Graver Technologies

SAFETY DATA SHEET

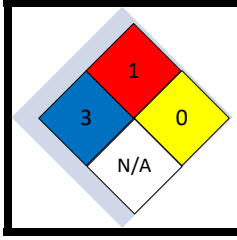
1. PRODUCT and COMPANY IDENTIFICATION

Product Name:	Powdex® Premix™ 22N, 42N
Product Form:	Mixture
Ionic Form:	Cation (Ammonium Form) & Anion (Hydroxide Form) Exchange Resins
Supplier/Manufacturer:	Graver Technologies, LLC 200 Lake Drive, Glasgow, DE 19702 +302-731-1700 +800-533-6623
Emergency Phone:	+302-731-1700 +800-533-6623
Fax Number:	+302-731-1707
Recommended Use:	Ion exchange process

2. HAZARDS IDENTIFICATION

This material is classified as hazardous in accordance with the OSHA Hazard Communication Standard (29CFR 1910.1200).

Serious eye damage – Category 1

NFPA HAZARD RATING		
	4=Severe 3=Serious 2=Moderate 1=Slight 0=Minimal	**Health** **Flammability** **Instability** **Special**

Label elements

Signal Word: DANGER!

Hazards: Causes serious eye damage. H318

Precautionary Statements

Prevention: Wear protective gloves and eye/face protection. Wash hands thoroughly after handling.

Response: If in eyes, rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician..

Other Hazards: None known

Skin Contact: Prolonged or repeated exposure may cause skin irritation.

Ingestion: Single dose oral toxicity is believed to be low.

Inhalation: Vapors are unlikely due to physical properties. If product is allowed to completely dry, inhalation of particles may cause coughing or congestion.

Chronic Effects: No known significant effects.

3. COMPOSITION / INFORMATION on INGREDIENTS

This product is a mixture

Component	CAS No.	%	Classification
1) Sulfonated copolymer of styrene, ethylstyrene, and divinylbenzene in the ammonium form.	69011-21-8	15 – 30	Not hazardous
2) Trimethylamine functionalized, chloromethylated copolymer of styrene, ethylstyrene, and divinylbenzene in the hydroxide form.	69011-18-3	10 – 25	H318
3) Water	7732-18-5	55 – 70	

4. FIRST AID MEASURES

Eye: Flush with water, remove any contact lenses, and continue flushing for at least 30 minutes. A physician should treat chemical burns promptly.

Skin Contact: If irritation occurs, flush affected area with water. Get medical attention if irritation persists or other symptoms occur.

Ingestion: If swallowed, wash out mouth with water. Move to fresh air and if conscious give small quantities of water to drink. Do not induce vomiting unless directed by medical personnel. If adverse health effects persist or become severe, get medical attention.

Inhalation: Move any affected person to fresh air. If adverse health effects persist or become severe, get medical attention.

Systemic & Other Effects: No specific data available, however, repeated exposures are not anticipated to cause any significant adverse effects.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: In case of fire, use dry chemical, foam, carbon dioxide, or water spray.

Fire Fighting Equipment: Wear appropriate protective equipment and positive pressure self-contained breathing apparatus.

Hazardous Combustion Products: Under normal conditions of use and storage, no hazardous combustion products are expected. Thermal decomposition products may include and are not limited to: Sulfur oxides, organic sulfonates, hydrocarbons, carbon monoxide, carbon dioxide, nitrogen oxides, organic amines, & benzene compounds.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Take no action that involves personal risk or without suitable training. Wear appropriate personal protective equipment and keep other personnel away from release area. Provide adequate ventilation. Spilled material may be slippery. See Sections 7 & 8 for more information.

Environmental Precautions: Do not disperse material and do not allow entry into sewers, waterways, or the ground. See Section 12 for more information.

Spills: Sweep up and recover if possible. Place in labeled containers. Dispose of according to national and local regulations. See Section 13 for more information.

7. HANDLING AND STORAGE

Handling: Wear appropriate personal protective equipment, described in Section 8. Do not get in eyes or on skin. Do not ingest material. Eating should not be allowed in areas where material is stored, handled, or processed. Wash hands thoroughly after handling and before eating. Keep material in original closed container until used. The maximum recommended operating temperature for this material is 60°C/140°F. **NOTE:** If these ion exchange resins are to be used in contact with strong oxidizing agents such as nitric acid, properly designed equipment is vital to prevent a rapid build-up of pressure and possible explosion. Consult a source knowledgeable in the handling of these materials before proceeding.

Storage: The minimum recommended storage temperature for this material is 3°C/38°F and the maximum is 40°C/104°F. Store original containers in a dry, well-ventilated area.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure Limit Values: None established

Exposure Controls

Engineering Controls: Not required under normal operating conditions.

Protective Measures: Facilities where material is stored or used should be equipped with an eyewash facility.

Personal Protective Equipment (PPE)

Eye Protection: Safety goggles recommended.

Skin & Hand Protection: Avoid skin contact. When using this material, use skin protection (clean body-covering clothing). Use cotton or canvas gloves for the hands.

Respiratory Protection: Not required under normal operating conditions.

Hygiene Measures: Wash hands after handling and before eating or using the lavatory.

