



Revolutionizing The Way We Move Aggregates.

2020 GREENBOX[®] CONTAINERS



Introduction to Greenbox®

Greenbox is an aggregate hopper built in the form of a standard ISO shipping container. It is designed to provide an effective and innovative aggregate delivery and storage experience.

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With its revolutionary patented system, Greenbox serves as an intermodal, universally transportable device, capable of keeping aggregate materials secure throughout the entire supply chain.

Greenbox® enables you to:

- Reach higher market prices through spot demand and delivery.
- Protect your product from the breakdown caused by multiple handlings.
- Secure hazardous materials in compliance with governmental regulations.
- Reduce your liability by safeguarding the product throughout the entire supply chain.
- Utilize the time and fuel efficiencies of intermodal freight shipping, enabling access to various means of transport – cargo ship, barge, rail, and truck.
- Provide your customers value by streamlining various elements of delivery process while saving onsite space, delivery time, and unnecessary costs.
- Help protect the environment by minimizing unnecessary handling and multiple conveyances of materials.



Problem

Current Bulk Delivery System



The current supply chain for bulk logistics market is unnecessarily costly and frustratingly time consuming with multiple handlings between a variety of transport and storage vessels.

The increased risks and the associated costs from multiple conveyances and lagging demurrage delays elevate expenditures on product deliveries. Furthermore, dangers of cross-contamination and comingling of products exist, placing companies at risk of losing valuable market share with their customers within their industries.

Greenbox[®] Solution



Greenbox allows customers to minimize unnecessary handling time and cost by providing a seamless system that delivers secured, high quality product, from suppliers to users in a single, intermodal device.

Greenbox[®] Advantages

Three In One

Transportability Of An Intermodal Container

A Greenbox container, with certifications from International Organization for Standardization (ISO) and American Bureau of Shipping (ABS), and an anticipated approval from Association of American Railroads (AAR),^[1] can be placed on cargo ships,^[2] railcars,^[3] and tractor trailers,^[4] as an intermodal container.



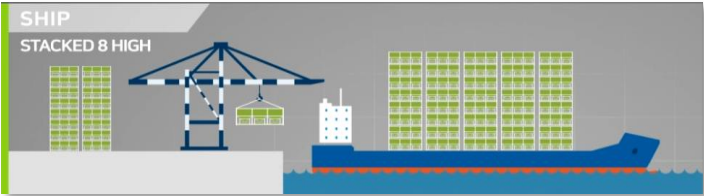
STORAGE

Greenbox containers are designed to be stacked up to 8 units high, eliminating the need for expensive silos and warehouses during transport.



SAFEGUARD AND PROTECT

With Greenbox, bulk materials are loaded at the origin, sealed, and never opened or imperiled until their destination, minimizing the risk of loss and the exposure to contaminants.^[5]








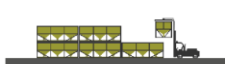




Greenbox provides a singular solution to many of the market's current problems.

INTEGRATION

Integrating Greenbox into your supply chain makes moving your product faster, safer, and cheaper^[6] and adds value to customers by providing a streamlined, efficient solution to the problems of the current market's supply chain.

CASE IN POINT: Greenbox® Savings [7]

