

KEMAMIDE® E

| Date Issued: | 02/01/2013 |
|--------------|------------|
| MSDS No.: | 1002004 |

1. PRODUCT AND COMPANY IDENTIFICATION

| PRODUCT DESCRIPTION | Kemamide® E; Kemamide® E Ultra; Kemamide® E Export; Kemamide® EZ; Kemamide® E-EQ; Kemamide® E-LO; Kemamide® EN; Kemamide® E SN; Kemamide® E STK; Kemamide® E-YPT; Kemamide® E-60 |
|---------------------------------------|--|
| PHYSICAL FORMS: | Bead, Molten, Pellet, Powder; |
| CHEMICAL NAME: | Erucamide |
| GENERAL USE: | Release agent, Chemical intermediate |
| MANUFACTURE: | PMC Biogenix, Inc. 1231 Pope Street Memphis, TN 38108 USA |
| SERVICE CONTACT NUMBER: | 800-641-2152 |
| EMERGENCY CONTACT: | Environmental Health and Safety Department |
| EMERGENCY PHONE: | 901-320-5820 |
| 24 HR. EMERGENCY TELEPHONE NUMBER: | CHEMTREC (24 hours) 800-424-9300 |

2. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW

IMMEDIATE CONCERNS: Usual hazards associated with organic dusts. The possibility of explosions exists under dusty conditions. Avoid dusting when handling and avoid all possible sources of ignition (Spark and Flame). Molten product may cause thermal burns.

Potential Acute Health Effects

| Eye: | May cause eye irritation; Molten product may cause thermal burns |
|-------------|--|
| Skin: | May cause mild skin irritation; Molten product may cause thermal burns |
| Ingestion: | Large oral doses may cause irritation to the gastrointestinal tract. |
| Inhalation: | Excessive inhalation of dust or heated vapors may cause irritation to the respiratory tract. |
| Chronic: | No data available |

| GHS Label elements, including precautionary statements | | |
|--|--|--|
| Pictogram | None | |
| Signal word | None | |
| Hazard statement(s) | None | |
| Precautionary statement(s) | | |
| P261 | Avoid breathing dust/fume/gas/mist/vapors/spray | |
| P264 | Wash skin thoroughly after handling | |
| P280 | Wear protective gloves/eye protection/face protection | |
| P302 + P352 | IF ON SKIN: Wash with plenty of soap and water | |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. | |

3. COMPOSITION / INFORMATION ON INGREDIENTS



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| INGREDIENT(S) | CAS | EINEC No. | % BY WEIGHT |
|-----------------------|----------|-----------|-------------|
| 13-Docosenamide, (Z)- | 112-84-5 | 204-009-2 | 100 |

No Hazardous Ingredient

| 4. FIRST AID MEASURES | | |
|-----------------------|---|--|
| Inhalation | Remove to fresh air | |
| Skin Contact | Wash skin thoroughly with soap and water for at least 15 minutes. If redness or irritation occurs, seek medical attention. WHEN MOLTEN ONLY (molten product can cause thermal burns) - For contact with hot molten material, cool burned skin area by immersing in cold water or apply cold water. | |
| Eye Contact | Immediately flush eyes with water and continue washing for at least 15 minutes. If redness or irritation occurs, seek medical attention. WHEN MOLTEN ONLY (molten product can cause thermal burns) - Obtain medical attention immediately. Immediately flush eyes with water and continue washing for at least 15 minutes. If redness or irritation occurs, seek medical attention | |
| Indigestion | No emergency care anticipated. WHEN MOLTEN ONLY (molten product can cause thermal burns) - Obtain medical attention immediately. | |

5. FIRE-FIGHTING MEASURES

| Flash point: Extinguishing Media | 220 °C (428°F) Dry chemical, water spray, CO2, foam, dry powder (ABC-powder) |
|---|--|
| Fire Fighting Procedure: | Do not direct a solid stream of water or foam into burning molten material; this may cause spattering and spread the fire. |
| Special protective equipment for fire fighting: | Firefighters must be equipped to prevent breathing of vapors or products of combustion. Wear an approved self-contained breathing apparatus and protective clothing. |
| Hazardous combustion products: | Carbon monoxide; Carbon dioxide, Oxides of nitrogen. |

6. ACCIDENTAL RELEASE MEASURES

| Environmental Precautions | This product is insoluble in water and will float on the surface., |
|---------------------------|--|
| Methods for cleaning up | Avoid dust formation. Avoid dispersion of dust. Sweep up and collect in a suitable container for disposal. Observe government regulations. |

7. HANDLING AND STORAGE

Handling Avoid breathing dust. Avoid dispersion of dust to reduce fire and explosion potential

Storage Normal precautions common to good safety practice should be followed in storage. Store at ambient temperature. Repair all broken containers immediately.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION



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Exposure limit values

| Component | Туре | Value | Remark |
|-------------------------------------|------------|------------|----------------------|
| Particulate not otherwise regulated | TWA, ACGIH | 10 mg/m3 | Total inhalable dust |
| | TWA-ACGIH | 3.0 mg/m3 | Respirable fraction |
| | TWA, OSHA | 5.0 mg/m3 | Respirable fraction |
| | TWA, OSHA | 15.0 mg/m3 | Total dust |

No other exposure limits have been established. Consult local authorities for acceptable provincial values

| Engineering Measures | Use local ventilation or engineering controls as needed to maintain personnel exposure below the exposure limits |
|----------------------|--|
| | |
| Hygiene Measures | Handle in accordance with good industrial hygiene and safety practices. |

