHLORINE BLEACH AND CONCENTRATED HYDROGEN PEROXIDE. REDUCING AGENTS SUCH AS SODIUM THIOSULFATE, ACIDS AND BASES; ALDEHYDES, CHLORINATED COMPOUNDS, AMINES, ALKANOLAMINES, BROMINE TRIFLUORIDE, LITHIUM AND DICHLOROMALEIC ANHYDRIDE WITH UREA.

Hazardous Decomposition Products:

OXIDES OF CARBON AND NITROGEN. FUMES OF CHLORINE AND SODIUM OXIDE.

Hazardous Polymerization:

<--May Occur X <--Will Not Occur

Conditions to Avoid:

N/A.

SECTION VIII - SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled:

WEAR APPROPRIATE PROTECTIVE CLOTHING. DIKE AND CONTAIN SPILL. FLUSH TO A SANITARY SEWER IF POSSIBLE. IF NOT, ABSORB AND TRANSFER ALL MATERIAL INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL.

Waste Disposal Method(s):

DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.

Neutralizing Agent:

N/A.

SECTION IX - SPECIAL PROTECTION INFORMATION

Required Ventilation:

VENTILATION IS RECOMMENDED TO CONTROL EXPOSURE FROM OPERATIONS THAT CAN GENERATE VAPORS.

Respiratory Protection:

A NIOSH/MSHA APPROVED RESPIRATOR IN POORLY VENTILATED AREAS AND/OR FOR EXPOSURE ABOVE THE ACGIH TLV OR OSHA PEL.

Glove Protection:

NEOPRENE OR NITRILE RUBBER GLOVES IF REPEATED OR PROLONGED SKIN CONTACT IS LIKELY.

Eye Protection:

60

SECTION IX - SPECIAL PROTECTION INFORMATION (Continued)

SAFETY GLASSES WITH SIDE SHIELDS IF THE METHOD OF USE PRESENTS THE LIKELIHOOD OF EYE CONTACT.

Other Protection:

PROTECTIVE CLOTHING WHEN HANDLING.

SECTION X - STORAGE AND HANDLING INFORMATION

Storage Temperature: Indoors--> X Outdoors--> Heated--> Refrigerated-->
 Minimum Temperature: 32°F Maximum Temperature: 104°F

Precautions to be Taken in Handling and Storing:

ALWAYS STORE MATERIAL IN ITS ORIGINAL CONTAINER. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. KEEP FROM FREEZING. IF PRODUCT FREEZES ALLOW IT TO SLOWLY WARM TO ROOM TEMPERATURE AND STIR THOROUGHLY BEFORE USING.

Other Precautions:

DO NOT USE IN CONJUNCTION WITH BLEACH OR OTHER HOUSEHOLD DISINFECTANTS AS THEY MAY INACTIVATE THIS PRODUCT. KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT.

SECTION XI - REGULATORY INFORMATION

Chemical Name	CAS Number	Upper & Limit
None		

Those ingredients listed above are subject to the reporting requirements of 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

Please call 1-800-527-9919 for additional information if you are a California customer.
 This MSDS is not intended for users in the state of California.

SECTION XII - REFERENCES

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 2001.
2. OSHA PEL.
3. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, CCINFODisc, 2001.

ALL COMPONENTS IN THIS PRODUCT CAN BE FOUND IN THE CURRENT TSCA INVENTORY.

IRR: IRRITANT, FLAM/FLAMM: FLAMMABLE, COMB: COMBUSTIBLE,
 CORR: CORROSIVE, CARC: CARCINOGENIC, TOX: TOXIC, N/A: NOT APPLICABLE, N/E: NOT ESTABLISHED, COC: CLEVELAND OPEN CUP, FMCC: PENSKEY-MARTIN CLOSED CUP,
 TAGLIABUE CLOSED CUP, LEL: LOWER EXPLOSION LIMIT, UEL: UPPER EXPLOSION LIMIT, NFPA: NATIONAL FIRE PROTECTION ASSOCIATION, IARC: INTERNATIONAL AGENCY
 FOR THE RESEARCH ON CANCER, NTP: NATIONAL TOXICOLOGY PROGRAM, OSHA: OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, ACGIH: AMERICAN CONFERENCE OF
 INDUSTRIAL HYGIENISTS, TLV: THRESHOLD LIMIT VALUE, PEL: PERMISSIBLE EXPOSURE LIMIT, STEL: SHORT-TERM EXPOSURE LIMIT, MLD: MILD,
 MODERATE, SEV: SEVERE, MUT: MUTAGENIC, ASPHYX: ASPHYXANT, PHOS: PARTICULATES (INSOLUBLE) NOT OTHERWISE SPECIFIED, SDT: STANDARD DRAIZE TEST,
 RAT, IHL: INHALATION, HMN: HUMAN

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