

Saltstream™ 300

Product Overview

Saltstream 300 is an advanced molten salt for heat transfer and thermal energy storage systems operating as low as 56 °C and up to 300 °C.

Highlights

- Lowest melting molten salt product on the market
- Water soluble
- Near zero vapor pressure
- Higher operating temperature than most oils

Technical Specifications

Melting Point	56 °C
Maximum Operating Temperature	300 °C
Heat Capacity	TBD
Heat of Fusion	N/A

Components

- Lithium Nitrate
- Sodium Nitrate
- Sodium Nitrite
- Potassium Nitrate
- Calcium Nitrate

Applications

- Manufacturing processes
- · Thermal energy storage
- Chemical synthesis processes



Saltstream[™] 500

Product Overview

Saltstream 500 is an advanced molten salt for heat transfer and thermal energy storage in concentrating solar power applications or other high temperature industrial processes.

Technical Specifications

Melting Point	65 °C
Maximum Operating Temperature	500 °C
Heat Capacity	TBD
Heat of Fusion	N/A

Components

- Lithium Nitrate
- Sodium Nitrate
- Potassium Nitrate
- Cesium Nitrate
- Calcium Nitrate

Applications

- Thermal energy storage
- Electrolyte for thermal batteries



Saltstream™ XL

Product Overview

Lower melting point and earth abundant components make **Saltstream XL** an unbeatable combination of price and performance.

Technical Specifications

Melting Point	120 °C
Maximum Operating Temperature	500 °C
Heat Capacity	1.395 J/g⋅°C
Density at 450 °C	1,868 kg/m³
Viscosity at 450 °C	1.63 cP
Thermal Conductivity at 450 °C	0.519 W/m·°C

Components

- Sodium Nitrate
- Potassium Nitrate
- Calcium Nitrate

Applications

• Thermal energy storage



Saltstream™ HTS

Product Overview

The combination of low melting point and low viscosity make **Saltstream HTS** suitable for a wide range of industrial processes.

Technical Specifications

142 °C
454 °C
1.560 J/g⋅°C
1,750 kg/m³
1.63 cP
0.297 W/m·°C

Components

- Sodium Nitrate
- Potassium Nitrate
- Sodium Nitrite

Applications

- Thermal energy storage
- Endothermic reaction control



Saltstream™ 60/40

Product Overview

Saltstream 60/40 is an advanced molten salt for heat transfer and thermal energy storage in concentrating solar power applications or other high temperature industrial processes.

Technical Specifications

M	elting Point	240 °C
M	aximum Operating Temperature	565°C
Н	eat Capacity	1.53 J/g·K

Components

- Sodium Nitrate
- Potassium Nitrate

Applications

• Thermal energy storage



Saltstream[™] 565

Product Overview

Saltstream 565 is beneficial for applications requiring low cost and high temperature performance.

Highlights

- Formulated with earth abundant components available in commercial scale quantities from leading chemical suppliers.
- Non-flammable, low hygroscopic behavior, very low vapor pressure at elevated temperatures.
- · Compatible with common steel alloys.

Technical Specifications

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Melting Point	246 °C
Maximum Operating Temperature	565 °C
Heat Capacity*	1.51 J/g·K
Heat of Fusion	115 J/g
Density at 300 °C**	1,920 kg/m³
Density at 400 °C**	1,850 kg/m³
Density at 565 °C**	1,730 kg/m³

^{*}Measured with reagent grade components. Commercial grade measurements underway.

Components

Primarily Nitrates

Applications

- Solar thermal energy storage
- Alumina production
- Melamine production

^{**}Calculated.



Saltstream™ 700

Product Overview

Saltstream 700 is an advanced molten salt for heat transfer and thermal energy storage systems operating at high temperatures of up to 700 °C.

Highlights

• Highest maximum operating temperature molten salt product on the market

Technical Specifications

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Melting Point	257 °C
Maximum Operating Temperature	700+ °C
Heat of Fusion	87.2 J/g
Density at 300 °C*	2,310 kg/m³
Density at 500 °C*	2,200 kg/m³
Density at 700 °C*	2,100 kg/m³
Viscosity at 300 °C*	16.9 cP
Viscosity at 500 °C*	3.7 cP
Viscosity at 700 °C*	1.0 cP
Heat Capacity*	0.79 J/K·g

^{*}Extrapolated from measured values.

Components

Primarily Chlorides

Applications

- Solar thermal energy storage
- In-situ oil shale conversion
- Chemical synthesis processes

^{**}Measured at 300 °C, presumed constant over liquid range.



Saltstream[™] 700e

Product Overview

Saltstream 700e is an advanced molten salt similar to <u>Saltstream 700</u>, but with a reduced melting point at a slightly higher cost.

Highlights

Lowest melting chloride-based molten salt on the market

Technical Specifications

Melting Point	205 °C
Maximum Operating Temperature	700+ °C
Heat Capacity at 350 °C	0.72 J/g·°C
Heat of Fusion	56.6 J/g
Density at 250 °C*	2,240 kg/m³
Density at 300 °C*	2,220 kg/m³
Density at 400 °C*	2,160 kg/m³
Density at 500 °C*	2,110 kg/m³
Density at 600 °C*	2,050 kg/m³
Density at 700 °C*	2,000 kg/m ³
*Calculated.	

Components

Primarily Chlorides

Applications

- Solar thermal energy storage
- In-situ oil shale conversion
- Chemical synthesis processes



Saltstream™ Products

Pricing Information

	1 kg Sample	25 kg Bag (\$/kg)	Bulk* (\$/mt)
Saltstream 300	\$59	\$29	\$9,699
Saltstream 500	\$179	\$144	\$37,699
Saltstream XL	\$45	\$21	\$2,989
Saltstream HTS	\$49	\$22	\$3,489
Saltstream 565	\$47	\$20	\$3,079
Saltstream 60/40	\$49	\$21	\$3,099
Saltstream 700	\$54	\$22	\$3,749
Saltstream 700e	\$59	\$23	\$3,989

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- > Seller retains the right to select the mode and routing of shipments unless otherwise agreed in writing with Buyer. Shipping not included in the above quote.
- > Bulk pricing is for raw material and may require onsite mixing and melting.
- > Sample products are developed for testing purposes and may be produced with high purity components depending on application. For industrial applications, please contact Halotechnics.