WUXIZYME TS-350
MANUFACTURER WUXI SYDER BIO-PRODUCTS CO. LTD.,
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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1 CHEMICAL PRODUCT  WUXIZYME TS-350
1.2 PREPARED BY  ENVIRONMENTAL & REGULATORY AFFAIRS DEPARTMENT
1.3 PREPARATION DATE  8/15/2008
1.4 CHEMICAL FORMULA  N.AV
1.5 MOLECULAR WEIGHT  N.AV
1.6 CHEMICAL FAMILY  ENZYME PROTEIN
1.7 MATERIAL USE  REFER TO TECHNICAL LITERATURE

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>CAS #</th>
<th>CHEMICAL NAME</th>
<th>%</th>
<th>EINECS #</th>
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<tbody>
<tr>
<td>9000-90-2</td>
<td>ALPHA-AMYLASE</td>
<td>100</td>
<td>232-565-6</td>
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</tbody>
</table>
2.1 HAZARD SYMBOLS   NONE LISTED

2.2 RISK PHRASES    NONE LISTED

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

APPEARANCE:    NOT AVAILABLE

CAUTION! MAY CAUSE SKIN IRRITATION. MAY CAUSE EYE IRRITATION. THE TOXICOLOGICAL PROPERTIES OF THIS MATERIAL HAVE NOT BEEN FULLY INVESTIGATED.

TARGET ORGANS:    NONE

POTENTIAL HEALTH EFFECTS

EYE     MAY CAUSE EYE IRRITATION

SKIN     MAY CAUSE SKIN IRRITATION

INGESTION    THE TOXICOLOGICAL PROPERTIES OF THIS SUBSTANCE HAS NOT BEEN FULLY INVESTIGATED. THIS IS A HUMAN SOURCE

INHALATION    THE TOXICOLOGICAL PROPERTIES OF THIS SUBSTANCE HAS NOT BEEN FULLY INVESTIGATED.

CHRONIC    NO INFORMATION FOUND.

4. FIRST AID MEASURES

4.1 EYES     FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES, OCCASIONALLY LIFTING THE UPPER AND LOWER EYELIDS. GET MEDICAL AID.

4.2 SKIN     GET MEDICAL AID. FLUSH SKIN WITH PLENTY OF SOAP AND WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES.

4.3 INGESTION    IF VICTIM IS CONSCIOUS AND ALERT, GIVE 2-4 CUPFULS OF MILK OR WATER. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL AID.

4.4 INHALATION    REMOVE FROM EXPOSURE TO FRESH AIR IMMEDIATELY. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. GET MEDICAL AID.

4.5 FOR PHYSICIAN    TREAT SYMPTOMATICALLY AND
5. FIRE FIGHTING MEASURES

GENERAL INFORMATION
As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

5.1 EXTINGUISHING MEDIA
For small fires, use water spray, dry chemical, carbon dioxide or chemical foam.

5.2 AUTOIGNITON TEMPERATURES
Not available.

5.3 FLASH POINT
Not available.

5.4 EXPLOSION LIMITS, LOWER
Not available.

5.5 EXPLOSION LIMITS, UPPER
Not available.

5.6 NFPA RATING
(estimated)

5.7 HEALTH
1; FLAMMABILITY: 0; INSTABILITY: 0

6. ACCIDENTAL RELEASE MEASURES

6.1 GENERAL INFORMATION
Use proper personal protective equipment as indicated in section 8.

6.2 SPILLS/LEAKS
Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions.

7. HANDLING AND STORAGE

7.1 HANDLING
Use with adequate ventilation. Avoid contact with skin and eyes. Avoid ingestion and inhalation.

7.2 STORAGE
Store in a cool, dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS
Use adequate ventilation to keep airborne concentrations low.
8.2 OSHA VACATED PELS

8.3 WUXIZYME TS-350

NO OSHA VACATED PELS ARE LISTED FOR THIS CHEMICAL.

PERSONAL PROTECTIVE EQUIPMENT

EYES
WEAR APPROPRIATE PROTECTIVE EYEGLASSES OR CHEMICAL SAFETY GOGGLES AS DESCRIBED BY OSHA'S EYE AND FACE PROTECTION REGULATIONS IN 29 CFR 1910.133 OR EUROPEAN STANDARD EN166

SKIN
WEAR APPROPRIATE GLOVES TO PREVENT SKIN EXPOSURE

CLOTHING
WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT SKIN EXPOSURE

RESPIRATORS
FOLLOW THE OSHA RESPIRATOR REGULATIONS FOUND IN 29 CFR 1910.134 OR EUROPEAN STANDARD EN 149. ALWAYS USE A NIOSH OR EUROPEAN STANDARD EN 149 APPROVED RESPIRATOR WHEN NECESSARY.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 PHYSICAL STATE LIQUID

9.2 COLOR BROWN

9.3 ODOR NO PECULIAR ODOR

9.4 PH NOT AVAILABLE

9.5 VAPOR PRESSURE NOT APPLICABLE

9.6 VAPOR DENSITY NOT APPLICABLE

9.7 EVAPORATION RATE NOT APPLICABLE

9.8 VISCOSITY NOT APPLICABLE

9.9 BOILING POINT NOT APPLICABLE
9.10 FREEZING/MELTING POINT
9.11 DECOMPOSITION TEMPERATURE
9.12 SOLUBILITY IN WATER
9.13 SPECIFIC GRAVITY/DENSITY
9.14 MOLECULAR FORMULA
9.15 MOLECULAR WEIGHT

