



MATERIAL SAFETY DATA SHEET

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Section 1. PRODUCT NAME AND CONTENT

Product Name: Luknova -Alumina Flash Columns
Alumina Prepacked Cartridges
Filtration funnels prepacked with Alumina
Alumina, Aluminum Oxide
Product Content: Alumina or Aluminum Oxide

Section 2. COMPOSITION / INFORMATION ON INGREDIENTS

Component:	CAS #
Alumina	134-28-1

Section 3. HAZARDS IDENTIFICATION

NFP A ratings (scale 0 - 4)	HIMS - ratings (scale 0 - 4)
Health = 1	Health = 2
Fire = 0	Fire = 0
Reactivity = 0	Reactivity = 0

Section 4. FIRST AID MEASURES

Emergency First Aid: Get medical assistance as required.

Skin: Immediately rinse with water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Eyes: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 30 minutes. Immediately get medical attention.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical assistance.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical assistance.

Section 5. FIRE AND EXPLOSION

Flammability of the Product: and Auto-Ignition Temperature:	Non-flammable.
Flash Points, Flammable Limits, and Combustion Products	Not applicable.
Fire Hazards in Presence of Various Substances:	Not applicable.
Fire Fighting Media and Instructions:	Not applicable.

Special Remarks on Fire Hazards: Chlorine Trifluoride reacts violently with Aluminum Oxide producing a flame.

Section 6. HANDLING AND STORAGE

Handling: Wear protection to prevent dust formation. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids.

Storage: Keep container tightly sealed in a cool, well-ventilated area

Section 7. ACCIDENTAL RELEASE MEASURES

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:	Not determined. Consult local authorities for acceptable exposure limits.
General protection:	The measures for handling chemicals should be followed.
Protection of hands:	The glove material has to be impermeable to the product!
Eye protection:	Safety glasses.
Body protection:	Protective work clothing.
Breathing equipment:	A suitable respiratory protective device is recommended.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid. (Solid crystalline powder.)
Color:	White to off-white
Odor:	None
Boiling Point:	2980°C (5396°F)
Melting Point (°C):	2072°C (3761.6°F)
Specific Gravity:	4 (Water = 1)
Bulk Density (lb/ft ³):	Not determined
Solubility in Water (%):	Not determined
Vapor Pressure and Density	Not applicable.

Section 10. STABILITY AND REACTIVITY

Stability:	Material is stable under normal condition.
Dangerous Reactions:	Chlorine Trifluoride reacts violently with Aluminum Oxide producing a flame. Ethylene oxide may polymerize violently when in contact with highly catalytic surfaces such as pure Aluminum Oxide. Reacts with hot chlorinated rubber.
Corrosivity:	Non-corrosive in presence of glass.
Dangerous products of decomposition:	Not determined

Section 11. TOXICOLOGICAL INFORMATION

Toxicity:	Not determined
Primary irritant effect:	May cause irritation with dryness and abrasion on the skin. In the eye: May cause abrasion, redness and pain. No sensitizing effects known.
chronic toxicity:	Not determined.

Section 12. ECOLOGY INFORMATION AND DISPOSAL CONSIDERATIONS

Aquatic toxicity:	Not determined.
General Note:	The product itself and its products of degradation are not toxic. Dispose of in accordance with all federal, state, provincial and local regulations.

Section 13. TRANSPORT INFORMATION

Not regulated as hazardous goods by DOT, ADR, IMO or IATA.

Section 14. OTHER INFORMATION

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use.