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MATERIAL SAFETY DATA SHEET

1. CHEMICAL IDENTIFICATION

NAME: Metabolix E3HB, ethyl (R)3-hydroxybutyrate

2. COMPOSITION

CAS reference 24915-95-5

3. PHYSICAL DATA

APPEARANCE: clear liquid
ODOR: SLIGHT
FORMULA WEIGHT: APPROX. 132.2
FORMULA: $\text{CH}_3\text{CH}(\text{OH})\text{CH}_2\text{COOC}_2\text{H}_5$
BOILING POINT: 180-184C
MELTING POINT: N/D
FLASH POINT: 73C
SOLUBILITY IN WATER: very low

4. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA:

WATER SPRAY
CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE
FOAM.

SPECIAL FIRE FIGHTING PROCEDURES:

WEAR SELF CONTAINED BREATHING APPARATUS AND PROTECTIVE
CLOTHING TO PREVENT CONTACT WITH SKIN OR EYES.

EXPLOSION HAZARDS:

EMITS TOXIC FUMES UNDER FIRE CONDITIONS

5. HEALTH HAZARD

ACUTE EFFECTS

MAY CAUSE EYE IRRITATION.
MAY CAUSE SKIN IRRITATION.
MAY BE HARMFUL BY INHALATION.

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL AND
TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY
INVESTIGATED.

6. FIRST-AID MEASURES

EYES: IMMEDIATELY FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT
LEAST 15 MINUTES.

SKIN: IMMEDIATELY WASH WITH SOAP AND COPIOUS AMOUNTS OF
WATER.

INHALATION: REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE
ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE
OXYGEN.

INGESTION: WASH OUT MOUTH WITH WATER PROVIDED PERSON IS
CONSCIOUS. DO NOT SWALLOW RINSE. CALL A PHYSICIAN.

7. STABILITY AND REACTIVITY

STABILITY: STABLE

INCOMPATIBILITIES: STRONG OXIDIZING AGENTS
STRONG ACIDS

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:
CARBON DIOXIDE, CARBON MONOXIDE

CONDITIONS TO AVOID: NOT ESTABLISHED

8. SPILL OR LEAK PROCEDURES

WEAR RESPIRATOR, CHEMICAL SAFETY GOGGLES, RUBBER BOOTS AND HEAVY RUBBER GLOVES. ADSORB ONTO INERT MATERIAL. SWEEP UP, PLACE IN BAG AND HOLD FOR WASTE DISPOSAL. AVOID RAISING DUST. VENTILATE AREA AND WASH SPILL SITE AFTER PICKUP IS COMPLETE.

9. HAZARD IDENTIFICATION

DATA NOT AVAILABLE.

10. HANDLING AND STORAGE

SEE EXPOSURE CONTROL.

11. EXPOSURE CONTROL/PERSONAL PROTECTION

CHEMICAL SAFETY GOGGLES.

COMPATIBLE CHEMICAL-RESISTANT GLOVES.

NIOSH APPROVED RESPIRATOR

SAFETY SHOWER AND EYE BATH.

MECHANICAL EXHAUST REQUIRED.

AVOID INHALATION.

AVOID CONTACT WITH EYES, SKIN AND CLOTHING.

AVOID PROLONGED OR REPEATED EXPOSURE.

WASH THOROUGHLY AFTER HANDLING.

KEEP TIGHTLY CLOSED.

STORE IN A COOL, DRY PLACE.

12. DISPOSAL CONSIDERATIONS

MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER. OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

13. OTHER INFORMATION

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