| 1. Product and Company Identification | on | |
|---|--|--|
| Product Name: | 390 MMP FRET Substrate IV | |
| | Mca - P - Cha - G - Nva - HA - Dpa - NH2 | |
| Manufacturer/Supplier: | AnaSpec, Inc. | |
| | www.anaspec.com | |
| | 34801 Campus Drive | |
| | Fremont, CA 94555 | |
| | Tel: 510-791-9560 | |
| | Fax: 510-791-9572 | |
| | Email: <u>service@anaspec.com</u> | |
| | Kaneka Eurogentec SA, | |
| | Rue du Bois Saint Jean 5 4102 Seraing Belgium | |
| | Tel. +32-4-3727400 | |
| | Fax. +32-4-3727500 | |
| | E-mail info@eurogentec.com | |
| | Kaneka Eurogentec Helpdesk | |
| | Tel. +32-4-3727665 | |
| Catalog Number | AS-27109 | |
| Relevant identified uses of the | For laboratory use only. | |
| substance/preparation and uses advised against | | |
| Emergency information | Please contact the regional Eurogentec representation in you | |
| | country or Kaneka Eurogentec S.A. directly (from 8 am to | |
| | pm) | |

Safety Data Sheet (SDS)

Emergency Overview: We do recommend handling all chemicals with caution. Use proper protective equipment (PPE) when handling chemicals. To our knowledge, the hazards of this material have not been thoroughly investigated.

GHS Hazard Classification:

GHS Physical Hazards:Not a dangerous substance according to the GHSGHS Health and Environmental Hazards:Not a dangerous substance according to the GHS

GHS Signal Words: None

GHS Hazard Statements: None

GHS Precautionary Statements: None

Potential Health Effects for:

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

Ingestion: If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Skin: In case of contact, immediately wash skin with soap and copious amount of water.

Eyes: In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

Chronic Exposures: No information available. We recommend limiting prolonged exposure.

Target Organs: No information available

HMIS Classification

Health hazard: 0 Chronic Health Hazard: 0 Flammability: 0 Physical hazards: 0

NFPA Rating

Health hazard: 0 Fire: 0 Reactivity Hazard: 0

| 3. Compositio | <u>m</u> | |
|----------------|---|--|
| Ingredients/Co | omponents: | |
| Chemical Na | ame: 390 MMP FRET Substrate IV Mca - P - Cha - G - Nva - HA - Dpa - NH2 | |
| | Molecular formula: NA Molecular weight: 1100.2 CAS-No NA EC-No NA | |
| | | |
| 4. First Aid N | <u>Measures</u> | |
| Inhalation: | If dust is inhaled, remove from contaminated area. Encourage patient to blow nose to ensure clear passage of breathing. If irritation or discomfort persists seek medical attention. | |
| Ingestion: | If swallowed do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Seek medical advice. | |
| Skin: | If skin or hair contact occurs: Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation. | |
| Eyes: | If this product comes in contact with the eyes: Wash out immediately with fresh running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. If pain persists or recurs seek medical attention. | |

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| Extinguishing media: | | Water spray or fog. |
|--------------------------------------|--|--|
| | | Alcohol resistant foam. |
| | | Dry chemical powder. |
| | | BCF (where regulations permit). |
| | | Carbon dioxide |
| | | |
| Special firefighting procedures: | | Alert Emergency Responders and tell them location and nature of |
| | | hazard. |
| | | Wear breathing apparatus plus protective gloves. |
| | | Prevent, by any means available, spillage from entering drains or water |
| | | course. |
| | | Use water delivered as a fine spray to control fire and cool adjacent |
| | | area. |
| | | DO NOT approach containers suspected to be hot. |
| | | Cool fire exposed containers with water spray from a protected location. |
| | | If safe to do so, remove containers from path of fire. |
| | | Equipment should be thoroughly decontaminated after use. |
| Unusual fire and explosions hazards: | | Emits toxic fumes under fire conditions |
| | | |
| 6. Accidental Release M | <u>leasures</u> | |
| Spill response | | l ignition sources. |
| | Clean up all spills immediately. | |
| | Avoid contact with skin and eyes. | |
| | | rsonal contact by using protective equipment. |
| | | ean up procedures and avoid generating dust. |
| | | suitable, labeled container for waste disposal |
| Containment | | personal contact, including inhalation. |
| | | ective clothing when risk of exposure occurs. |
| | | ell-ventilated area. |
| | DO NOT enter confined spaces until atmosphere has been checked. | |
| | DO NOT allow material to contact humans, exposed food or food utensils. | |
| | Avoid contact with incompatible materials. | |
| | When handling, DO NOT eat, drink or smoke. | |
| | Keep containers securely sealed when not in use. | |
| | Avoid physical damage to containers. | |
| | Always wash hands with soap and water after handling. | |
| | Use good occupational work practice. | |
| | Empty containers may contain residual dust which has the potential to accumulate | |
| | following settling. Such dusts may explode in the presence of an appropriate ignitio | |
| | source. Do NOT cut, drill, grind or weld such containers | |
| | | - |
| PPE | Use person | nal protective equipment |
| | | |
| | | |