Current Methodology vs. Greenbox Methodology

	\$50/ton (\$500/car) - tested, loaded sand	\$28/ton (\$700/car) - monthly lease	
SUPPLY SITE (MINE/PLANT)		\$50/ton (\$500/car) - tested, loaded sand	SUPPLY SITE (MINE/PLANT)
	\$5.00/ton up to 10% loss of product in transit via rail hoppers.	No loss of product.	
	** Freight Costs Equivalent **	** Freight Costs Equivalent **	
	\$5.75/ton (\$575/car) - monthly hopper lease	\$4.75/ton (\$475/car) - monthly hopper lease	
TRANSIT (RAIL - HOPPER)		\$0.00/ton (\$0/car) - material testing	TRANSIT RAIL
	\$2.00/ton (\$200/car) - material testing	\$0.00/ton (\$0/car) - demurrage	
	\$13.50/ton (\$1350/car) - demurrage, 15 days	\$0.00/ton (\$0/car) - demurrage	
	\$10.00/ton (\$1000/car) - handling to silo	\$4.00/ton (\$100/Box) - handling to silo	
STORAGE (TRANSLoad)		\$0.10/ton (\$1500/acre) - stackable storage space	STORAGE (RAIL SPUR)
	\$12.00/ton (\$1200/car) - storage in silo		
	There is a limit to pneumatic availability, especially during times of increased drilling	There is no real limit to the availability of trucks and cargo chassis	
	Typical costs for trucking \$4.75/mile (0-100 miles) \$4.25/mile (100+ miles) \$1.60/mile deadhead	Typical costs for trucking \$4.75/mile (0-100 miles) \$4.25/mile (100+ miles) \$1.60/mile deadhead	
TRANSIT (PNEUMATIC)			TRANSIT (CHASSIS ONLY)
	Avg. distance from transload to well site is 125 miles	Avg. distance from rail spur to well site is 50 miles	
	\$31.24/ton (\$781/truck - 25 tons)	\$12.70/ton (\$317.50/truck)	
WELL SITE (TRADITIONAL)		\$24.00/ton (\$1200/truck - 1/2#) demurrage at well site	WELL SITE
	\$48.00/ton (\$1200/truck) demurrage at well site		
	Cheapest current option: \$177.49/ton (excluding rail freight cost)	\$123.55/ton (excluding rail freight cost)	

Greenbox containers can generate estimated savings on handling and logistics costs of between 30 and 40%. [8]

1. Application for certification for Greenbox is currently pending with AAR.
2. Rail hauling – Four Greenbox containers can be aligned end to end on an eighty five feet (85') flat car; or four containers can be placed onto a one hundred and ten ton well car if the containers are double stacked. The containers attach to railroad cars with standard ISO or "Holland" locks. Please note that depending on the rail carrier, railroad approval may be required to double stack.
3. Road Hauling – Greenbox containers can be carried on tri-axle or sliding chassis. Additionally, empty units can be carried on flat-top trucks. A standard PTO (Power Takeoff) blower unit will be required to unload the material contents on our pneumatic unit.
4. Greenbox containers are certified by American Bureau of Shipping (ABS) and the international Convention for Safety Containers (CSC) through the International Maritime Association (IMO,) as well as a Center of Gravity test for the road per DOT.
5. Greenbox containers are watertight and airtight.
6. Greenbox is portable (not tied down to a rail car or truck axle and movable via crane, forklift, or roll off truck,) stackable (creates smaller footprint at work site and storage facilities which can provide an efficient continuous supply of materials,) and universally transportable (shipped via ship, rail, or truck.)
7. Based on internal Bakken case study (fracking) with supply originating from Jordan, MN to destination in Dickinson, ND.
8. All figures and calculations based on the best estimates available. Results may vary.

Applications

Oil and Energy Sector

- Regulated Materials
- Byproducts / Waste
- Fly Ash
- Frac Sand
- Fine Chemicals
- Guar Gum
- Blast Furnace Slag
- Petroleum Coke

Industrial Sector

- Limestone Powders
- Various Pellets
- Grouts and admixtures
- Soda Ash
- Calcium Carbonate
- Titanium Dioxide
- Silicone Powder
- Cement
- Starch Powder

Agricultural Sector

- Flour
- Fertilizers
- Soy Beans
- Corn
- Grains

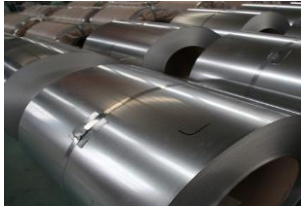
Greenbox can hold **ANY aggregate, powder, or granule**, and can be customized to meet most special industry needs.

Customization

Weight

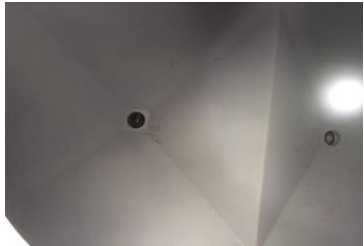
Greenbox can be built with lighter materials for **weight reduction**, resulting in increased cargo capacity on public roads.

20ft, 40ft, or High Cube containers can be built for hauling materials that are lighter in weight but requiring larger volume.



