



How a label
Becomes
BS 5609
Certified

Every Container Needs a Label



When shipping containers with hazardous materials overseas, your label must be IMDG compliant

BS 5609 Certification:
A testing method used to show IMDG regulation compliance

Certification

Testing consists of submerging labels in sea water for 90 days

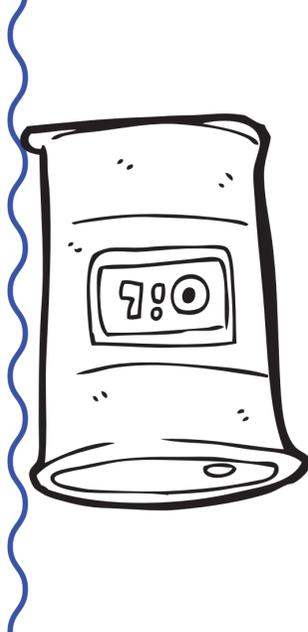
Certification MUST be done by a third-party company

Section 2

The printed label image passed the 3 part lab test without significant fading

Section 3

Printed label image passed the 5 part BS 5609 test



90 day sea water submersion test



- Label certified by third party company
- Section 2 and 3 certified for both material and label image
- Posting certification certificate



- Label not certified by third party company
- Stating BS 5609 certification without stating which section
- not posting certificate of certification

Pressure Sensitive GHS Labels, BS 5609 and IMDG Compliance

As the industry has transitioned into the world of HazCom 2012 and GHS, there are many challenges, confusion and mis-conceptions in the area of bulk container label printing. There are clear misunderstandings as to what International Maritime Dangerous Goods (IMDG) and British Standard BS 5609 compliance truly means and what kind of exposure companies have when they do not meet those standards.

IMDG Annex III

Regulation 3: Marking and Labeling

1. Packages containing a harmful substance shall be durably marked with the correct technical name and further, shall be durably marked or labeled to indicate that the substance is a marine pollutant. Such identification shall be supplemented where possible by any other means, for example, by use of the relevant UN Number.
2. The method of marking the correct technical name and of affixing labels on packages containing a harmful substance shall be such that this information will still be identifiable on packages surviving at least three months' immersion in the sea. In considering suitable marking and labeling, account shall be taken of the durability the materials used and the surface of the package.

GHS container labels that are shipped over international waterways must meet International Maritime Dangerous Goods (IMDG) code requirements. The IMDG code requires the container label and label image to withstand 90 days immersion in the sea. Although BS 5609 certification is not a specific requirement to meet IMDG code, BS 5609 label certification does ensure the label will meet IMDG code.

The BS 5609 certification was developed as a method of testing the printed label durability under conditions that would emulate the label being submerged in saltwater and abrasive sand for 90 days. The label must remain affixed to the container with the printed image (including the red frame, pictograms and precautionary text) remaining identifiable and readable.

BS 5609 Section 2: Pressure-Sensitive, adhesive coated label base material

Must meet the following tests;

- 4.1 **Marine Performance Test** – performed on the label base material with 3 month exposure to marine conditions (labels are applied to panels attached to pylon at half-tide at sea)
- 4.2 **Laboratory performance type tests**
 - 4.2.1 Dimensional stability (Labels are measured for shrinkage)
 - 4.2.2 Adhesion after 48hrs (adhesion values are measured peeling label from test panels)
 - 4.2.3 Adhesion after artificial weathering (adhesion values are measured peeling label from test panels)
 - 4.2.4 Adhesion after temperature cycling (adhesion values are measured peeling label from test panels)
 - 4.2.5 Color fastness of base material (comparison of base material color before and after exposure)

BS 5609 Section 3: Printed Pressure-Sensitive, adhesive coated labels

Must meet the following tests:

- 8 **Performance Requirements**
 - 8.1 **Print Key effectiveness** (adhesive tape test)
 - 8.2 **Abrasion resistance** (laboratory seawater, sand with labels affixed to steel rods in a rotating mill jar)
 - 8.3 **Permanence of print, color fastness and residual contrast** (artificial weathering including saltwater spray and artificial sunlight)
 - Color shall remain recognizable as the original hue and color fastness no less than 2
 - Any text/symbol shall remain legible and identifiable

OSHA Position

- OSHA does not give guidelines as to what durability criteria HazCom labels must meet.
- They say that all the text and symbols must be readable and that the label must be affixed to the container at all times.
- All containers, large and small, must have GHS labels.
- As a matter of best practices, it is recommended for containers being shipped domestically that the labels affixed to these containers meet the BS 5609 Section 2 and 3 standards to ensure they remain affixed and readable.

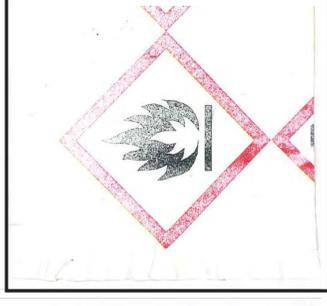


ABRASION TESTER

SUCCESSFUL ABRASION TEST



Before Test

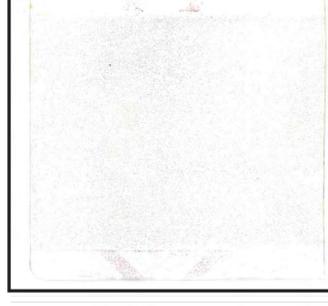


After Test

FAILED ABRASION TEST



Before Test



After Test