

# BLUESTAR PRODUCT COMPLIANCE



**BLUESTAR PLM**<sup>®</sup>  
PLM inside Dynamics 365

## Follow your compliance obligations by managing all your chemical data in a single solution - Dynamics 365&AX

### KEY BENEFITS

Centralize and manage all your compliance data in a single solution;

Ensure all your stakeholders comply to regulations;

Gain access to essential chemical data from a Third-Party data provider;

Reveal the compliance level of your products with compliance calculations.

As a manufacturer you are required to comply by substance compliance regulations, and you must be able to check and document if parts in your products conform to environmental regulations throughout the entire product lifecycle.

Directives restrict the usage of banned or hazardous materials, and for this sake environmental regulations from multiple geographic markets exist, to ensure these materials are contained in consumer products.

International regulations are numerous, such as RoHS for electronic components, REACH or Proposition 65 and they apply to all industries and markets. To be compliant you need a deep knowledge of your supply chain, and you must be able to efficiently manage all your records on items, materials and substances.

### KEY FEATURES

Exemption management;

Compliance calculation;

Importing/exporting Full Material Disclosures;

SiliconExpert integration;

Compliance reporting

Whether you are manufacturer or a supplier, understanding the restrictions on hazardous materials and compliance is critical to maintaining and expanding your market share.

## A single source of information for all your chemical data

Bluestar Substance Compliance serves as a material declaration that provides full material disclosure (FMD) on all your products and gives you the means to manage, trace and calculate whether your products are compliant or not with specifications.

When you have all this information in one system - Microsoft Dynamics 365 (D365) & AX - users in Engineering, Operations and Manufacturing have access to the same compliance data in real-time. This reduces errors, allows you to perform due diligence and ensures that expensive non-compliant products that require rework are not fabricated.

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## Key Features and Benefits

### Import and acquire substance properties

To be substance compliant, you need a reliable source of information that can provide you with up-to-date chemical data, synchronized with compliance requirements.

Bluestar allows you to import such chemical data from SiliconExpert, a Third party data provider, with information on chemicals and substances for electronic components and materials.

Bluestar imports SiliconExpert data as XML files, connecting specifications, substances and related manufacturing items in one system, for everyone in your enterprise to easily find and access. This will save you time and money and you will make fewer mistakes, when you have reliable chemical data imported automatically.

Name	Comment	RoHS Specification Name
Silicon Expert mapping	SE mapping	RoHS

  

Setup Mapping	
+ New Delete	
Parent node	Child Node
//Results/ResultDto/ChemicalData/ChemicalDto	SubstanceIdentification
//Results/ResultDto/ChemicalData/ChemicalDto	NormalizedSubstance
//Results/ResultDto/ChemicalData/ChemicalDto	SubstanceGroup
//Results/ResultDto/ChemicalData/ChemicalDto	CASNumber
//Results/ResultDto/ChemicalData/ChemicalDto	SubstanceMass
//Results/ResultDto/ChemicalData/ChemicalDto	PPM
//Results/ResultDto/ChemicalData/ChemicalDto	TotalMassInGram

**SiliconExpert data is imported in a controlled and organized manner, so user can easily find and manage it.**

Location	HM	Norm. Name	CAS	PPM	Mass	Exemption
Frame	Frame	Lead	7439-92-1	500000	0.40	100
Wire	Wire	Copper	7440-50-8	1000000	0.40	100
Frame	Frame	Tin	7440-31-5	500000	0.40	
Chip	Chip	Cobalt	7440-48-4	500000	0.20	
Chip	Chip	Silicon	7440-21-3	500000	0.20	

**Full Material Disclosure (FMDs) can be imported into Bluestar from Excel.**

### Obtain full material disclosure on your supplier products

With Bluestar, Full Material Declarations (FMD and chemical data can be collected from your suppliers and vendors. From a declaration in Excel the data is imported and mapped in Bluestar, for users to easily access in a single repository.

Bluestar makes the mandatory process of obtaining FMD's from suppliers a seamless and automated process, removing time-consuming and error-prone work otherwise required to manually create or transfer chemical data into your product database.

As a result, you will have reliable chemical data for supplier items used in your products, so you can fully document your compliance efforts.

