

Safe cargo securing for the Chemical Industry

cordstrap









Cordstrap and the Chemical Industry

Supplying cargo security to the chemical industry for 50 years

Cordstrap's mission is to keep the world's cargo safe. We provide our customers with innovative solutions and expert advice and deliver the physical insurance global shipping needs - on rail, sea, road and air.

The rapid global expansion of the chemical industry has seen sharp growth of manufacturers and suppliers in the USA, Germany, and developing markets, producing products for their own use and international export. As an example, production in the USA is expected to grow at a rate that will see industry shipments reach \$1 trillion by 2018.*

Such a scale of activity creates a massive shipping requirement, with some unique challenges.

Any suspension of supply in the chemical industry increases the cost of the products. Thus raw materials at one end of the process and products at the other must be shipped reliably and on time.

Cordstrap's resource – with five manufacturing locations and operations in 50 countries worldwide – means that we are able to offer cargo securing solutions wherever the industry requires them.

And 50 years experience of dealing with the typical loads of the chemical industry – whether drums, IBC's, big bags, pails or super sacks – means we understand the need to keep control of total cost of ownership and ensure time and cost efficiency are maximized during cargo securing.

The over-riding factor in chemical shipping is safety

Delivering the physical insurance global shipping needs – on rail, sea, road and air

The importance of safety

The over-riding factor that must be considered in chemicals shipping is safety. Many of the products that the industry develops can be toxic or dangerous at some stage, not just during manufacture but also in transit. And those products ship in many forms – solids, liquids and gases. The industry generally has a good safety record – but even so, there were 42 fatalities in the United States chemical industry in 2012 – 13.*

The environmental impact of chemicals is also a major concern. With programmes like the Responsible Care global initiative, the industry looks to enhance product management and the safe use of chemicals throughout their life cycles. Implicit in this is the need to ensure secure, safe shipping - and the Responsible Care Indices of Performance specifically cover areas such as lost time accidents and transport incidents.



Cordstrap expertise

At Cordstrap, we have the resource, expertise and innovative thinking to take responsibility for these vital concerns in the shipping of chemicals worldwide. Such matters can only be handled by a business with the global resources to match the worldwide reach of the chemical industry.

All Cordstrap's solutions are tested for maximum safety and reliability, and our products are accepted and approved by regulatory bodies including the International Maritime Organization and the Association of American Railroads. Our strapping and lashing solutions meet the requirements of the Germanischer Lloyd classification society and we are fully ISO 9001 certified.

Importantly for chemical manufacturers, all Cordstrap applications are fully CTU compliant. The latest version of the CTU code explicitly states that "although the carrier generally is responsible to deliver the cargo in the same condition as received, it is the shipper who should deliver a cargo that is safe and suitable for transport."*

Cordstrap's CTU code advisors monitor all regulatory requirements and global market developments
- and advise chemical industry customers on mandatory requirements and best practice with regard to shipping.











*US Department of Labor, Bureau of Labor Statistics









Cordstrap Applications

Cordstrap's cargo securing products are world-class. But it is the applications that use these products that ensure we can engineer the maximum protection for their goods during shipping.

Whatever the means of shipping and whether in 55-gallon drums, super sacks, 25kg bags or IBC's, our solutions provide the physical insurance needed in a complex supply chain economically, efficiently and safely. And with full CTU code compliance.

Containerization

Bundling and Palletizing

Railcar Securing





Containerization

We work with chemical manufacturers that ship cargo in containers to provide a complete container solution – including innovative modular systems – for the industry.

Cordstrap Lashing Solutions

Whether securing drums or IBC's in containers, Cordstrap lashing is the most effective way to secure cargo for international shipping.

Our polyester lashing has many advantages over conventional cargo securing products such as heavy-duty steel straps, chains or wood blocking and bracing, in terms of preventing damage during transportation.