Personal Protective Equipment

| Respiratory Protection | Dust respirator, if dusting conditions exist. |
|-------------------------------|---|
| Hand Protection | Neoprene, Heat protective impervious gloves when handling molten product. |
| Eye Protection | Monogoggles. Personal protective, When MOLTEN ONLY., Splash-proof goggles, Full face shield. |
| Skin Protection | Rubber or plastic apron, Use heat protective equipment (such as gloves, long sleeves, and aprons) When handling molten material,. |

9. PHYSICAL AND CHEMICAL PROPERTIES

| Physical State | Solid |
|--------------------------|--|
| Color | Off-White |
| Odor | Slight Faint |
| Boiling Point | >288°C (>550 °F) |
| Melting Point | 75 °C (167°F) - 85°C (185 °F) |
| Density | ~0.88 g/cm3 at 25° C 0.815 g/cm3 at 130°C |
| Vapor pressure | Negligible |
| Solubility in water | Insoluble |
| Autoignition temperature | Not available |
| Upper explosion limits | Not available |
| Lower explosion limits | Not available |
| Flash point | 220 °C (428°F) Method: Pensky-Martens closed cup ASTM D 93 |
| Flash point | 220 °C (428°F) Method: Pensky-Martens closed cup ASTM D 93 |
| Percent volatiles | 0%(m) |

10. STABILITY AND REACTIVITY

| Stability | Stable under normal conditions |
|---------------------------------|---------------------------------|
| Conditions to avoid | None Known |
| Incompatible materials | Strong oxidizing agents |
| Hazardous decombustion products | Carbon monoxide; Carbon dioxide |
| Hazardous polymerization | Will not occur |



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11. TOXICOLOGICAL INFORMATION

| Acute effects | |
|-------------------------------|---|
| EYES: | May cause slight irritation. |
| SKIN CONTACT: | May cause slight irritation. LD ₅₀ Species: Rabbit Result: Slight erythema, slight edema Classification: Not irritant Remark 0,5 ml; occlusive |
| SKIN ABSORPTION: | Low acute toxicity |
| INHALATION : | Dust may cause irritation of the respiratory tract |
| SWALLOWING: | Low acute toxicity LD ₅₀ Rats (Males) Results: >10,000mg/kg |
| Dermal LD ₅₀ : | No data available |
| Oral LD ₅₀ : | No data available |
| Inhalation LC ₅₀ : | No data available |

12. ECOLOGICAL INFORMATION

| Ecotoxicological Information | No data available |
|----------------------------------|--|
| Bioaccumulative Potential | Bioaccumulative unlikely. |
| Comments | Not expected to be acutely toxic to aquatic organisms. |

13. DISPOSAL CONSIDERATION

| General | It is our opinion this product is not a RCRA hazardous waste. It is the generator's responsibility to make their own determination as to the RCRA status of waste they generate. We have not performed a Toxicity Characteristic Leachate Procedure (TCLP) on this product., Incinerate in a furnace where permitted under appropriate Federal, State, and local regulations. |
|----------------------|---|
| Non-cleaned packages | Subject completely emptied paper bags to paper recycling |

14. TRANSPORATION INFORMATION

| DOT | This product is not regulated by DOT |
|--|---------------------------------------|
| Canada Transportation of Dangerous Goods | This product is not regulated by TDG |
| IMDG Classification | This product is not regulated by IMDG |
| ICAO Classification | This product is not regulated by ICAO |

15. REGULATORY INFORMATION

UNITED STATES

SARA Title III (Superfund Amendments and Reauthorization Act)



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313 Reportable Ingredients: None

302/304 Emergency Planning

Emergency Plan: None

EPA Hazard Categories

SARA 311/312: None

CERCLA (Comprehensive Response, Compensation and Liability Act)

CERCLA RQ: None

TSCA (Toxic Substance Control Act)

TSCA Status: This product is on the TSCA inventory

New Jersey Worker and Community Right – To- Know Act (Labeling Requirements)

| Chemical Name | CAS Number | New Jersey TS Number |
|-----------------------|------------|----------------------|
| 13-Docosenamide, (Z)- | 112-84-5 | |

California Proposition 65 Does not of

oposition 65 Does not contain any contaminates or byproducts known by the State of California to cause cancer or reproductive toxicity as listed under Proposition 65 Safe Drinking Water and Toxic Enforcement Act.

CANADA

WHMIS CLASSIFICATION: Not A WHMIS controlled product

CPR Compliance This Product has been classified with the hazard criteria of the CPR, and the MSDS contains all the information required by CPR

Domestic Substance List (Inventory): This product is on the DSL

Chemical Inventory

| ••••••• | |
|----------------|--|
| Canada: | This product is on the DSL. |
| Europe: | This product is on the EINECS inventory. |
| United States: | This product is on the TSCA inventory. |
| Australia: | This product is on the AICS inventory. |
| China: | This product is on the IECSC Inventory. |
| Japan: | This product is on the ENCS inventory. |
| Korea: | This product is listed on the Existing Chemicals List (ECL). |
| Taiwan | This product is listed on the National Existing Chemical Substance Inventory (NECSI) |
| Philippines: | This product is on the Philippines Inventory of Chemicals and Chemical Substances (PICCS). |
| | |

16. OTHER INFORMATION

| Revision | 3 |
|-----------------|--|
| Supersedes Date | 04/01/2011 |
| Approved By | Safety Health & Environmental Department |
| Prepared By: | Quality Assurance, Product Safety |



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HMIS Rating

HEALTH: 1 FLAMMABILITY: 1 PHYSICAL HAZARD: 0 PERSONAL PROTECTION:

Manufacturer Disclaimer: The opinions expressed herein are those of qualified experts within PMC Biogenix Inc. We believe that the information contained herein is current as of the date of this safety data sheet. Since the use of this information and of these opinions and the conditions of use of this product are not within the control of PMC Biogenix Inc., it is the user's obligation to determine the conditions of safe use of the products.