Filter	CHEMICAL DATA MAPPING	
Name	Comment	Start at row
Excel map	Excel map	14
Sheet name	Data Sheet	
Chemical data		
+ New Delete		
Excel column	Table name	Field name
1	Bluestar_ChemicalData	LocationName
2	Bluestar_ChemicalData	HomogeneousMaterial
3	Bluestar_ChemicalData	NormalizedSubstance
4	Bluestar_ChemicalData	CASNumber
5	Bluestar_ChemicalData	PPM

**Bluestar allows you to determine how the data is imported and mapped in Bluestar according to spreadsheet rows, fields and table names.**

Item ID: 100131, Item revision: 0-0, Item name: Electric Box, Status: Design

Compliance									
Record	Object ID	Name	Rev. Count	Type	Level	Specification ID	Name	Rev. Count	Calc. Compliance
1	100131	Electric Box	0-0	BOM	0	100004	Test Lead	0-0	NotCompliant
						100007	Halogen Free	0-0	Compliant
2	100126	Box Part 1	0-0	ITEM	1	100004	Test Lead	0-0	NotCompliant
						100007	Halogen Free	0-0	Compliant
3	ADG779BKSZ- REEL	Analog Switch Single SPDT 6-Pin SC-70 T/R	A-0	Manufacturer Item	1	100004	Test Lead	0-0	NotCompliant
						100007	Halogen Free	0-0	MissingInfo
4	100129	Box Part 2	0-0	ITEM	1	100004	Test Lead	0-0	MissingInfo
						100007	Halogen Free	0-0	Compliant
5	TI81-DSP	TI-81	A-0	Manufacturer Item	1	100004	Test Lead	0-0	MissingInfo
						100007	Halogen Free	0-0	MissingInfo

Compliance reports show you all materials used for each item, and whether the items are compliant or not.

## Centralize chemical data for your Manufacturing items

In Bluestar your master data for each manufacturing item and all specifications, substances, and compliance calculations associated with it, are contained in a single object structure. This provides you with a full material disclosure accessible for your items from a single touchpoint in the system.

Understand the relationship between specifications and your products.

Bluestar uses color coding to show you which specifications and substances are related.

This visual feedback lets you know if you have all the chemical data in the system, required to perform accurate compliance calculations.

As a result you will make fewer errors in your compliance efforts, and spend less time manually checking if you have the required data to prove your products are compliant.

## Easily create and share compliance reports with your stakeholders

Compliance reports collect all your chemical data for a product in a single table for easy overview.

Across the supply chain material reporting is a core process and being able to easily generate a complete report with calculation results, makes information transparent and the compliance process efficient at the same time.

With compliance reports, you mitigate the risk of manufacturing non-compliant products. You will be able to perform due diligence with best-practice reporting processes, and know in advance, if you have any compliance issues with your products that needs to be fixed, before the product is manufactured.

Substances							
	+ New	Delete	Recalculate mass	Find substances	Find by name	Generate compounds	Create substance
<input checked="" type="checkbox"/>	Compound	Location name ↑	Homogeneous material	Substance identification			
<input type="checkbox"/>	Bond Wire	Bond Wire	Bond Wire	Copper			
<input checked="" type="checkbox"/>	Leadframe	Lead Frame	Lead Frame	Copper			
<input type="checkbox"/>	Leadframe	Lead Frame	Lead Frame	Magnesium			
<input type="checkbox"/>	Leadframe	Lead Frame	Lead Frame	Lead			
<input type="checkbox"/>	Mold Compound	MOLD COMPOUND	MOLD COMPOUND	Carbon Black			
<input type="checkbox"/>	Mold Compound	MOLD COMPOUND	MOLD COMPOUND	Epoxy			
<input type="checkbox"/>	Mold Compound	MOLD COMPOUND	MOLD COMPOUND	Fused Silica			

Color coding shows which substances and specifications are related for the item (highlighted in blue), and if you have missing data for substances (highlighted in orange)

## Stay aware of exemptions and deadlines



**The Engineering Dashboard, provides you notifications on exemption expiration dates and compliance levels for items and products.**

Exemptions are allowances granted to regulations when the elimination of a restricted substance is impossible, or when the benefit of using a product containing hazardous substances, outweigh the potential danger of using it.

Exemptions often have an expiration date after which it becomes invalid; if you still use it after expiration, your products become non-compliant.

With Bluestar, exemptions can be assigned to your products, and fully traced through revisions and expiration dates. You will automatically be notified when exemptions are no longer valid or about to expire, and you can exercise due diligence by preparing your supply chain for changing or retiring products from the market accordingly. This mitigates the risk of making expensive products that are not permitted.

## Calculate the compliance level of your products

The end-goal of your substance compliance efforts, is to make compliant products which don't exceed the permitted material compositions. Bluestar calculates substance concentrations against the thresholds of specifications, to reveal if a product and all components in a BOM comply.