9. PHYSICAL and CHEMICAL PROPERTIES

Appearance:	Powder
Color:	Light tan to dark brown
Odor:	Odorless to slight amine odor
Odor threshold:	No data available
pH:	6-9.5 aqueous slurry
Melting/freezing point:	Not applicable
Boiling point/range:	Not applicable
Flash point:	Not applicable
Evaporation rate (Butyl acetate=1):	< 1 Water
Flammability (solid, gas):	No data available
Upper/lower explosive limits:	Not applicable
Vapor pressure (mm Hg):	No data available
Vapor density (Air=1):	No data available
Relative density (water=1):	1.1 – 1.3
Solubility in water:	Insoluble
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	~500°C/932°F. Product is not combustible until moisture is removed, then resin starts to burn in flame at ~230°C/446°F.
Decomposition temperature:	No data available
Viscosity, kinematic:	Not applicable
Explosive properties:	No data available
Oxidizing properties:	No data available
Percent Volatility:	55 – 70% Water

10. STABILITY & REACTIVITY

Reactivity: No dangerous reactions known under normal use conditions.

Chemical stability: Stable under normal handling and storage conditions.

Hazardous polymerization: Product will not undergo polymerization.

Incompatibility/Conditions to Avoid: Oxidizing agents such as nitric acid attack organic ion exchange resin under certain conditions and could result in a slightly degraded resin up to an explosive reaction. Before using strong oxidizing agents, consult sources knowledgeable in handling such materials.

Hazardous Decomposition Products: Under normal conditions of use and storage, no hazardous decomposition products are expected. Thermal decomposition products may include and are not limited to: Sulfur oxides, organic sulfonates, hydrocarbons, carbon monoxide, carbon dioxide, nitrogen oxides, organic amines, & benzene compounds.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Ingestion: Typical for this family of materials – Oral LD_{50} (Rat) >5,000 mg/kg
Skin Contact: No data available
Inhalation: No data available
Eye contact: Risk of serious damage

Carcinogenicity: No data available
Mutagenicity: No data available
Teratogenicity: No data available
Specific target organ systemic toxicity (single exposure): No data available
Specific target organ systemic toxicity (repeated exposure): No data available

12. ECOLOGICAL INFORMATION

Toxicity: No specific data available

Not expected to be acutely toxic, but material may mechanically cause adverse effects if ingested by waterfowl or aquatic life.

Persistence & Degradability: No specific data available

This water-insoluble polymeric solid is expected to be inert in the environment. Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

Bioaccumulative potential: No specific data available

No bioconcentration is expected because of the high molecular weight.

Mobility in soil: No specific data available

In the terrestrial environment, material is expected to remain in the soil. In the aquatic environment, material will sink and remain in the sediment.

Results of PBT and vPvB assessment: Not applicable

Other adverse affects: No specific data available

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND OR INTO ANY BODY OF WATER. Dispose unused resin in licensed landfill or incinerate according to all national, regional, and local regulations. For resin contaminated with hazardous material, dispose of mixture as hazardous material according to national, regional, and local regulations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

14. TRANSPORT INFORMATION

UN Number and name:	Not hazardous for transport
US DOT:	Not regulated for transport
IMO/IMDG:	Not regulated for transport
IATA/ICAO:	Not regulated for transport
ADR:	Not regulated for transport
RID:	Not regulated for transport
ADN:	Not regulated for transport

Packaging group: Not applicable
Environmental hazard: Not a marine pollutant
Transport bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

15. REGULATORY INFORMATION

Workplace Classifications: This material is classified as hazardous in accordance with OSHA Hazard Communication Standard (29CFR 1910.1200).

This product is not a 'Controlled Product' under the Canadian Workplace Hazardous Materials Information System (WHMIS).

Emergency Planning & Community Right-To-Know (SARA Title 3):

Section 311/312 Categorizations (40CFR 370) Acute health hazard.

Section 313 Information (40CFR 372) This material does not contain any chemical that exceeds the threshold, de minimis, reporting levels.

CERCLA Information (40CFR 302.4) Releases of this material to air, land, or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to state and local emergency planning committee under the Superfund Amendments and Reauthorization Act (SARA Title III Section 304).

EPA Resource Conservation and Recovery Act (RCRA) When a decision is made to discard this material as supplied, it does not meet RCRA's characteristic definition of ignitability, corrosivity, or reactivity, and is not listed in 40CFR 261.33. It

is the responsibility of the product user to determine whether a material containing the product or derived from the product should be classified as a hazardous waste, at the time of disposal.

Chemical Control Law Status All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

16. OTHER INFORMATION

Hazard statements:

H318 Causes serious eye damage

Precautionary statements:

P280/P264 Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling.

P305/P351/P338/P310
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

SDS Identification No.: SD-PM-N1

Effective Date: 03/15/21

Abbreviations:
OSHA – Occupational Safety and Health Administration
PBT – Persistent, Bioaccumulative and Toxic
vPvB – Very Persistent and Very Bioaccumulative

The information contained herein relates to the specific material as shipped. Graver Technologies believes that such information is accurate and reliable as of the effective date. No representation, guarantee or warranty, express or implied, is given. As local regulatory requirements may differ, the user is responsible for determining the conditions needed for safe use of the product and the suitability for their particular application. It is the user's responsibility to comply with all national and local laws. Consult Graver Technologies for further information.