



Guideline Assessment of newly delivered empty steel drums





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Introduction and scope

The steel drums manufactured by members of the Verband Metallverpackungen e. V. (VMV) are high-quality containers that offer excellent protection for a wide range of products. The quality-tested drums leave the production facilities of VMV members in flawless condition. The condition of transport routes, the type of loading and the course of transport, however, can result in the drums being slightly compromised in appearance. This guideline seeks to assist users in the receipt of empty drums. It offers help in recognising whether the consequences of transport are strictly visual flaws or whether there is evidence of a functional impairment of the empty containers. The guideline applies to tight head steel drums as well as to open head steel drums, including necked-in versions suitable for shipment in freight containers, so called ISO standard drums.

Safety and quality

Steel drums guarantee high transport safety, long durability and outstanding storage and handling characteristics. Even at high temperatures or under difficult storage and transport conditions, they remain stable, secure and impermeable. This ensures equally reliable protection for both their contents and the environment. The quality of the drums is guaranteed by meticulous procedures in their production and testing. These include:

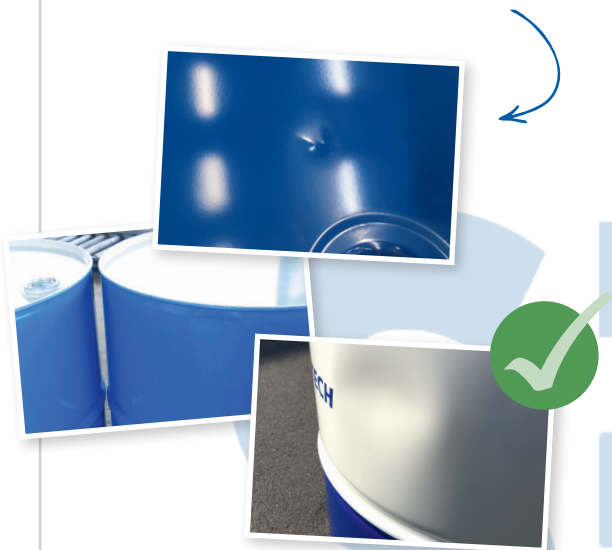
- Use of high-quality steels
- Modern production plants
- Internally and externally tested and monitored quality processes
- Extensive process-accompanying tests, including destruction of drums
- Leak testing for every single drum

The following pages provide an overview of possible consequences of the transport of empty drums and are intended to help in their assessment.

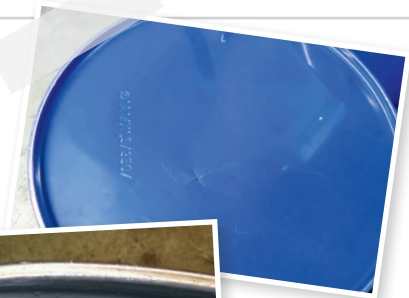
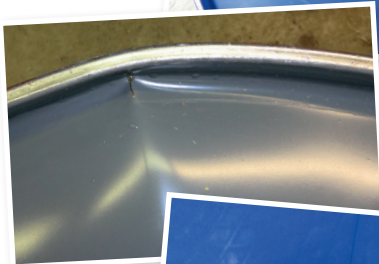


Dents and bulges

Smaller dents and isolated bulges of up to fist size on a steel drum's body and top end have no adverse effect on its serviceability.*



* In this regard, other assessment criteria can be applied for straight sided open head drums, in particular when the drums are emptied using follower plates.



A premature damage in the drum's bottom end can induce vibration damages, especially in longer-distance transport to the end customer or to intermediate destinations. We therefore recommend a visual examination of the bottom chime and bottom surface at least on a sample basis.

Surface scratches and abrasions

Scratches to the paint and abrasion, for example from sideboards in lorry cargo spaces and in swap bodies, generally have no influence on drum serviceability. Rather, these are purely visual flaws.

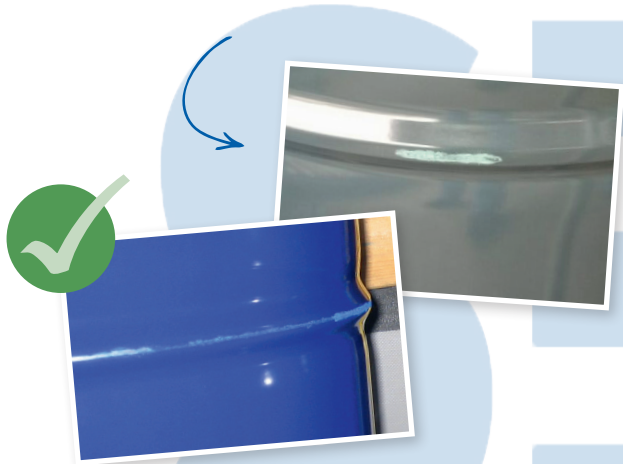
However, scratches must not detract from the clear and consistent legibility of UN markings.





