



Safety Data Sheet

Product Name: BSM-50

(Strong Base Anion Exchange Resin in the Borate form impregnated with hydrated iron oxide)
Effective date 31 March 2015

Section 1: Identification

1a	Product Name	ResinTech BSM-50
1b	Common Name	Strong base anion resin in the borate 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 little or no 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 skin irritation.
Ingestion is not likely to pose a health risk.

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

Section 2A: Hazard classification UN OSHA globally harmonized system



WARNING

(contains ion exchange resin)

H320: Causes eye irritation (Category 2B)

Precautionary Statements

P264: Wash hands thoroughly after handling.

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

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Section 3: Composition/ Information on Ingredients

3a	Chemical name	Trimethylamine functionalized chloromethylated copolymer of polystyrene in the borate 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%)
3c	Ferric Hydroxide	CAS# 20344-49-4 (10 – 20%)
3d	Boric Acid	CAS# 10043-35-3 (5 – 10%)
	Water	CAS# 7732-18-5 (30 – 45%)

Section 4: First Aid Measures

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

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.

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

Section 6: Accidental Release Measures

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

7a Handling Avoid prolonged skin contact. 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

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.
Protective Gloves Recommended for extended contact.

Section 9: Physical and Chemical Properties

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	Near neutral (6 to 8 typical)
Relative density	Approx 800 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

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

11a	Likely Routes of Exposure	Oral, skin or eye contact.
11b	Effects of exposure Delayed Immediate (acute) Chronic	None known. None known. None known.
11c	Toxicity Measures Skin Adsorption Ingestion Inhalation	Unlikely. Oral toxicity believed to be low but no LD50 has been established. Unknown, vapors are very unlikely due to physical properties (insoluble solid).
11d	Toxicity Symptoms Skin Adsorption Ingestion Inhalation	Mild rash. Indigestion or general malaise. None known.
11e	Carcinogenicity	None known

Section 12: Ecological information

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

13a	General considerations	Material is non-hazardous.
13b	Disposal Containers	Most plastic and paper containers are suitable.
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 Resins used to remove hazardous materials may then become hazardous mixtures.

Section 14: Transportation Information

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

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 Not a controlled product
TDG 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