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Store at -20 °C, dry desiccated and protected from light. Store away from oxidizing agent.

| 8. Exposure Controls | |
|----------------------|---|
| Engineering controls | Local exhaust ventilation is required where solids are handled as powders or crystals; |
| | even when particulates are relatively large, a certain proportion will be powdered by mutual friction. |
| | Exhaust ventilation should be designed to prevent accumulation and re-circulation of particulates in the workplace. |
| | If in spite of local exhaust an adverse concentration of the substance in air could occur, respiratory protection should be considered. Such protection might consist of: |
| | (a): particle dust respirators, if necessary, combined with an absorption cartridge;(b): filter respirators with absorption cartridge or canister of the right type; |
| | (c): fresh-air hoods or masks |
| | Build-up of electrostatic charge on the dust particle, may be prevented by bonding and grounding. |
| | Powder handling equipment such as dust collectors, dryers and mills may require additional protection measures such as explosion venting. |
| | Air contaminants generated in the workplace possess varying "escape" velocities which, |
| | in turn, determine the "capture velocities" of fresh circulating air required to efficiently |
| | remove the contaminant. |
| PPE | Use personal protective equipment |

9. Physical and Chemical Properties

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| Physical State | Solid |
|---------------------|---------------|
| Odour | Not available |
| Solubility in Water | Not available |
| Specific Gravity | Not available |
| рН | Not available |
| Boiling Point | Not available |
| Melting Point | Not available |
| Flash Point | N/A |
| Vapor Pressure: | N/A |
| Vapor Density: | N/A |

10. Stability and Reactivity

| Thermal Decomposition | No data available |
|-------------------------------------|----------------------|
| Dangerous Products of Decomposition | No data available |
| Dangerous Reactions | COx, NOx when burned |
| | |

Keep container tightly closed in a dry well-ventilated place. Store in -20 °C, dry refrigerator.

11. Toxicological Information

| RTECS Number | N/A |
|-------------------|--|
| Toxicity | No information available. |
| Health Hazards | Although ingestion is not thought to produce harmful |
| | effects, the material may still be damaging to the |
| | health of the individual following ingestion, especially |
| | where pre-existing organ (e.g. liver, kidney) |
| | damage is evident. In an occupational setting however, |
| | ingestion of insignificant quantities is not thought to be |
| | cause for concern. |
| Potential Hazards | Not available |

AnaSpec Inc.

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| Carcinogenicity: | | No significant acute toxicological data identified |
|---|--|---|
| OSHA Permissible Exposure Limit(PEL) Data | | N/A |
| ACGIH Threshold Limit Values (TLV) | | N/A |
| Reproductive Toxicity: | , | No information available |
| 12. Ecological Information | | |
| No information available. | | |
| 13. Disposal Considerations | | |
| | by country, state and | tate and federal regulations. Legislation addressing waste d/ or territory. Each user must refer to laws operating in their |
| 14. Transport Information | | |
| Hazard Class | N/A | |
| Identification Number | N/A | |
| Packing Group | N/A | |
| Proper Shipping Name (DOT) | N/A | |
| 15. Regulatory Information | | |
| US SARA Title III (Superfund Ame US Other: N/A | vironmental Respon endments and Reaut | se, Compensation, and Liability Act: N/A thorization Act: N/A rcial Chemical Substances) Number: N/A |
| EC Risk Statements: N/A | | |
| Other Country Regulations: N/A | | |
| 16. Other Information | | |
| experienced in handling potential to be correct but does not purp- independent decisions regarding of | ly hazardous chemi- ort to be all inclus completeness of the | cultural or cosmetic use. A technically qualified individual cals must supervise its use. The above information is believed sive and shall be used only as a guide. Users should make information based on all sources available. AnaSpec shall not g or from contact with the above product. |