BOM: 108322, Rev 0-0, Design, RH0063-A00114 P1_PUI		Status			
Documentation					
Item: Pos:1, Qty:1.00 108323, Rev 0-0, Design, RH0063					
Item: Pos:2, Qty:1.00 108325, Rev 0-0, Design, WASH C					
Item: Pos:3, Qty:1.00 108326, Rev 0-0, Design, hose re					
Item: Pos:4, Qty:1.00 108327, Rev 0-0, Design, WASH C					
Related specifications					
+ New   Delete   Details   View all   View approved   View design   Add exemption   Remove exemption					
✓	Chemical specification ID	Revision	Chemical specification name	Status	Calculated compliance
	10000	A-0	Reach SVHC	Approved	Missing Information

**Select individual items from any level or the top assembly in the BOM structure and Bluestar will calculate if the BOM and items are compliant with the related specifications.**

## Comply to industry-specific regulations

Bluestar allows you to perform calculations on either an article or homogenous level. While the electronics industry and RoHS Directive requires a 100% disclosure of every substance down to the homogenous level, in other industries a 100% disclosure at the part level is sufficient. Thus, Bluestar complies with regulatory requirements in any industry or market.

Since all your chemical data is stored in one solution, it is easy to calculate the compliance level of any product, whenever the mass of a part changes, new materials are added or removed, or exemptions expire.

In turn you will be able to reduce errors and mistakes, from making non-compliant products that require expensive rework.

KEY BENEFITS	
Centralize and manage all your compliance data in a single solution;	With all your chemical product data in D365&AX, it is easy for all users to access it at all times, reducing errors throughout your entire supply chain and mitigating the risk of producing non-compliant products.
Ensure all your stakeholders comply to regulations;	Being able to easily import and export chemical data you ensure that all stakeholders in your enterprise and suppliers have the information to manufacture compliant products.
Gain access to essential chemical data from a Third-Party data provider;	Import reliable chemical data on electronic components, and the associated substances for your products. The data is mapped in Bluestar, easy for everyone in your supply chain to access so you can follow your compliance obligations.
Reveal the compliance level of your products with compliance calculations.	Bluestar provides you compliance calculation results fast and easily, so you can reduce errors and immediately take corrective action for non-compliant products.

FEATURES	
Exemption management;	Assign exemptions to your items, so you will know when allowances permits you to make products that otherwise go against specifications.
Compliance calculation;	Bluestar is capable of automatically calculating the mass and concentration of each substance against the thresholds of specifications. When calculations are easy to perform like this, you reduce the risk of making non-compliant products.
Importing/exporting full material disclosures;	Import chemical data and FMDs into Bluestar or export to your suppliers and customers to ensure all your partners and customers are able to document compliance as they are obliged to. The data is imported automatically in a controlled manner, eliminating the need for manually mapping the data.
Where-used analyses;	Reveals all the manufacturing items, exemptions and specifications containing any particular substance. Makes you aware of which particular products and substances are affected by specifications across your entire product line.
Declared compliance;	Manually declare a compliance status, that overrides the calculated one. Useful if calculations are inaccurate, when further research and lab testing is required to reveal substance concentrations.
SiliconExpert integration;	Seamlessly import and map reliable chemical data on manufacturing items, substances and specifications from a Third Party data provider, which you need to follow compliance obligations. Saves you the effort of doing otherwise errorprone work when manually transferring data from one system to another.
Alternative substance names;	Any substance can easily be found in the Bluestar system, as you can search for it by both its trivial and a chemical name; i.e. lead = Pb
List of chemical specifications;	All your chemical specifications for regulations like REACH SVHC and RoHS are organized in a single hub where you can see all the thresholds for each substance as well as any exemptions that might be in effect.
Compliance reporting;	Allow all users in your supply chain to easily generate reports that reveal real-time data on the compliance level of individual BOM items. Mitigates the risk of manufacturing non-compliant products.
Manufacturing items;	Every manufacturing item gives you a full material disclosure with all chemical data associated with that item. Centralizes all your compliance data in one system for everyone to access.
Substance Compounds;	Create and import compounds containing several substances. Compounds summarize the Parts Per Million (PPM) and the Mass Values of all the substances contained in it. Certain directives like RoHS is based on compounds, which require you to have them in your material declarations.
Manufacturer item unit;	Measure your mass and PPM in any unit value (g, kg, mg, t) and imported values to your default unit value.
Exclude from compliance;	Exclude individual lines in a BOM from the compliance calculation. Allows you to ignore items or documents in a BOM that are not supposed to be included in the calculation, as they don't have any impact on the material composition of the product.
Revision control.	Revise and manage all your manufacturing items and associated data, so you will always know which is the latest version. With revisions you can also backtrack to find out how and when errors or mistakes happened during engineering change processes.

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