



WUXIZYME TS-300

ICI Pakistan Limited
05 West Wharf
Karachi-74000

UAN: 111-100-200

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1. IDENTIFICATION OF THE SUBSTANCE/ PREPARATION AND THE COMPANY

| | | |
|-----|------------------|---|
| 1.1 | CHEMICAL PRODUCT | WUXIZYME TS-300 |
| 1.2 | PREPARED BY | ENVIRONMENTAL & REGULATORY AFFAIRS DEPARTMENT |
| 1.3 | PREPARATION DATE | Aug 2013 |
| 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

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

3.2 POTENTIAL HEALTH EFFECTS

EYE MAY CAUSE EYE IRRITATION. SKIN: MAY CAUSE SKIN IRRITATION.

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

INHALATION THE TOXICOLOGICAL PROPERTIES OF THIS SUBSTANCE HAVENOTBEENFULLY

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 NOTES TO PHYSICIAN TREAT SYMPTOMATICALLY AND

5. FIRE FIGHTING MEASURES

- 5.1 GENERAL INFORMATION AS IN ANY FIRE, WEAR A SELF-CONTAINED BREATHING APPARATUS IN PRESSURE-DEMAND, MSHA/NIOSH (APPROVED OR EQUIVALENT), AND FULL PROTECTIVE GEAR EXTINGUISHING MEDIA: FOR SMALL FIRES, USE WATER SPRAY, DRY CHEMICAL, CARBON DIOXIDE OR CHEMICAL FOAM
- 5.2 AUTOIGNITION TEMPERATURE 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. STORAGE AND HANDLING

- 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 EXPOSURE LIMITS

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

8.3 OSHA VACATED PELS: WUXIZYME TS-300: NO OSHA VACATED PELS ARE LISTED FOR THIS CHEMICAL.

8.4 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/ CHEMICAL PROPERTIES

9.1 PHYSICAL STATE LIQUID

9.2 COLOR BROWN

9.3 ODOR NO PECULIAR ODOR

9.4 SOLUBILITY IN WATER SOLUBLE IN ANY RATE

9.5 SPECIFIC GRAVITY/DENSITY 1:2G/ML



9.6 MOLECULAR FORMULA PROTEIN

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 REPORTED

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-300 NOT LISTED BY ACGIH, 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. ECOLOGICAL INFORMATION

N/A

13. 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



14. TRANSPORT INFORMATION

US DOT

n NO INFORMATION AVAILABLE

CANADIAN TDG

n NO INFORMATION AVAILABLE.

15. 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 SNUR UNDER TSCA.

SARA CERCLA HAZARDOUS SUBSTANCES AND CORRESPONDING RQS

n NONE OF THE CHEMICALS IN THIS MATERIAL HAVE

ANRQ.

SARA SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES

n NONE OF THE CHEMICALS IN THIS PRODUCT HAVE A TPQ. 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.

STATE

E

WUXIZYMETS-300 IS NOT PRESENT ON STATE LISTS FROM CA, PA, MN, MA, FL, OR NJ.

CALIFORNIA NO SIGNIFICANT RISK LEVEL: NONE OF THE CHEMICALS IN THIS PRODUCT ARE LISTED.

EUROPEAN/INTERNATIONAL REGULATIONS

EUROPEAN LABELING IN ACCORDANCE WITH EC DIRECTIVES

n HAZARD SYMBOLS: NOT AVAILABLE.

n RISK PHRASES:

n SAFETY PHRASES:



i S24/25AVOIDCONTACTWITHSKINANDEYES. WGK(WATER DANGER/PROTECTION)
nCAS# 9000-90-2: 0
UNITEDKINGDOM OCCUPATIONALEXPOSURELIMITS
UNITEDKINGDOM MAXIMUMEXPOSURELIMITS CANADA
nNONEOFTHECHEMICALSINTHISPRODUCTARELISTEDONTHE DSL/NDSSLIST.
nWHMIS:NOTAVAILABLE.
n CAS#9000-90-2ISNOTLISTEDONCANADA'SINGREDIENTDISCLOSURE LIST.
EXPOSURELIMITS

16. OTHER INFORMATION

MSDS CREATION DATE: Aug 2013

REVISION #2 DATE: FEB 2016

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