

JULY 2025

GUIDELINES

On Time In Full Measurement



CONTAINERBOARD
EUROPE





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1 Introduction

Following a need for consistency and alignment that was expressed by the members of Containerboard Europe's Technical Committee, a dedicated group of industry experts was brought together to develop guidelines on how to best measure the delivery performance of European containerboard producers.

These guidelines (or industry recommendation) specify the method and metrics to measure the delivery performance on the basis of the **On Time In Full (OTIF)** key performance indicators (KPI). Aim of these guidelines is to define the right method of measuring for our industry within the boundaries of what we can unify, standardize and/or agree upon as a total industry. Aim of these guidelines is not to define customer relation specific targets. Obviously, given the complexity and the (logistical, ICT systems, etc.) constraints foreseen, containerboard producers will have the flexibility to agree on tailor-made measures with their customers if required and/or regarded as appropriate.

These guidelines also ensure that containerboard producers have robust and prudent standards on which to measure and continuously improve their delivery performance.

The geographical scope of these guidelines has been limited to Europe which implies that these guidelines do not apply to shipments to non-European or overseas customers. Performance measurement of non-European deliveries will be subject to customer specific agreements.

This first version is not an end in itself since it is Containerboard Europe's intention to continue working on this document in order to integrate the best practices of delivery performance measurement that could emerge and, thus, contribute to improve the efficiency and performance of both the containerboard producers and their customers.

This document has been structured around the following three KPI elements:

- On Time - definitions and metrics
- In Full – definitions and metrics
- OTIF – combined calculation and performance metrics

Final or most up to date version of these guidelines will also be available on Containerboard Europe's website.

2 On Time

A delivery is on time when it is delivered on **the day that was first or initially agreed with the customer as the delivery date**.

The **first or initially agreed date can only be changed or moved when this is requested by the customer** and not when the date change is initiated by the supplying containerboard mill.

Days of delivery in this respect are considered as full (24hrs) days starting at 00.00 and ending at 23.59. One day too early or one day too late are therefore considered as "not on time". Even if the forwarder was allowed to deliver one day earlier, this still needs to be considered as a failure. Unless otherwise agreed with the customer.

On time is to be measured on a per shipment (physical load) level and not on order line level. The latter relates to the IF (In Full) part of the guidelines and will be consequently addressed there.

Although **time slots are left out of this equation**, these can obviously still be agreed upon between containerboard producers and their customers.

On Time **to be measured on a binary basis (0 = too early or too late, 1 = on time)**. Please see below table for the recommended calculation method of the On Time performance.

type of measure	unit of measure	level of measurement	compared against	tolerance	measurement example
OT (on-time)	Binary	0 or 1	Per shipment	1 day (24 hours)	Confirmed delivery date (arrival at customer location) : X 1: if delivered on X = 1 OT. 2: if delivered on X+1 or later = 0 OT 3. if delivered X-1 or earlier = 0 OT

shipment number	confirmed delivery date (at customer location)	actual delivery date (at customer location)	OT
1001_A	02-Aug	02-Aug	1
1001_B	05-Aug	05-Aug	1
1001_C	07-Aug	06-Aug	0
1001_D	08-Aug	09-Aug	0

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As most -final- deliveries to customers are done by truck, the mode of transport does not really affect the method used. Of course, mode of transport and consequent expected delivery performance is determined and agreed on customer level. As a result, mode of transport has been left out of the equation.

3 In Full

A delivery is considered "In Full" when the delivered volume corresponds to the confirmed volume to be delivered considering a 10% margin of tolerance per order line with the maximum being 100%. The 10% tolerance for In Full is a recommended standard unless otherwise adjusted as per specific customer agreement/logistic constraints.

In Full to be measured on:

- **order line level, and**
- **a continuous basis (percentage).**

Please see below table for the recommended calculation method of the In Full performance.

	type of measure	unit of measure	level of measurement	compared against	tolerance	measurement example
IF (in-full)	Non-binary (continuous) (from 0 - 100). Maximum being 100%	%	Per order line	Confirmed volume per order line (metric tons) to the customer	10% (almost 1 paper reel)	Confirmed volume against an specific order = 100 MT. Actual shipped volume = 86 MT. IF % = 86% + Tolerance = 96%

order line number	confirmed volume	delivered volume	IF % with tolerance
1001	100	86	96%
1002	170	156	100%
1003	35	40	100%

4 OTIF combined performance metric

OTIF is calculated for each order line level by combining the OT binary performance with the IF continuous (percentage) performance by using the following formula:

OTIF per order line:

$$OTIF_{\text{orderline}} = \frac{\sum (OT_{\text{per shipment of orderline}} * IF_{\text{orderline}} * \text{tonnes}_{\text{per shipment of orderline}})}{\sum \text{tonnes}_{\text{per shipment of orderline}}} \%$$

Overall OTIF:

$$OTIF_{\text{overall}} = \frac{\sum (OTIF_{\text{per orderline}} * \text{tonnes}_{\text{per orderline}})}{\sum \text{tonnes}_{\text{per orderline}}} \%$$

This implies that overall OTIF % is a weighted average of OTIF % per order line.

Please see below table for the recommended calculation method of the combined OTIF performance metric.

									IF tolerance	
									10%	
Month	Customer name	Order line number	Order volume - MT	Shipment number	Actual shipment - MT	Confirmed delivery date	Actual delivery date	OT (either 0 or 1)	IF %	OTIF %
Aug	A	1001	100	1001_A	21	02-Aug	02-Aug	1		
				1001_B	24	05-Aug	05-Aug	1		
				1001_C	21	07-Aug	06-Aug	0		
				1001_D	20	08-Aug	09-Aug	0		
		Total: 1001	100		86			52.3%	96.0%	50.2%
Aug	A	1002	170	1002_A	26	12-Aug	12-Aug	1		
				1002_B	27	14-Aug	14-Aug	1		
				1002_C	28	15-Aug	14-Aug	0		
				1002_D	25	19-Aug	20-Aug	0		
				1002_E	24	20-Aug	20-Aug	1		
				1002_G	26	26-Aug	26-Aug	1		
		Total: 1002	170		156			66.0%	100.0%	66.0%
Aug	A	1003	35	1003_A	21	28-Aug	28-Aug	1		
				1003_B	19	29-Aug	28-Aug	0		
		Total: 1003	35		40			52.5%	100.0%	52.5%
Aug	TOTAL: A		305		282			59.9%	98.8%	59.3%