

6.10. Products with Shelf Life

Streamline can account for product shelf life when it is generating a replenishment plan.

Shelf life is the recommended maximum time for which products or fresh (harvested) produce can be stored.

It should be less than the time period from the moment the item arrives in stock until the item expiration date. Streamline doesn't include **Lead time** into the shelf-life period.

Product shelf life can be also considered as:

- a maximal limit on the [Days of supply](#) indicator. Typically, the **Days of supply** value shown by Streamline is less than the given **Shelf life** period. The more is the dispersion of sales, the bigger is the difference between **Days of supply** and **Shelf life**.
- a maximal limit on the [Current order qty](#) when it is transformed into quantity based on the generated demand forecasts and the given **Shelf life exceeding** parameter. Let's denote this quantity as `shelf life limit qty`.

When **Shelf life** limitation is applied, **Shelf life exceeding** defines the percentage of the ordered quantity that, on average, will not be sold during the shelf-life period, and, probably, should be sent to a clearance sale, returned to the supplier, or write-offed.

Streamline implies that the product moves by the [FIFO](#) rule. So if you got some goods, a newly appeared lot will never sell until we sell the expiring ones. Streamline doesn't take into account that some lots of goods are doomed and be discarded for sure.

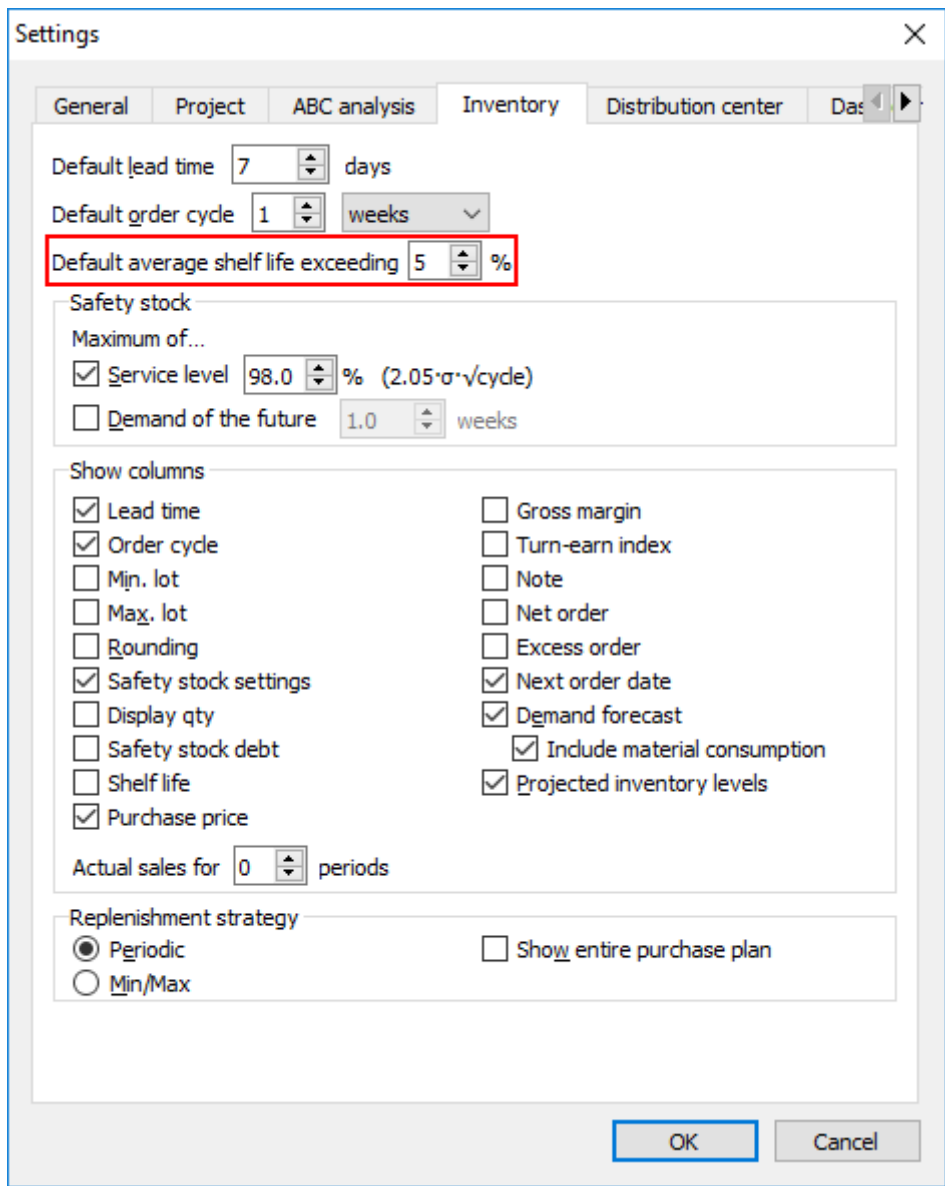
Required data

To be able to use this constraint in the optimization, you should [import](#) product shelf life data at the data connection step. By default, Streamline sets **Shelf life exceeding** to 5%.