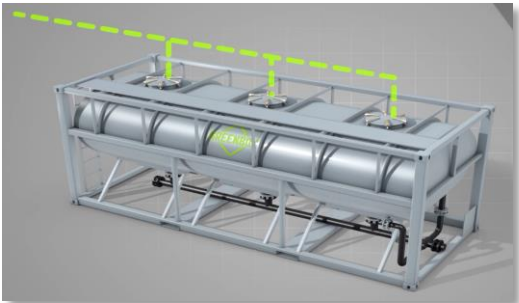
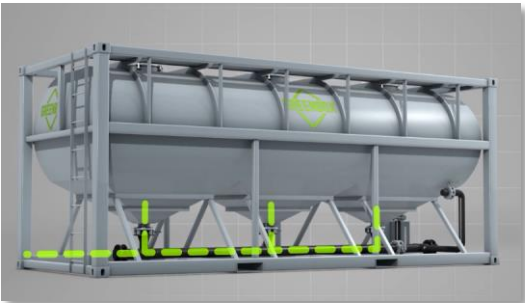
Portability

Greenbox may be unloaded via **pneumatic** blower system for single unit operation or via **gravity** flow system for organized multi-unit operation with unloading structure in place.



Special Material Handling

For handling of **hazardous materials** regulated by government or other unsafe products, Greenbox may be fitted with **special coatings, temperature control** units, and other devices necessary to meet customers' needs for safe material handling.



ISO Tank Containers

Specifically designed for special material handling

Greenbox has developed ISO tank container models for handling of dangerous materials suitable for highly contaminant and/or explosive liquid materials. The tank walls are specially designed and proprietary elements are utilized to minimize the risks associated with the usual transport of ISO containers. In addition, only the best components, including valves and piping, are used to make Greenbox ISO tank containers safer for handling your special materials.



Based on your need, Greenbox can also provide you with quality standard ISO tank containers without the special improvements.

Provide Solutions

No matter what your special need is in delivering your aggregate materials safe and sound, the Greenbox engineers will work with customers to find the best solution for each unique situation.



Greenbox® around the globe



SPECIFICATIONS *

Dimension

External Dimensions

Length	6,058 (0, -6) mm	20'
Width	2,438 (0, -5) mm	8'
Height	2,591 (0, -5) mm	8'6"

Hatch Opening

Internal Diameter	508 mm
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Fork Pocket

Width	360 mm
Height	116 mm
Center distance	2,050 mm

Inside Cubic Capacity

15.57 cu.m	550 cu.ft
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Rating

Maximum Gross Weight	25,364 kg	55,918 lbs
Average Payload	+/- 23 Tons	+/- 50,700 lbs
Tare Weight (est.)	3,395 kg	7,485 lbs

Means of Portability

- Crane - Top corner hooks
- Forklift - Side fork channels
- Loading - Top-load Gravity Feed
- Unloading - Pneumatics or Bottom Gravity Flow System



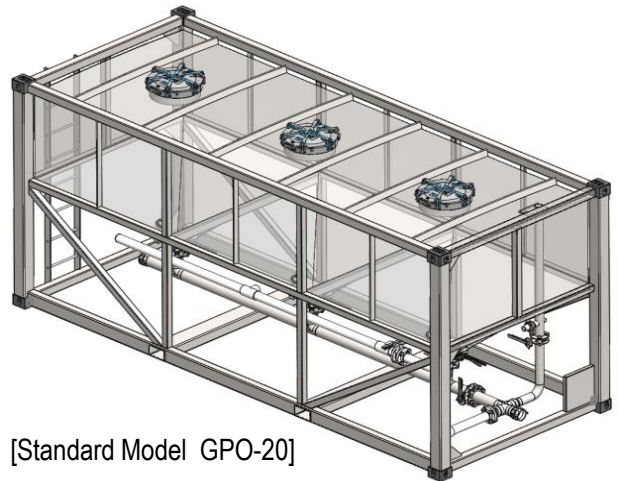
* Above specifications are based on standard Greenbox 20 ft. GPO-20 model unit.

Greenbox Aggregate Hopper Containers | Pneumatic

GP-20 | GPO-20 | GPH-20 | GP-40

Product Information

- Highly customizable
- Provides airtight storage
- Transports via ship, rail, and road
- ISO stackable frame up to 8 high
- Pneumatic and gravity discharge
- Walkable roof with access ladder
- American Bureau of Shipping, Association of American Railroads*, and Transports Internationaux Routiers approved.