Benefits of Cordstrap Polyester Lashing include:

- Certified by AAR and Germanisher Lloyd
- Strong system strength of up to 20 tons
- Easy, fast and safe to apply
- Protective
- Shock absorbent
- Possibility of personalization
- Light weight
- Portability

Dunnage Bags

Cordstrap dunnage bags are specifically designed to secure and stabilize cargo in containers, closed railcars, trucks and ships. Where palletized cartons are containerized, dunnage bags should be used in conjunction with Cordstrap lashing.

ng include:

They prevent both lateral and longitudinal movement and, using our unique precision inflation system, are much more effective in stabilizing cargo compared with wood blocking and bracing – which are both

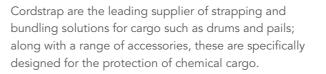
more costly and time-consuming.

Cordstrap will advise on the most effective dunnage bag to match a customer's individual requirements.

Benefits of Cordstrap Dunnage Bags include:

- AAR approved
- Easy, fast and safe to apply
- Moisture resistant
- Time saving
- Light weight
- Re-usable
- Easy to remove at destination
- Constructed from 100% recyclable materials

Bundling and Palletizing



Cordstrap Strapping Solutions

Cordstrap's polyester composite strapping solutions provide a high quality, strong solution to securing products for chemical manufacturers.

Our composite strap, together with a high quality steel buckle, provides optimal strength in all securing applications.

Cordstrap buckles are the most reliable closing method for securing products. They are easy to use and can be consistently applied with our high quality, low maintenance tooling range.

Made of non-abrasive material, Cordstrap's composite strapping is easy to use, will not damage products in transit and is safe to apply and remove.

Benefits of Cordstrap Strapping include:

- Strong
- Easy, fast and safe to apply
- Protective
- Shock absorbent
- Possibility of personalization
- Light weight
- Portable
- Re-tensionable
- Weather resistant
- Rust and rot-proof
- Certified and approved by Germanischer Lloyd





Railcar Securing

Drums, IBC's and Big Bags transported by railcar can be subjected to forces in excess of 4G during shunting. Cordstrap's dynamic cargo securing solutions provide a high degree of shock absorbency, critical in this event.

Cordstrap Lashing Solutions

Cordstrap lashing is the most effective way to secure cargo for international shipping.

Our polyester lashing has many advantages over conventional cargo securing products such as heavy-duty steel straps, chains or wooden blocks and bracing, in terms of preventing damage during transportation.

Benefits of Cordstrap Polyester Lashing include:

- Certification including AAR and Germanischer Lloyd
- Strong system strength of up to 20 tons
- Easy, fast and safe to apply
- Protective
- Shock absorbent
- Possibility of personalization
- Light weight
- Portability

Dunnage Bags

Cordstrap dunnage bags prevent both lateral and longitudinal movement and, using our unique precision inflation system, are much more effective in stabilizing cargo compared with wood blocking and bracing – which are both more costly and time-consuming.

Cordstrap will advise on the most effective dunnage bag to match a customer's individual requirements.

Benefits of Cordstrap Dunnage Bags include:

- AAR approved
- Easy, fast and safe to apply
- Moisture resistant
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Cordstrap Accessories

For all applications, a comprehensive range of complimentary accessories, including edge protection, dessicants and anti slip mats, allow Cordstrap's application specialists to design the most precise solution to the shipping challenges of customers in the chemical industry - in combination with the appropriate products.



Cordstrap Training

Located at our corporate headquarters in the Netherlands and our headquarters in the USA, our training centers offer every Cordstrap customer the opportunity to participate in our Secure Cargo Training program. In addition, we provide training in cargo securing to surveyors and other regulatory bodies. On-site training from Cordstrap experts is also available.







Together with our trainers, our customers have the opportunity to develop a training program that suits their specific requirements, to include:

- Learning the causes and consequences of cargo movement during transport
- Insight on relevant legislation and regulations, including current CTU code compliance
- Theoretical training in cargo securing and cargo calculation methods
- Intensive hands-on training using the newly acquired skills



Contact your local Cordstrap cargo securing expert to discuss your specific requirements

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