Scratches on the beads and chimes

As a rule, steel drums are manufactured with at least two circumferential V-shaped rolling beads in their bodies. Their resilience can be further increased by the inclusion of W-shaped rolling beads and additional corrugations. An added advantage of these special beads is that they facilitate the rolling of drums without damage to their straight surfaces. Scratches in the beads do not compromise drums' serviceability.





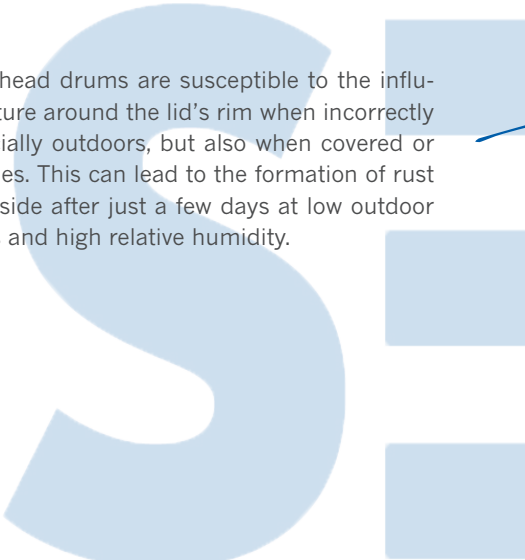
The mode of stacking used in transporting empty steel drums – for example on pallets or three-high loose – of course cannot be carried out in a non-contact manner. Accordingly, unproblematic abrasion to the chimes may occur. This can be reduced through appropriate, precisely determinable protective measures.

Rust



Steel drums should be protected from moisture and especially rain. For this reason, the empty drums are either shipped immediately after the final manufacturing step or palletised and placed in covered interim storage. Superficial rust damage that may nonetheless occur, poses no danger to drum contents. Given the thicknesses of the steel sheet employed, the material cannot be expected to fully rust through from outside to inside within the usual period of use, from the manufacturer through to the end consumer.

Empty open head drums are susceptible to the influence of moisture around the lid's rim when incorrectly stored, especially outdoors, but also when covered or on swap bodies. This can lead to the formation of rust on the underside after just a few days at low outdoor temperatures and high relative humidity.



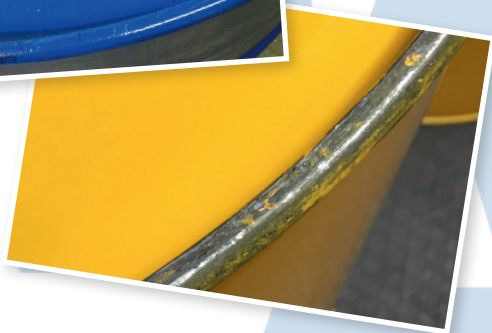
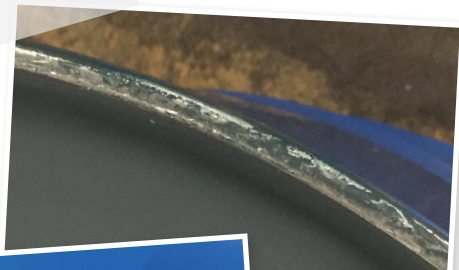


Soiling

Various oils and lubricants are employed in the operation of mechanical production plants and machines. The lubricants are used in optimised amounts and, for the most part, evaporate during the further production steps. The outer surfaces of a drum, however, do not undergo a final cleaning.

Over the course of production, the steel drums are conveyed by means of belts and chains, which likewise require lubrication.

To avoid paint abrasion, drum lids should always be removed with the drum in a vertical position and, especially importantly, the edges of the lid collar should not be set on the border of the drum or on other objects.

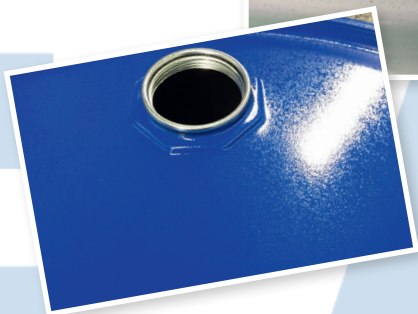
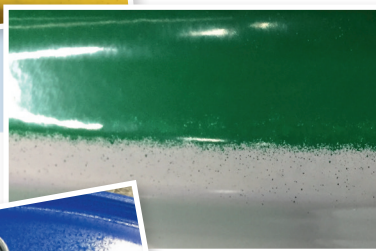


Paint irregularities

Slight irregularities in the paint surface, due to the brightness of the colour used or of the paint type, or in the colour transitions in the case of a multicolour design, cannot always be avoided.

However, the avoidance of blurring in the silk-screen printing of a logo or lettering, or a complete printed image, is considered a quality attribute.





An initiative of the European Steel Drum Association (SEFA)

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