

Technical Note

January 2015

Re: Embossed graduation markings on IBC inner tanks.

The inner tanks of the Schuetz Australia ECOBULK range of IBC's are embossed with 100 litre graduation marks up to the nominal capacity of 1,000 litres.

These markings are indicative only and are present to allow end-users to estimate the contents remaining in an unpigmented IBC. Some variation is found due to the variable shrinkage rates of high density polyethylene (HDPE) during the moulding process and also after filling, there can be some "bulging" of the steel cage which can affect the accuracy of the fill marks.

Typically, packaging companies will fill containers with liquid product based on weight as the density or specific gravity of liquids changes with temperature. A fill quantity based on weight can be converted to volume at a standard ambient temperature and pressure.

To ensure the Schuetz IBC's meet the requirements of the Australian Code for the Transport of Dangerous Goods by road or rail, 7th Edition (ADG7), enough free space or ullage must be left to allow for thermal expansion up to 50 °C. Liquids that are filled at 15 °C can expand around 0.3% if left out in the sun on a hot day. A temperature increase of 30 °C can change the fill level from 1,000 litres to 1,030 litres or more.

Therefore, the inner tanks of IBC's have a brim-full capacity of approximately 1,070 litres. If filled to the nominal capacity of 1,000 litres, this then allows sufficient free space for liquid to expand in conditions with high ambient temperature.

If significant changes in ambient conditions are expected, then fillers and end-users should specify IBC's with a top lid insert that allows pressure compensation to avoid over pressuring when heating or tank contraction during cooling.

SCHÜTZ Australia P/L
ABN 60 090 995 958

MELBOURNE
17 Burr Court
Laverton North VIC 3026
Phone (+61) 3 9360 9291
Fax (+61) 3 9360 9735

Mail: PO Box 278
Altona North VIC 3025

BRISBANE
Building 4
356 Bilsen Rd
Geebung QLD 4034
Phone (+61) 7 3265 4911
Fax (+61) 7 3265 4355

Mail: PO Box 454
Virginia QLD 4014

PERTH
152 Cockburn Rd
North Coogee WA 6163
Phone (+61) 8 9336 2688
Fax (+61) 8 9430 5031

Mail: PO Box 38
South Fremantle WA 6162

E-mail salesau@schuetz.net
www.schuetz.net/australia

John Christopherson
Head of Group SHEQ
SCHÜTZ Australia Pty Ltd



ISO 9001:2008
Licence: KLN 0923227