

Tank Guide- Cargo Temperature



This document is a quick reference guide for cargo temperature while filling and discharging portable tank. IMDG Code must be the source of guidance, this document does not replace IMDG Code.

IMDG Code sections, 4.2.5.3 (TP33), 6.7.2.1 Definitions, 6.7.2.20.19(e)(i),

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Temperature range of tanks

For classes 1 and 3 to 9, IMDG Code requires

| Cargo temperature | Design Temperature range of shell |
|---|--|
| Substances transported under ambient conditions | -40°C to 50°C |
| Substances filled, discharged or transported above 50°C | Temperature shall not be less than the maximum temperature of the substance during filling, discharge or transport |

Types of cargoes which need temperature consideration

1. Solids which are filled and discharged at temperatures above their melting point and which are cooled and transported as a solid mass.
2. Solids transported above their melting point
3. Elevated temperature liquids

For solids which are filled and discharged by melting and while in transport it is cooled down and transported as a solid mass IMDG Code has assigned tank provision TP33 in column 14 of dangerous goods list in chapter 3.2.

When such a solid is offered for transport check the melting point of the substance and check the design temperature range in tank certificate/tank plate to ensure it is within the safe limit.

Minimum and maximum cargo temperature permitted in tanks

Cargo temperature permitted is depended on the design temperature range of the 'shell' of the tank. This can be found in the tank certificate and tank mark plate. Melting point of the cargo can be found in section 9 of safety data sheet (SDS).

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| Pression d'épreuve / Hydr. test pressure : | 6 bar |
| Pression ext de calcul / Ext design pressure : | - bar |
| Temp de calcul / Range design temp : | -40 TO 120 °C |
| Ep. de const./ Construc. Thickness : VIS : | 4.2/4.3 mm |
| Ep. équiv d'acier doux/ Eq. thickn. Mild steel : | 6 mm |

