

Safety Data Sheet: A451-Free Base or Hydroxide

Section 1: Identification

Product Name: A451, Free base or Hydroxide form. Macroporous Weak Base Anion Exchange Resin,
Recommended use/restrictions: Ion Exchange Resin-water purification; Absorbent and/or Catalyst-Contaminant removal

Chemical : Dimethylamine functionalized chloromethylated copolymer of styrene and dilynbenzene Ionic Form: Free Base or Hydroxide

Company: General Technologies SPC (all locations and supplier information)

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For information about this SDS, use this department contact phone#: Lab, 913-708-8131

Section 2: Hazard(s) Identification

See <https://www.sigmaaldrich.com/safety-center/globally-harmonized.html> for a list of hazard classifications, signal words, hazard statements, pictograms, precautionary statements, and a description of hazards.

Hazard Classification: Not classified

Signal Word(s): Warning!

Hazard Statements: Causes serious eye irritation

Pictograms: Warning-Eye Irritant/Eye Damage



Precautionary Statements: Wear splash goggles to keep resin product out of eyes.

Description of other hazards: Resin beads can cause floor to be slippery. Sweep up any loose beads and dispose of them in waste receptacle/bin and clearly mark "waste".

Section 3: Composition/ Information on Ingredients

Chemical Name	Synonym	CAS#	Conc.
Dimethylamine functionalized chloromethylated copolymer of styrene and divinylbenzene		69011-17-2	35-65
Water	Click here to enter text.	7732-18-5	35-60

All concentrations are in percent by weight.

Section 4: First-Aid Measures

After skin contact: Wash off with soap and plenty of water. If irritation persists, seek medical attention.

After eye contact: This product can be mildly irritating to eyes. Immediately flush with plenty of room temperature water for at least 15 minutes. If easy to do, remove contact lenses. If you continue to have eye irritation, seek medical attention right away.

After inhalation: Remove person out into fresh air. Seek medical advice if discomfort continues.

After swallowing: Rinse mouth thoroughly. Give 200-300mL (half pint) of water to drink. Never give anything by mouth to an unconscious person. Do not induce vomiting. If vomiting occurs, keep head low as to avoid stomach vomit doesn't enter lungs. Seek medical attention if discomfort continues.

Symptoms caused from exposure: Major eye irritant. May causes redness, tearing, pain, itchiness, and/or blurred vision.

If seeking medical attention and personal safety for first responders: If you continue to feel unwell, seek medical attention. Communicate to medical personnel are aware of material(s) have been involved so they can take precautions to protect themselves. Treat as symptoms arise.

Section 5: Fire-Fighting Measures

Suitable extinguishing agents: In case of fire, use water, foam, carbon dioxide or dry agent. Do not use water jet as an extinguisher, as this will spread out the fire.

Special protective equipment for firefighters: Wear full protective clothing including chemical protection suit. Also wear a self-contained breathing apparatus to prevent inhalation.

Specific hazards arising from the chemical: By heating and exposing product to fire, harmful vapors/gases may be formed. Avoid inhalation of such vapors/gases.

Fire Fighting Equipment and Instructions: In the event of a fire and/or explosion, do not breathe vapors/fumes in. This can be harmful. Seek medical attention if you breathe in vapors. Move receptacles, bins and other containers away from the fire if you can do so without risk to your safety. Prevent any and all run off from fire control or dilution from entering local streams, sewers, bodies of water or drinking water supply. Wear chemically protective clothing and self-contained breathing apparatus to avoid inhalation.

HazChem: 2X

General Fire Hazards: This product is not flammable. Heat, fire and other means of thermal decomposition or combustion may release carbon oxides and other toxic gases or vapors. Do not inhale these vapors.

Section 6: Accidental Release Measures

Personal precautions, Protective Equipment and Emergency Procedures:

Emergency Personnel: Keep unnecessary personnel away from scene. Wear chemical protective clothing and self-contained breathing apparatus (see section 8). Avoid breathing in vapors and avoid contact with skin and eyes. Seek Medical Attention if necessary.

Non-Emergency Personnel: Keep unnecessary personnel away from scene. Wear protective clothing during clean up (see section 8). Avoid inhaling vapors.

Measures for environmental protection: Prevent further leakage or spillage if safe to do so. Cover with plastic sheet to prevent spreading. Do not allow product to enter drains, bodies of water, sewers, or drinking water supply.

Measures for cleaning/collecting:

1) Avoid the generation of dust during clean up. The product is immiscible with water and will sediment in water systems.

2) Large Spills: Dike the spilled material, where this is possible. Sweep or shovel up material and place in clearly labeled container for waste.

Small Spills: sweep up or vacuum up spillage and collect in suitable container for disposal.

3) Never return spills to original container for re-use.

4) For waste disposal, see section 13 of this sheet. Do not allow product to contaminate ground water system or drinking water supply.

