HighQ™
The lightweight container for heavyweight challenges.
HighQ™: A revolution in multimodal transportation

At DSM we’ve developed the HighQ container - a breakthrough in the European multimodal logistics market. DSM is one of the world’s leading Materials Sciences companies, specializing in sustainable solutions like composite materials. By developing this lightweight, composite container, we will help reduce weight, fuel consumption and ultimately... carbon emissions.

**Development**
HighQ is a lightweight solution for heavy-weight challenges. To develop HighQ, we replaced the corrugated steel panels in containers with flat composite panels - and then added innovative high impact corners.

With no compromise on performance or durability, we aim for making the container 20% lighter versus the best-in-class steel alternative.

**A sustainable solution**
HighQ is a sustainable innovation to be proud of: It’s lighter, stronger, more durable and more energy efficient than traditional materials. The new container enables fuel and energy savings in every part of the supply chain - better for people, planet and profit.

**Partnership with Samskip**
Several 45ft prototypes, have now been successfully tested under the toughest conditions by our development partner Samskip.

Diederick Blom, Chief Operating Officer at Samskip Multimodal says: ‘Samskip Multimodal, has a long history of improving container specification and continuously reducing the weight of steel containers. We have however reached the limits possible with steel and recognize the potential for using composites to take weight reduction to the next level.

We believe that using the HighQ container will increase the competitiveness of Samskip Multimodal.’

The innovative high impact corners make the container less sensitive to roof damage.
A closer look at HighQ™: A proven innovation

The first HighQ prototypes were tested by Samskip under very extreme conditions for more than a year across Europe on ships, trains and trucks. The result? HighQ meets all industry requirements. So what's the difference between a traditional steel container and a HighQ Container?

Strong composite panels (side, front, intermediate and roof)
The panels are corrosion free and damage proof - made from strong, lightweight composite material, developed by DSM.

High tensile frame
We used high tensile steel for the frame, understructure, corner posts and headers.

Unique design of the high impact corners
A new, smart design that prevents damage caused by misalignments during lifting and handling of the container. Instead of making the roof stiffer close to the corner castings, we decided to make it very flexible.
It's a true revolution in the protection of containers and its cargo.

Easy to repair
Sometimes damage is unavoidable. If it does happen, the composite panels can be repaired in a regular container repair workshop.

ISO certification by Lloyds
The HighQ container is certified by Lloyds for 7-high stacking at 45ft and 3-high at 40ft at 34,000 kgs.

Theo Jongeling, Business Manager for HighQ containers at DSM explains:
‘HighQ enables the multimodal logistics market to balance higher performance with the drive for sustainability.’

The weight reduction and more aerodynamic design deliver significant fuel savings.

The composite material is stronger, leading to a major reduction in maintenance and repair costs.

The flat walls make it easier to load and unload, thus avoiding cargo damages.
HighQ™ containers offer you a unique combination of three core benefits:

1. **HighQ™ = Higher cost efficiency**
   The weight reduction and more aerodynamic design deliver significant fuel savings. The composite material is also stronger, which means a major reduction in maintenance and repair costs. We expect the HighQ container to have a longer life than a steel container.

2. **HighQ™ = Higher payload**
   The new 45ft HighQ container aims to be 20% lighter than the best-in-class steel alternative. This allows you to increase the payload of weight-restricted cargo by one pallet.

3. **HighQ™ = Higher cargo protection**
   The flat walls make it easier to load and unload, thus avoiding cargo damages. The composite walls are clean, corrosion free and do not dent, thus avoiding the cargo damages that sometimes happen with corrugated steel walls. Meanwhile the innovative impact corners make the container less sensitive to roof damage, ensuring the cargo is better protected against leakages.
Do you have heavyweight challenge for a different size container?
We believe the principles we applied to the development of the 45ft HighQ container hold true for any size container.

Please contact us if you would like to discuss how we could apply composite solutions and smart design to your containers.