



# MRP Safety Stock Calculation Checklist

## Demand Analysis

Review historical demand data and forecast accuracy for each item.

### Average Daily Demand (Units)

### Standard Deviation of Demand (Units)

### Start Date of Demand History

### End Date of Demand History

### Forecast Method Used

- ☐ Moving Average
- ☐ Exponential Smoothing
- ☐ Statistical Forecast
- ☐ Manual Forecast

### Forecast Error (MAPE or MAD)

Enter a number...

### Notes on Demand Patterns or Unusual Events

Write something...

### Seasonality Considerations

- ☐ None
- ☐ Monthly
- ☐ Quarterly
- ☐ Yearly

## Lead Time Assessment

Determine lead time components and variability.

### Procurement Lead Time (Days)

Enter a number...

### Manufacturing Lead Time (Days)

Enter a number...

### Inspection Lead Time (Days)

Enter a number...

### Total Lead Time (Days)

Enter a number...

### Description of Procurement Process

Write something...

### Description of Manufacturing Process

Write something...

### Last Lead Time Review Date

Enter date...

### Lead Time Units

- ☐ Days
- ☐ Weeks
- ☐ Months

## Service Level Goal Definition

Define desired service levels based on business priorities.

### Target Service Level (%)

Enter a number...

### Acceptable Stockout Rate (%)

Enter a number...

### Justification for Service Level Goal

Write something...

### Criticality of Item (Impact of Stockout)

- ☐ High
- ☐ Medium
- ☐ Low

### Date Service Level Goal Reviewed

Enter date...

### Customer Impact Assessment (Stockout Scenario)

Write something...

### Business Priority (e.g., Cost vs. Customer Satisfaction)

- ☐ Cost Minimization
- ☐ Customer Satisfaction

## Safety Stock Formula Selection

Choose an appropriate safety stock calculation method.

### Description of Selected Formula

Write something...

### Primary Safety Stock Formula

- ☐ Normal Distribution (Z-score)
- ☐ Average Method
- ☐ Fixed Percentage of Demand
- ☐ Vendor Managed Inventory (VMI) – Based on Vendor Guidance

### Assumed Service Factor (Z-score)

Enter a number...

### Demand Variability (Standard Deviation)

Enter a number...

### Formula Justification

Write something...

### Formula Assumptions Verified?

- ☐ Yes
- ☐ No
- ☐ Not Applicable

# Parameter Calculation

Calculate safety stock parameters.

## Average Daily Demand

## Lead Time (Days)

## Standard Deviation of Demand

## Desired Service Level (Z-score)

## Lead Time Standard Deviation

## Safety Stock Factor

# Review and Adjustment

Review calculated safety stock levels and make adjustments as needed.

### Deviation from Calculated Safety Stock Level

Enter a number...

### Reason for Deviation

Write something...

### Impact on Service Level

- ☐ Increased
- ☐ Decreased
- ☐ No Impact

### Date of Adjustment

Enter date...

### New Safety Stock Level

Enter a number...

### Notes/Comments

Write something...

## System Implementation & Monitoring

Implement safety stock levels in the MRP system and monitor performance.

### **Initial Safety Stock Quantity (Units)**

Enter a number...

### **Safety Stock Implementation Date**

Enter date...

### **Stockout Rate (Post Implementation)**

Enter a number...

### **Inventory Turnover (Post Implementation)**

Enter a number...

### **Notes on System Setup and Configuration**

Write something...

### **Next Review Date**

Enter date...



### Metrics to Track

- ☐ Stockout Rate
- ☐ Inventory Turnover
- ☐ Forecast Accuracy
- ☐ Order Fill Rate