10. STABILITY AND REACTIVITY

10.1 CHEMICAL STABILITY
10.2 CONDITIONS TO AVOID
10.3 INCOMPATIBILITIES WITH OTHER MATERIALS
10.4 HAZARDOUS DECOMPOSITION PRODUCTS
10.5 HAZARDOUS POLYMERIZATION

11. TOXICOLOGICAL INFORMATION

RTECS#:
CAS#9000-90-2: BU7432500
LD50/LC50:
CAS#9000-90-2:
ORAL, MOUSE: LD50=>15GM/KG; ORAL, RAT: LD50=>7500 MG/KG.
CARCINOGENICITY:
WUXIZYMETS-350 NOT LISTED BY ACGIH, IARC, NIOSH, NTP, OSHA.
EPIDEMIOLOGY
TERATOGENICITY
REPRODUCTIVE EFFECTS
NEUROTOXICITY
MUTAGENICITY
OTHER STUDIES

12. DISPOSAL CONSIDERATIONS

CHEMICAL WASTE GENERATORS MUST DETERMINE WHETHER A DISCARDED CHEMICAL IS CLASSIFIED AS A HAZARDOUS WASTE. US EPA GUIDELINES FOR THE CLASSIFICATION DETERMINATION ARE LISTED IN 40
CFR PARTS 261.3. ADDITIONALLY, WASTE GENERATORS MUST CONSULT STATE AND LOCAL HAZARDOUS WASTE REGULATIONS TO ENSURE COMPLETE AND ACCURATE CLASSIFICATION.

RCRA P-SERIES: NONE LISTED
RCRA U-SERIES: NONE LISTED

13. TRANSPORT INFORMATION

US DOT
n NO INFORMATION AVAILABLE
CANADIAN TDG
n NO INFORMATION AVAILABLE.

14. REGULATORY INFORMATION

US FEDERAL
TSCA
n CAS#9000-90-2 IS LISTED ON THE TSCA INVENTORY. HEALTH&SAFETY REPORTING LIST
n NONE OF THE CHEMICALS ARE ON THE HEALTH&SAFETY REPORTING LIST.
CHEMICAL TEST RULES
n NONE OF THE CHEMICALS IN THIS PRODUCT ARE UNDER A CHEMICAL TEST RULE.
SECTION 12B
n NONE OF THE CHEMICALS ARE LISTED UNDER TSCA SECTION 12B.
TSCA SIGNIFICANT NEW USER RULE
n NONE OF THE CHEMICALS IN THIS MATERIAL HAVE A SNR UNDER TSCA.
SARA CERCLA HAZARDOUS SUBSTANCES AND CORRESPONDING RQS
n NONE OF THE CHEMICALS IN THIS MATERIAL HAVE AN RQ.
SARA SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES
n NONE OF THE CHEMICALS IN THIS PRODUCT HAVE A TTPQ. SECTION 313
n NO CHEMICALS ARE REPORTABLE UNDER SECTION 313. CLEAN AIR ACT:
n THIS MATERIAL DOES NOT CONTAIN ANY HAZARDOUS AIR POLLUTANTS.
n THIS MATERIAL DOES NOT CONTAIN ANY CLASS 1 OZONE DEPLETORS.
n THIS MATERIAL DOES NOT CONTAIN ANY CLASS 2 OZONE DEPLETORS. CLEAN WATER ACT:
n NONE OF THE CHEMICALS IN THIS PRODUCT ARE LISTED AS HAZARDOUS SUBSTANCES UNDER THE CWA.
n NONE OF THE CHEMICALS IN THIS PRODUCT ARE LISTED AS PRIORITY POLLUTANTS UNDER THE CWA.
n NONE OF THE CHEMICALS IN THIS PRODUCT ARE LISTED AS TOXIC POLLUTANTS UNDER THE CWA.
OSH
A:

n NONE OF THE CHEMICALS IN THIS PRODUCT ARE CONSIDERED HIGHLY HAZARDOUS BY OSHA.
STAT
E
WUXIZYMETS-350 IS NOT PRESENT ON STATE LISTS FROM CA, PA, MN, MA, FL, OR NJ.
CALIFORNIANOSIGNIFICANTRISKLEVEL:NONEOFTHECHEMICALSIN THIS PRODUCTARELISTED.
EUROPEAN/INTERNATIONAL REGULATIONS
EUROPEAN LABELING IN ACCORDANCE WITH EC DIRECTIVES

HAZARD SYMBOLS: NOT AVAILABLE.

RISK PHRASES:

SAFETY PHRASES:

S24/25 AVOID CONTACT WITH SKIN AND EYES. WGK (WATER DANGER/PROTECTION)

CAS# 9000-90-2: 0

UNITED KINGDOM OCCUPATIONAL EXPOSURE LIMITS

UNITED KINGDOM MAXIMUM EXPOSURE LIMITS CANADA

NONE OF THE CHEMICALS IN THIS PRODUCT ARE LISTED ON THE DSL/NDSL LIST.

WHMIS: NOT AVAILABLE.

CAS# 9000-90-2 IS NOT LISTED ON CANADA'S INGREDIENT DISCLOSURE LIST.

EXPOSURE LIMITS

15. OTHER INFORMATION

MSDS CREATION DATE: 11/07/1998

REVISION #4 DATE: FEB 2016

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