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| REF No.: | MSDS/01 | MATERIAL SAFETY DATA SHEET <u>ECO-IMPRES-2067-A/M</u> |
| Rev. Date: | 15/11/15 | |
| Issue Date: | 31/03/17 | |
| Version No. | 1 | |

1. Product & Company Identification

Product Details

Description: Styrene -Acrylic Resin solution
Product Code/s: ECO-IMPRES – 2067-A/M
Recommended Use: For Indl. (Chem. Ind.) use only
Chemical family: Polymer

Company Details

Address: 210/211, Narmada, Laxmi Telephone +91 22 25855379
Indl. Premises, Pokhran Rd., Vartak Fax: + 9122 2585 5714
Nagar, Thane E-Mail: sales@anuvichem.com
Website: www.anuvichem.com

2. Composition / Information on Ingredients

| Chemical Characterization: | CAS # | % Range |
|---|----------------|---------|
| Water | 7732 - 18 - 5 | 45 - 55 |
| Amine Salt of Modified Acrylic Copolymer | EC 1272/2008 | 40 – 50 |
| Ammonium Hydroxide | 1336 – 21 - 6 | < 1 % |
| Alcohols - C11 - C15 secondary, Ethoxylated | 68131 - 40 - 8 | < 2 % |

Hazards not otherwise Classified:

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Emergency Overview:

Use with local exhaust ventilation. Handle in accordance with good industrial hygiene and safety practice. If used as intended, this product is not expected to present a physical or health hazard.

3. Hazards Identification

Emergency Overview

Physical Appearance

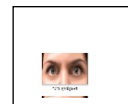
Free flowing Transparent & pale yellow liquid –
Characteristic odour



Potential Health Effects

Eyes

May cause eye burning or irritation on over exposure
May cause irritation in the form of redness, burning or dermatitis (last one in severe cases or person being allergic)



Skin

Ingestion

Chemicals present in this mixture may be harmful if swallowed. Also, may affect nervous system and cause abdominal discomfort.



Inhalation

May cause moderate respiratory irritation, dizziness, fatigue, nausea & headache

4. First Aid Measures

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| Eyes: | Immediately flush eyes with plenty of water for two to three minutes. Remove eye contact lenses (if wearing one) and continue flushing with water for 15 minutes. Get medical attention |
| Skin: | Remove contaminated clothing and immediately wash affected area with plenty of soap and water. Seek medical attention where necessary. Wash contaminated clothing before use. |
| Ingestion: | Contact local medical practitioner or medical help. Do not induce vomiting unless advised by medical practitioner. If vomiting occurs then keep head lower than hips to help prevent aspiration. Get medical attention immediately. |
| Inhalation: | Remove the patient to fresh air (open and airy space), supply oxygen if breathing is difficult. Seek medical attention immediately. |
| Clothing | Remove contaminated clothing and wash the affected body part/s with water |

5. Flammability & Fire Fighting Measures

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| Extinguishing media: | Water spray, Dry Powder and Foam |
| Hazardous combustion products: | Harmful vapours. Evolution of fumes & fog. Substances / group of substances can be released in case of fire. |
| Firefighting equipment: | Fire fighters must be equipped with self-contained breathing apparatus and turn-out gear. Contaminated fire extinguishing water must be disposed off in accordance with the official regulations. |



6. Accidental Release (spillage / leakage) Measures

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| General procedure: | Vacate area of spill or leak. Wear appropriate personal protective equipment. Contain and recover liquid to the extent possible. Collect the liquid in an appropriate container or absorb with an inert material like saw dust / dry sand / universal binder / acid binder or cloth stripes (Chindhi) etc. Disperse any vapour and flush spill away from the personnel or other ignitable material. Whatever is collected from the accidental release – treat as prescribed under Disposable Material” Do not discharge in to drains, ground water and/or surface water streams. |
|---------------------------|---|

7. Handling & Storage

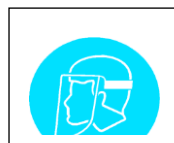
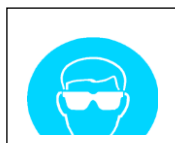
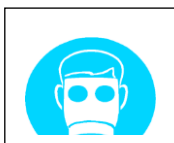
| | |
|--|--|
| General procedure: | No special measures necessary provided product is used correctly |
| Precautions against Fire & Explosion | No special precaution/s necessary |
| Conditions for storage, including any incompatibilities | Keep containers tightly closed and in a cool place |
| Shelf Life | One year from date of manufacture when stored in original sealed container at recommended storage temperature range. |

8. Exposure Control & Personal Protection

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| Exposure guidelines: | OSHA Hazardous Components (29 CFR 1910.1200) – Exposure Limits |
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Personal Protection Equipment:

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| Eye & face | Wear safety glasses with side shields or goggles when handling this material |
| Skin | Wear impervious gloves and appropriate protective clothing as required to minimize contact with skin |
| Respiratory: | A half-face organic vapour respirator maybe worn for protection up to ten or full-face respirator for protection up to fifty times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier. Whichever is lowest must be followed. For emergencies where the exposure levels are unknown, use a full-face air respirator. |



9. Physical & Chemical Properties

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| Physical State | Transparent & pale yellow liquid |
| % Solid Content | 45 ± 1 |
| Brookfield viscosity cps Spindle 3/RPM 60 at 30°C | 500 ± 200 |
| pH | 8.5 ± 1 |
| Vapour Density | Heavier than air |
| Boiling Point | Around 100°C |
| Freezing Point | 0°C |
| Melting Point | Not applicable |
| Solubility in Water | Yes |
| Flash Point | No flash point (measurement made up to boiling point) |
| Flammability | Not Flammable |
| Lower explosion limit | 15 % (V) |
| Upper explosion limit | 28 % (V) |
| Auto-ignition | Due to high water content - product does not ignite |
| Density | 1.04 g/cm ³ |
| Thermal decomposition | Stable up to boiling point |
| VOC or % Volatilities | < 1 % |
| Evaporation rate | Not determined |

10. Stability & reactivity

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| Reactivity | No hazards if stored / handled as prescribed |
| Oxidizing properties | No fire propagation |
| Chemical Stability | Product is stable if product is stored and handled as prescribed. |
| Polymerization or Hazardous reactions: | Shall not occur, if product is stored as prescribed |
| Conditions to avoid | See sec. 7 (Handling & Storage) |
| Incompatible material/s hazards | No such material identified |
| Hazardous decomposition products | No hazards if stored / handled as prescribed |
| Thermal decomposition | Stable up to boiling point |

11. Toxicological Information

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| Primary routes of exposure | Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases. |
| Acute Toxicity: | Assessment of acute toxicity: Virtually nontoxic after a single ingestion. Oral Type of value: LD50 Species: rat Value: > 5,000 mg/kg |

12. Ecological Information

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| Environmental data | No data available. |
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13. Disposal Considerations

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| Product | Material that cannot be transferred to recovery or re-cycle should be handled as hazardous waste and the extract disposed off at a Govt. Approved waste facility or incinerator (or handed over to waste handling authorised contract). Always dispose according to the current regulations or the acts of the country of residence. <u>Dispose of in accordance with national, state and local regulations. It is the waste generator's responsibility to determine if a particular waste is hazardous under RCRA.</u> |
| Un-cleaned packing: | Contaminated packing material should be emptied as far as possible and after appropriate cleaning could be re-used or disposed as per the regulations. |

14. Transport Information

Department of Transportation Rules

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|------------------------------------|---|
| Proper Shipping Name | Resin solution |
| Technical Name | Styrene Acrylic Resin Solution |
| Land Transport (USDOT) | Not classified as Dangerous Goods under Transport Regulations |
| Sea Transport (IMDG) | Not classified as Dangerous Goods under Transport Regulations |
| Air Transport (IATA / ICAO) | Not classified as Dangerous Goods under Transport Regulations |

15. Regulatory Information

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| Federal regulations | |
| Registration status | Chemical - TSCA US Released list |
| EPCRA 311/322 Hazard category | Acute; Chronic |
| NFPA Hazard Codes | Health: 1; Fire: 0; Reactivity: 0; Special: None |
| HMIS III Rating | Health: 1; Flammability: 0; Physical hazard: 0 |

16. Other Information

| NFPA Codes | Health | 1 | HMS Codes | Health | 1 |
|------------|------------|---|-----------|------------|---|
| | Fire | 0 | | Fire | 0 |
| | Reactivity | 0 | | Reactivity | 0 |
| | | | | Protection | G |

Additional Information

The OSHA Hazard Communication Standard, 29 CFR 1910.1200, Paragraph (g) (4), specifically permits chemical manufacturers to single MSDS for a category of complex mixtures, where those “**Mixtures**” have similar Hazards and contents. Therefore, this MSDS applies to the range of products described in Section 1, or all products with the same product name listed in section 1 (unless described otherwise). Where specific data is required for the purposes of regulatory reporting, a Technical Data Sheet shall be provided for the specific product, on request to us (manufacturer).

Manufacturers Disclaimer:

Information given herein is offered in good faith as accurate, but without guarantee. Conditions of issue and stability of the product for particular use and suitability of the product for specific application/s are beyond our control; all risks of use of this product are therefore assumed by the user. Nothing is intended as a recommendation for uses, which infringe valid Patents or extending Licence under valid Patents. Appropriate warning and safe handling procedures should be provided to all the handlers and users of this material.

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