



Safety Data Sheet

Product Name: ASM-125-OH

(Base Anion Exchange Resin Hydroxide Form impregnated with hydrated iron oxide)

Effective date 31 March 2015

Section 1: Identification

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| 1a | Product Name | ResinTech ASM-125-OH |
| 1b | Common Name | Type I Strong base anion resin in the hydroxide form impregnated with hydrated iron oxide. |
| 1c | Intended use | Antimony and silica removal. |
| 1d | Manufacturer Address | ResinTech, Inc. 160 Cooper Road, West Berlin, NJ 08091 USA |
| | Phone | 856-768-9600 |
| | Email | ixresin@resintech.com |

Section 2: Hazard Identification

2a OSHA Hazard classification Not hazardous or dangerous

| Product Hazard Rating | Scale |
|-----------------------|----------------|
| Health = 0 | 0 = Negligible |
| Fire = 1 | 1 = Slight |
| Reactivity = 0 | 2 = Moderate |
| Special – N/A | 3 = High |
| | 4 = Extreme |

2b Product description Black or red colored solid beads approximately 0.6 mm diameter with moderate to strong amine odor.

2c Precautions for use Safety glasses and gloves recommended. Slipping hazard if spilled.

2c Potential health effects Will cause eye irritation.
Will cause skin irritation.
Ingestion is not likely to pose a health risk.

2d Environmental effects This product may raise the pH of any water that contacts it.

Section 2A: Hazard classification UN OSHA globally harmonized system



WARNING

(contains hydroxide form strong base anion resin)

H315: Causes skin irritation (Category 2)

H318: Causes serious eye irritation (Category 2A)

H335: May cause respiratory irritation (Category 3)

Precautionary Statements

P261: Avoid breathing dust/fume/gas/mist/vapors/spray

P264: Wash hands thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection/face protection

P284: In case of inadequate ventilation wear respiratory protection.

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.

P333+313: If skin irritation or a rash occurs: Get medical advice/attention.

P337+313: If eye irritation persists get medical advice/attention.

P403+233: Store in a well-ventilated place. Keep container tightly closed.

P411: Store at temperatures not exceeding 50 °C/ 122 °F.

Please refer to the safety data sheet for additional information regarding this product

ResinTech, Inc.
160 Cooper Road
West Berlin, NJ 08091-9234
856 768-9600
lxresin@resintech.com

Section 3: Composition/ Information on Ingredients

| | | |
|----|---|---|
| 3a | Chemical name | Trimethylamine functionalized chloromethylated copolymer of polystyrene in the hydroxide form impregnated with hydrated iron oxide. |
| 3b | Ingredients | |
| | Trimethylamine functionalized chloromethylated copolymer of styrene and divinylbenzene in the chloride form | CAS# 60177-39-1 (35 - 50%) |
| | Ferric Hydroxide | CAS# 20344-49-4 (10 – 20%) |
| | Water | CAS# 7732-18-5 (30 – 45%) |

Section 4: First Aid Measures

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| 4a | Inhalation | No adverse effects expected- normal use of product does not produce odors or vapors. |
| 4b | Skin | Wash with soap and water - seek medical attention if a rash develops. |
| 4c | Eye contact | Wash immediately with water - seek attention if discomfort continues. |
| 4d | Ingestion | No adverse effects expected for small amounts, larger amounts can cause stomach irritation. Seek medical attention if discomfort occurs. |

Section 5: Fire Fighting Measures

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| 5a | Flammability | NFPA Fire rating = 1 |
| 5b | Extinguishing media | Water, CO2, foam, dry powder |
| 5c | Fire fighting Procedures | Follow general fire fighting procedures indicated in the work place. Seek medical attention if discomfort continues. |
| 5d | Protective Equipment | MSHA/NIOSH approved self-contained breathing gear, full protective clothing. |
| 5e | Combustion Products | Carbon oxides and other toxic gasses and vapors. |

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| 5f | Unusual Hazards | Product is not combustible until moisture is removed. Resin begins to burn at approximately 230° C. Auto ignition can occur above 500° C. |
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Section 6: Accidental Release Measures

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| 6a | Personal Precautions | Keep people away, spilled resin can be a slipping hazard, wear gloves and safety glasses to minimize skin or eye contact. |
| 6b | Incompatible Chemicals | Strong oxidants can create risk of combustion products similar to burning. |
| 6c | Environmental Precautions | Keep out of public sewers and waterways. |
| 6d | Containment Materials | Use plastic or paper containers. |
| 6e | Methods of Clean-up | Sweep up material and transfer to containers. |

