



WUXIZYME TS-350

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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

CAS #	CHEMICAL NAME	%	EINECS #
9000-90 -2	ALPHA-AMYLASE	100	232-565-6



2.1 HAZARD SYMBOLS NONE LISTED

2.2 RISK PHRASES NONE LISTED

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

APPEARANCE:

NONE LISTED

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 | AUTOIGNITION 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

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|-----|----------|--|
| 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. |
|-----|----------------------|---|



CHEMICAL NAME	ACGIH	NIOSH	OSHA – FINAL ELS
THERMOSTABLE ALFA-AMYLASE	NONELISTED	NONE LISTED	NONE LISTED

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	NOT APPLICABLE
9.11	DECOMPOSITION TEMPERATURE	NOT APPLICABLE
9.12	SOLUBILITY IN WATER	SOLUBLE IN ANY RATE
9.13	SPECIFIC GRAVITY/DENSITY	1.2G/ML
9.14	MOLECULAR FORMULA	PROTEIN
9.15	MOLECULAR WEIGHT	NOT APPLICABLE

10. STABILITY AND REACTIVITY

10.1	CHEMICAL STABILITY	STABLE UNDER NORMAL TEMPERATURES AND PRESSURES
10.2	CONDITIONS TO AVOID	NONE REPORTED
10.3	INCOMPATIBILITIES WITH OTHER MATERIALS	NONE REPORTED
10.4	HAZARDOUS DECOMPOSITION PRODUCTS	NONE
10.5	HAZARDOUS POLYMERIZATION	HAS NOT BEEN REPORTED

11. TOXICOLOGICAL INFORMATION

RTECS#:
n CAS#9000-90-2: BU7432500
LD50/LC50:
n CAS#9000-90-2:
ORAL,MOUSE:LD50=>15GM/KG;ORAL,RAT:LD50=>7500 MG/KG.
CARCINOGENICITY:
WUXIZYMETS-350 NOTLISTED BYACGIH,IARC,NIOSH,NTP,OROSHA.
EPIDEMIOLOGY NO DATA AVAILABLE
TERATOGENICITY NO DATA AVAILABLE
REPRODUCTIVE EFFECTS NO DATA AVAILABLE
NEUROTOXICITY NO DATA AVAILABLE
MUTAGENICITY NO DATA AVAILABLE
OTHER STUDIES NO DATA AVAILABLE

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
nCAS#9000-90-2ISLISTEDONTHETSCAINVENTORY. HEALTH&SAFETYREPORTING LIST
nNONEOFTHECHEMICALSAREONTHEHEALTH&SAFETYREPORTING LIST.
CHEMICALTESTRULES
nNONEOFTHECHEMICALSINTHISPRODUCTAREUNDERACHEMICAL TESTRULE.
SECTION12B
nNONEOFTHECHEMICALSARELISTEDUNDERTSCASECTION12B.
TSCA SIGNIFICANTNEWUSERULE
nNONEOFTHECHEMICALSINTHISMATERIALHAVEASNURUNDER TSCA.
SARA CERCLHAZARDOUSSUBSTANCESANDCORRESPONDINGRQS
nNONEOFTHECHEMICALSINTHISMATERIALHAVE ANRQ.
SARASECTION302EXTREMELYHAZARDOUSSUBSTANCES
nNONEOFTHECHEMICALSINTHISPRODUCTHAVEATPQ. SECTION313
nNOCHEMICALSAREREPORTABLEUNDERSECTION313. CLEANAIRACT:
nTHISMATERIALDOESNOTCONTAINANYHAZARDOUSAIR POLLUTANTS.
nTHISMATERIALDOESNOTCONTAINANYCLASS1OZONEDEPLETORS.
nTHISMATERIALDOESNOTCONTAINANYCLASS2OZONEDEPLETORS. CLEANWATERACT:
nNONEOFTHECHEMICALSINTHISPRODUCTARELISTEDAS HAZARDOUSSUBSTANCES
UNDERTHE CWA.
nNONEOFTHECHEMICALSINTHISPRODUCTARELISTEDASPRIORITY POLLUTANTS UNDERTHE CWA.
nNONEOFTHECHEMICALSINTHISPRODUCTARELISTEDASTOXIC POLLUTANTS UNDERTHE CWA.
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nNONEOFTHECHEMICALSINTHISPRODUCTARECONSIDEREDHIGHLY HAZARDOUSBYOSHA.
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WUXIZYMETS-350ISNOTPRESENTONSTATELISTSFROMCA,PA,MN, MA,FL,ORNJ.
CALIFORNIANOSIGNIFICANTRISKLEVEL:NONEOFTHECHEMICALSIN THIS PRODUCTARELISTED.
EUROPEAN/INTERNATIONALREGULATIONS



EUROPEAN LABELING IN ACCORDANCE WITH EC DIRECTIVES

n HAZARD SYMBOLS: NOT AVAILABLE.

n RISK PHRASES:

n SAFETY PHRASES:

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

n CAS# 9000-90-2: 0

UNITED KINGDOM OCCUPATIONAL EXPOSURE LIMITS

UNITED KINGDOM MAXIMUM EXPOSURE LIMITS CANADA

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

n WHMIS: NOT AVAILABLE.

n 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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