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M A T E R I A L S A F E T Y D A T A S H E E T

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #: 02153

NAME: Z-Cys(Bzl)-ONp

SYNONYMS: Z-S-benzyl-L-cysteine 4-nitrophenyl ester

24 HOUR EMERGENCY TELEPHONE: (800) 535-5053(USA)
352-323-3500 (INTERNATIONAL)

TO REQUEST AN MSDS: (800) 869-9290

CUSTOMER SERVICE: (630) 766-2112

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #: 3401-37-4

MF: $C_{24}H_{22}N_2O_6S$

MW: 466.50

PURITY:

SECTION 3. HAZARDS IDENTIFICATION

NOT AVAILABLE.

POTENTIAL HEALTH EFFECTS

THE TOXICOLOGICAL PROPERTIES OF THIS MATERIAL HAVE NOT BEEN INVESTIGATED. USE APPROPRIATE PROCEDURES TO PREVENT OPPORTUNITIES FOR DIRECT CONTACT WITH THE SKIN OR EYES AND TO PREVENT INHALATION.

SECTION 4. FIRST-AID MEASURES

EYES: NOT AVAILABLE.

SKIN: NOT AVAILABLE.

INHALATION: NOT AVAILABLE.

INGESTION: DO NOT INDUCE VOMITING. IF CONSCIOUS AND ALERT, RINSE MOUTH AND DRINK 2-4 CUPFULS OF MILK OR WATER.

NOTES FOR PHYSICIAN: TREAT SYMPTOMATICALLY AND SUPPORTIVELY.

SECTION 5. FIRE FIGHTING MEASURES

FLASH POINT: NOT AVAILABLE

AUTOIGNITION NOT AVAILABLE
TEMPERATURE:

FLAMMABLE LIMITS IN AIR, BY % VOLUME
UPPER: NOT AVAILABLE
LOWER: NOT AVAILABLE

EXTINGUISHING NOT AVAILABLE.
MEDIA:

GENERAL AS IN ANY FIRE, WEAR A SELF-CONTAINED BREATHING
INFORMATION: APPARATUS IN PRESSURE-DEMAND, MSHA/NIOSH
 (APPROVED OR EQUIVALENT), AND FULL PROTECTIVE GEAR.

SECTION 6. ACCIDENTAL RELEASE MEASURES

USE PROPER PERSONAL PROTECTIVE EQUIPMENT AS INDICATED IN SECTION 8.

SPILLS AND LEAKS: SWEEP UP, THEN PLACE INTO A SUITABLE CONTAINER FOR
 DISPOSAL.

SECTION 7. HANDLING AND STORAGE

HANDLING NOT AVAILABLE.

STORAGE KEEP COOL AND DRY

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING USE ADEQUATE GENERAL OR LOCAL EXHAUST VENTILATION

CONTROLS: TO KEEP AIRBORNE CONCENTRATIONS BELOW THE PERMISSIBLE EXPOSURE LIMITS.

EYES: WEAR SAFETY GLASSES AND CHEMICAL GOGGLES IF SPLASHING IS POSSIBLE.

SKIN AND CLOTHING: WEAR APPROPRIATE PROTECTIVE GLOVES AND CLOTHING TO PREVENT SKIN EXPOSURE.
WEAR APPROPRIATE PROTECTIVE CLOTHING TO MINIMIZE CONTACT WITH SKIN.

RESPIRATORS: WEAR A NIOSH/MSHA OR EUROPEAN STANDARD EN 149 APPROVED FULL-FACEPIECE AIRLINE RESPIRATOR IN THE POSITIVE PRESSURE MODE WITH EMERGENCY ESCAPE PROVISIONS.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:

pH: NOT AVAILABLE

VAPOR PRESSURE: NEGLIGIBLE.

VISCOSITY: NOT AVAILABLE

BOILING POINT:

FREEZING / MELTING
POINT

SECTION 10. STABILITY AND REACTIVITY

| | |
|---------------------------------------|--|
| CHEMICAL STABILITY: | STABLE UNDER NORMAL TEMPERATURES AND PRESSURES. |
| CONDITIONS TO AVOID | INCOMPATIBLE MATERIALS. |
| INCOMPATIBILITY WITH OTHER MATERIALS: | OXIDIZING AGENTS, REDUCING AGENTS, BASES, ALKALI METALS. |
| HAZARDOUS DECOMPOSITION PRODUCTS: | CARBON MONOXIDE, CARBON DIOXIDE. |
| HAZARDOUS POLYMERIZATION: | HAS NOT BEEN REPORTED. |

SECTION 11. TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 3401-37-4

LD50/LC50:

CAS# 3401-37-4 :
NOT AVAILABLE.

CARCINOGENICITY:

CAS# 3401-37-4 : NOT LISTED BY ACGIH, IARC, NIOSH, NTP, OR OSHA. SEE ACTUAL ENTRY IN RTECS FOR COMPLETE INFORMATION.

SECTION 12. ECOLOGICAL INFORMATION

DATA NOT YET AVAILABLE.

SECTION 13. DISPOSAL CONSIDERATIONS

DISPOSE OF IN A MANNER CONSISTENT WITH FEDERAL, STATE, AND LOCAL REGULATIONS.

SECTION 14. TRANSPORT INFORMATION

NO INFORMATION AVAILABLE.

SECTION 15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

TSCA:

CAS# 3401-37-4 IS LISTED ON THE TSCA INVENTORY.

EUROPEAN/INTERNATIONAL REGULATIONS

EUROPEAN LABELING IN ACCORDANCE WITH EC DIRECTIVES

HAZARD SYMBOLS: NOT AVAILABLE.

RISK PHRASES:

SAFETY PHRASES:

S 24/25 AVOID CONTACT WITH SKIN AND EYES.

WGK (WATER DANGER/PROTECTION)

CAS# 3401-37-4 : NO INFORMATION AVAILABLE.

UNITED KINGDOM OCCUPATIONAL EXPOSURE LIMITS

UNITED KINGDOM MAXIMUM EXPOSURE LIMITS

CANADA - DSL/NDSL

CAS# 3401-37-4 IS LISTED ON CANADA'S DSL LIST.

CANADIAN INGREDIENT DISCLOSURE LIST

CAS# 3401-37-4 : IS NOT LISTED ON CANADA'S INGREDIENT DISCLOSURE LIST.

EXPOSURE LIMITS

SECTION 16. OTHER INFORMATION

MSDS LEGEND:

| | |
|--------|--|
| MW: | MOLECULAR WEIGHT |
| MF: | MOLECULAR FORMULA |
| VOC: | VOLATILE ORGANIC COMPOUNDS |
| ACGIH: | AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS |
| CAS: | CHEMICAL ABSTRACTS SERIVE REGISTRY NUMBER |
| OSHA: | OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION |
| PEL: | PERMISSIBLE EXPOSURE LIMIT (OSHA) |
| TLV: | THRESHOLD LIMIT VALUE (ACGIH) |

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