Section 7: Handling and Storage

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| 7a | Handling | Prolonged skin contact will cause burns due to causticity. Avoid contact with salts or with salty water to prevent premature exhaustion of the resin. Keep resin moist and avoid allowing resin to completely dry. |
| 7b | Storage | Store in a cool dry place (0° to 45° C) in the original shipping container. This product is thermally sensitive and will have reduced shelf life if subjected to extended periods of time at temperatures exceeding 50° C. Although freezing does not usually damage ion exchange resins, avoid repeated freeze thaw cycles. |
| 7c | TSCA considerations | Ion exchange resins should be listed on the TSCA Inventory in compliance with State and Federal Regulations. |

Section 8: Exposure Controls/Personal Protection

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| 8a | OSHA exposure limits | None noted. |
| 8b | Engineering Controls | Provide adequate ventilation. |
| 8c | Personal Protection Measures Eye Protection | Safety glasses or goggles. |

Respiratory Protection

Not required for normal use but recommended for poorly ventilated spaces.

Protective Gloves

Recommended for extended contact.

Section 9: Physical and Chemical Properties

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| Appearance | Amber, yellow, or red beads approx. 0.6 mm diameter. |
| Flammability or explosive limits | Flammable above 500° C |
| Odor | Little or no odor |
| Physical State | Solid |
| Vapor pressure | Not available |
| Odor threshold | Not available |
| Vapor density | Not available |
| pH | Basic when mixed with water |
| Relative density | Approx 710 grams/Liter |
| Melting point/freezing point | Does not melt, freezes at approx. 0 C |
| Solubility | Insoluble in water and most solvents |
| Boiling point | Does not boil |
| Flash point | Approx 500° C |
| Evaporation rate | Does not evaporate |
| Partition Coefficient (n-octanol/water) | Not applicable |
| Auto-ignition temperature | Approx 500° C |
| Decomposition temperature | Above 230° C |
| Viscosity | Not applicable |

Section 10: Stability and Reactivity

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| 10a Stability | Stable under normal conditions. |
| 10b Conditions to Avoid | Heat, exposure to strong oxidants. |
| 10c Hazardous by-products | Trimethylamine, charred polystyrene, aromatic acids and hydrocarbons, organic amines, nitrogen oxides, carbon oxides, chlorinated hydrocarbons. |
| 10d Incompatible materials | Strong oxidizing agents (such as HNO ₃) |

10e Hazardous Polymerization Does not occur

Section 11: Toxicological Information

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| 11a Likely Routes of Exposure | Oral, skin or eye contact. |
| 11b Effects of exposure | |
| Delayed | None known. |
| Immediate (acute) | None known. |
| Chronic | None known. |
| 11c Toxicity Measures | |
| Skin Adsorption | Unlikely, some transfer of causticity is possible. |
| Ingestion | Oral toxicity believed to be low but no LD50 has been established. |
| Inhalation | Amine vapors released in head space above sealed containers can exceed recommended exposure levels for trimethylamine. |
| 11d Toxicity Symptoms | |
| Skin Adsorption | Mild rash. |
| Ingestion | Indigestion or general malaise. |
| Inhalation | Unknown. |
| 11e Carcinogenicity | None known. |
| 11e Carcinogenicity | None known |

Section 12: Ecological information

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| 12a Eco toxicity | Not acutely harmful to plant or animal life. |
| 12b Mobility | Insoluble. |
| 12c Biodegradability | Not biodegradable. |
| 12d Bioaccumulation | Insignificant. |
| 12e Other adverse effects | Not Harmful to the environment. |

Section 13: Disposal Considerations

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| 13a | General considerations | Material is non-hazardous. |
| 13b | Disposal Containers | Most plastic and paper containers are suitable. Avoid use of unlined metal containers. |
| 13c | Disposal methods | No specific method necessary. |
| 13d | Sewage Disposal | Not recommended. |
| 13e | Precautions for incineration | May release trimethylamine and toxic vapors when burned. |
| 13f | Precautions for landfills | pH of spent resin may be high. Resins used to remove hazardous materials may then become hazardous mixtures. |

Section 14: Transportation Information

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| 14a | Transportation Class | Not classified as a dangerous good for transport by land, sea, or air. |
| 14b | TDG | Not regulated. |
| 14c | IATA | Not regulated. |
| 14d | DOT (49 CFR 172.101) | Not Regulated. |

Section 15: Regulatory Information

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| 15a | CERCLA | Not regulated |
| 15b | SARA Title III | Not regulated |
| 15c | Clean Air act | Not regulated |
| 15d | Clean Water Act | Not regulated |
| 15e | TSCA | Not regulated |
| 15f | Canadian Regulations WHMIS TDG | Not a controlled product Not regulated |
| 15g | Mexican Regulations | Not Dangerous |

Section 16: Other Information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features. Regulatory requirements are subject to change and may differ from one location to another. It is the buyer's responsibility to ensure that their activities comply with federal, state, and local laws.

16a Date of Revision 31 March 2015