Section 7: Handling and Storage

Handling: Wear protective clothing (see section 8). Use with adequate ventilation. Keep formation of airborne dusts to a minimum. Pour product in slowly to avoid creating dust. Wash hands thoroughly after handling. Avoid release into the environment and in drinking water supply. Observe good industrial hygiene practices.

Storage: Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from incompatible materials (see section 10 of this document for more information).

Section 8: Exposure Controls/Personal Protection

Occupational exposure limits: No exposure limits have been set for this product

Biological limit values: No biological exposure limits noted for this product.

Allow adequate ventilations. Provide eyewash station.

General protective and hygienic measures: Avoid contact with eyes. Handle in accordance with good industrial hygiene and safety procedures. Always observe good personal hygiene measures such as washing hands after handling the materials and before/after eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Breathing equipment: No breathing equipment is normally required.

Protection of hands: Protective gloves should be worn to prevent skin contact. Suitable gloves can be recommended through a glove supplier. Other skin-Wear appropriate clothing to prevent repeated or prolonged skin contact. Wear anti-slip shoes to minimize slipping.

Eye protection: Wear safety glasses with side shields or goggles.

Section 9: Physical and Chemical Properties

Form: Solid beads, white or cream in color.

Odor: slight amine

Odor threshold: Not available

pH: Neutral

Melting point/melting range: Not available

Boiling point/boiling range: Not available

Flash point: Not available

Evaporation rate: Not available

Flammability: combustible solid

Upper/lower flammability or explosive limits: Not available

Auto ignition temperature: Not available

Danger of explosion: Combustible solid

Vapor pressure: Not available

Vapor density: Not available

Relative density: 1.1-1.3

Solubility in/Miscibility with water: Insoluble in water

Section 10: Stability and Reactivity

Reactivity: This product is stable and non-reactive under normal conditions of use, storage and transportation.

Chemical stability: Material is stable under normal conditions.

Conditions to avoid: Contact with incompatible materials. Heat, sparks, flames, elevated temperatures.

Incompatible materials: Strong oxidizing agents. Nitric acid.

Hazardous decomposition products: Thermal decomposition or combustion may release carbon oxides and other toxic gases or vapor.

Section 11: Toxicological Information

Acute toxicity: May cause discomfort if swallowed.

Potential routes of exposure/potential health effects

Skin: May cause mild skin irritation.

Eye: Dust may irritate the eyes. May cause eye irritation on direct contact.

Inhalation: Under normal conditions of intended use, this material is not expectation to be an inhalation hazard. Inhalation of dusts may cause lung irritation on direct contact. Dusts may irritate the respiratory tract.

Ingestion: not classified

Carcinogenic effects: not classified

Mutagenic effects: not classified

Reproductive toxicity: not classified

Sensitization: not classified

Target organs: not classified.

Chronic effects: Chronic effects are not expected when this product is used as intended.

Section 12: Ecological Information (non-mandatory)

Ecotoxicity: Based on available data and test results. The classification criteria are not met for hazardous to the aquatic environment. This product's components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Mobility: No data available. Product is not water soluble and will sediment in water systems.

Other adverse effects: No other adverse environmental effects (e.g endocrine disruption, ozone depletion, global warming potential contributor, photochemical ozone creation potential) are expected from this product.

Section 13: Disposal Considerations (non-mandatory)

Dispose of in accordance with local/regional/national/international regulations.

EU number for exhausted or saturated ion exchange resins used for the preparation of drinking water or water for industrial use is 19 09 05

- EU number for exhausted or saturated ion exchange resins used in waste water treatment plants not otherwise specified is 19 08 06

Section 14: Transport Information (non-mandatory)

DOT regulations: not regulated

- **Hazard class:** not regulated
- **Land transport ADR/RID (cross-border):** Not regulated as dangerous goods
- **ADR/RID class:** Not regulated as dangerous goods
- **Maritime transport IMDG:** Not regulated as dangerous goods

Air transport ICAO-TI and IATA-DGR: Not regulated as dangerous goods

- **ICAO/IATA Class:** Not regulated as dangerous goods

Section 15: Regulatory Information (non-mandatory)

Safety, health and environmental regulations specific for the product in question

US Federal Regulations

SARA Section 355 (extremely hazardous substances): Not applicable

SARA Section 313 (specific toxic chemical listings): Not regulated

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs): Not regulated

TSCA (Toxic Substances Control Act): Listed

Section 16: Other Information

Disclaimer: The information provided in this safety data sheet is based on current knowledge about the product and current legal requirements and standards. It relates specifically to health, safety and environmental requirements and standards, may not identify all hazards associated with the product or its uses or misuses, does not signify any warranty with regard to the properties of the product, and only applies when the product is used for the purposes indicated in section 1. This product is not sold as suitable for other purposes and such other usage may cause risks not mentioned in this safety data sheet.

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