[Standard Model GPO-20]

	GP-20	GPO-20	GPH-20	GPO-40
Tank Profile	Horizontal Oval	Cube	High Cube	Cube
Dimension				
Length	20'	20'	20'	40'
Width	8'	8'	8'	8'
Height	8' 6"	8' 6"	9' 6"	8' 6"
Hatch Opening	3	3	3	6
Cubic Capacity	512	550	725	1,155
Rating				
Max Gross Weight	55,918 LBS	54,998 LBS	77,160 LBS	99,160 LBS
Average Payload*	+/- 21 Tons	+/- 23 Tons	+/- 22 Tons	+/- 20 Tons
Tare Weight	9,038 LBS	7,458 LBS	8,600 LBS	14,590 LBS

Disclaimer

1. All figures and calculations are based on the best information currently available.
2. Above information should be solely used as a reference as all Greenbox units are manufactured and designed to meet each customer's need.
3. Greenbox containers are material specific. Actual cubic capacity and rating will vary greatly depending on the degree of customization with utilization of aerators and the angle of the hopper.
4. Application for AAR certification for Greenbox is currently pending.
5. GPH-20 Models (High Cube) are stackable only up to 7 units high.



Greenbox Liquid Tank Containers

GTO-20

Product Information

- Insulated, cylindrical stainless steel vessel .
- Transports via ship, rail, and road.
- ISO stackable up to 8 high .
- Bottom or top discharge.
- Walkable roof with access ladder.
- Designed to carry oils, chemicals, and food grade liquids
- .
- CSC, ABS, AAR, TIR, / Customes, UIC certifiable.
- Can be customized to meet special requirements.



[GTO-20]

Capacity	25000 liters	5812 gallons
Tare	3500 KG	7716 lbs.
Usage	Oils, Chemicals, & Food grade liquids	
Max. weight	36000 KG	79366 lbs.
Size	20ft	
Compartments	1 / Vacuum tank	
Heating system	Steam Heating	
Cladding type	2 mm GRP	
Steel thickness	4.4 mm	
Test pressure	6.0 Bar	
Work pressure	4.0 Bar	
Airline	1,5" BSP DN 40 Ball Valve	
Insulation	Rockwool on aluminum foil. Glasswool ends.	
Discharge type	Bottom / Top	
Material	Stainless steel 316	
Certificate	IMDG, US DOT CFR 49, RID/ADR, CSC, TC, TIR / Customs, UIC, ISO 1496/3	

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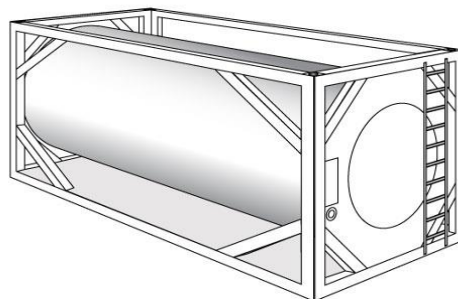


Greenbox Liquid Tank Containers

GTX-20

Product Information

- Provides safe and convenient storage
- Transports via ship, rail, and road
- ISO stackable frame up to 8 high
- Highly customizable loading and unloading process
- Bottom or top discharge
- Walkable roof with access ladder
- GTX-20 Model is exclusively designed to carry dangerous and / or explosive materials.
- American Bureau of Shipping, Association of American Railroads*, and Transports Internationaux Routiers approved.



[Standard Model GTX-20]

Capacity	14000 - 26000 liters	3700 – 6868 gallons
Tare	3800 KG	8378 lbs.
Usage	Chemical & Food grade liquids	
Max. weight	36000 KG	79366 lbs.
Size	20ft	
Compartments	1 / Vacuum tank	
Heating system	Steam Heating	
Cladding type	1.8 mm GRP	
Steel thickness	4.4 mm	
Test pressure	6.0 Bar	
Work pressure	4.0 Bar	
Airline	1,5" BSP Airline Ball Valve	
Insulation	50 mm Glass wool	
Discharge type	Bottom / Top	
Material	Stainless steel 316	
Certificate	ISO/IMO/CSC/ABS/TIR	

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3. Greenbox containers are material specific. Actual capacity and rating will vary greatly depending on the degree of customization with utilization of aerators and the angle of the hopper.
4. Application for AAR certification for Greenbox is currently pending.