Configuring parameters

There are three ways to set up the **Shelf life exceeding** in Streamline:

- Change it for all your items by going to the menu **File > Settings > Inventory** tab and changing the **Default average shelf life exceeding** value (see figure below).



- Set it up for each item individually using the 'All items' report; or alternatively
- [Import your overrides](#) for it from an Excel file.

Shelf life alerts

Streamline automatically notifies you when the **Current order qty** is reduced due to the given **Shelf life** limitation. All your inventory information is on the **Inventory planning** tab. By default, the shelf-life-related parameters are hidden. To show them:

1. Click the **Setting** button on the **Inventory planning** toolbar.
2. Set the **Shelf life** option checked in the **Show columns** group (see figure below).

The screenshot shows the 'Settings' dialog box with the following configuration:

- Default lead time: 30 days
- Default order cycle: 1 months
- Default average shelf life exceeding: 5 %
- Safety stock:
 - Maximum of...
 - Service level: 98.0 % (2.05·σ·√cycle)
 - Demand of the future: 1.0 months
- Show columns:

<input checked="" type="checkbox"/> Lead time	<input type="checkbox"/> Gross margin
<input checked="" type="checkbox"/> Order cycle	<input type="checkbox"/> Turn-earn index
<input type="checkbox"/> Min. lot	<input type="checkbox"/> Note
<input type="checkbox"/> Max. lot	<input type="checkbox"/> Net order
<input type="checkbox"/> Rounding	<input type="checkbox"/> Excess order
<input checked="" type="checkbox"/> Safety stock settings	<input checked="" type="checkbox"/> Next order date
<input type="checkbox"/> Display qty	<input type="checkbox"/> Demand forecast
<input type="checkbox"/> Safety stock debt	<input checked="" type="checkbox"/> Include material consumption
<input checked="" type="checkbox"/> Shelf life	<input type="checkbox"/> Projected inventory levels
<input checked="" type="checkbox"/> Purchase price	
- Actual sales for: 0 periods
- Replenishment strategy:
 - Periodic
 - Min/Max
- Show entire purchase plan

Buttons: OK, Cancel

A red background for the cells in the **Shelf life** column of the table (see figure below) indicates that the **calculated Current order qty** has exceeded the shelf life limit qty. Streamline cuts this quantity down based on the shelf life limit qty in order to satisfy the given **Shelf life exceeding** percentage. Then, this limited amount is shown in the **Qty** column of the **Current order** section. In the example shown in the figure, it was cut to 0.

Group	Item code	Order cycle, months	Rounding	Service level	Safety stock	Shelf life, months	Shelf life exceeding, %	Purchase price	Current order		
									Qty	Value	D
Pharmacies	05-T48	1	20	98%	22	∞		3.79	180	682.2	1:
Furniture	1866-MB	1		98%	7	∞		198.99	36	7,163.64	3:
Alcoholic Beve...	002661-1	1	6	98%	26	∞		2.3	114	262.2	3:
Clothing Sum...	004652 Blue	1		98%	8	∞		22.99	0	0	
Clothing Sum...	004662 Blue	1		98%	6	∞		22.99	500	11,495	5:
Clothing Wint...	016542 Yellow	1	100	98%	33	∞		79.6	0	0	
Clothing Wint...	016543 Purple	1	100	98%	284	∞		0	0	0	
Electronics	45645-RP	1		98%	2	∞		489.19	2	978.38	6:
Electronics	46689-PC	1		98%	2	∞		388	0	0	
Alcoholic Beve...	50046	1	6	98%	4	∞		8.09	66	533.94	3:
Chocolate	56213	1	120	98%	6	3	5%	3.79	0	0	
Water	056329 N PW	1	12	98%	8	∞		0	0	0	

Shelf life-related cut-downs on an order might happen if some of the replenishment parameters make Streamline order more than you can sell during the shelf-life period. For example:

- long **Order cycle**;
- large **Rounding** constraint (in our example);
- ordering availability constraint.

If an item has open sales orders or backorders (**To ship** column has non-zero quantity), Streamline will always order that quantity regardless of the shelf life limitation.

[Next: Definitions and Concepts](#)

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