

FROM DATA TO SUSTAINABILITY

A DEEP DIVE INTO THE COLLABORATION
BETWEEN THE BHive® & OEKO-TEX® STeP



The BHive®



HOHENSTEIN

WELCOME!

- Use the Q&A for **QUESTIONS**
- **MICROPHONE & CAMERA** are deactivated
- We provide the **SLIDES & RECORDING**

AGENDA



1. Sustainable chemistry – challenges in the supply chain
2. The BHive[®]
3. OEKO-TEX[®] STeP
4. Smart chemical management with The BHive[®] & OEKO-TEX[®] STeP
5. Q&A

SPEAKER



The BHive[®]



HOHENSTEIN



LARS DOEMER

Co Founder & Managing Director
GoBlu International



MATHIAS WENZEL

Lead Auditor, Audits by OEKO-TEX[®]
Hohenstein

“SUSTAINABLE CHEMISTRY – CHALLENGES IN THE SUPPLY CHAIN”

- The production of apparel, footwear, textile and leather is chemically intensive. Input chemistry has a significant effect on product safety, the environment and circularity. Greener chemistry proactively removes hazardous substances before they enter supply chains.
- What goes in, must come out. Chemicals and dyes used in the production of textiles and leather are not typically food grade quality, nor do they have pharmaceutical purity



“SUSTAINABLE CHEMISTRY – CHALLENGES IN THE SUPPLY CHAIN”

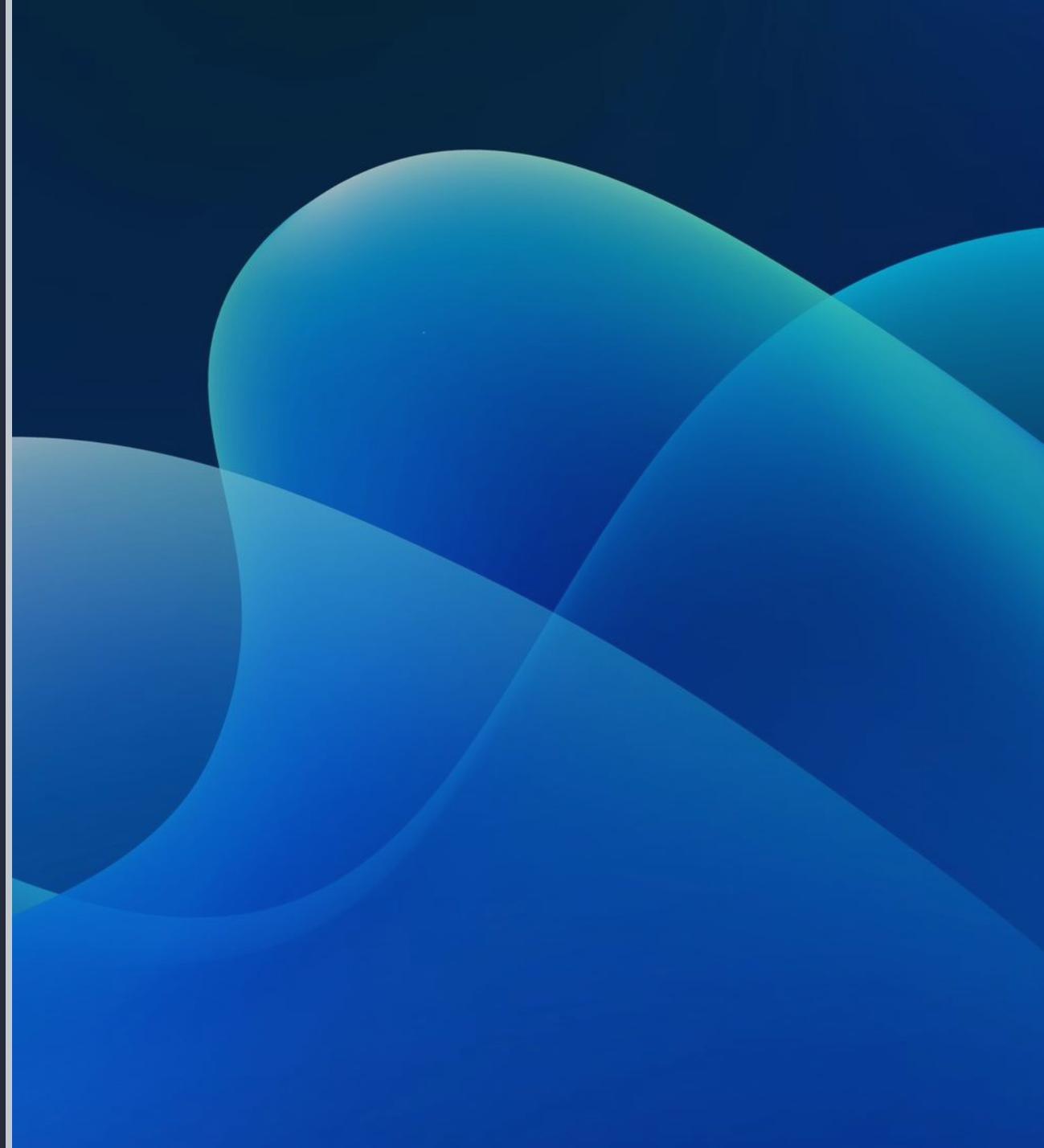
- If chemicals used in production do not remain in or on the product, they are released into the environment during manufacturing or consumer use. Either result can harm humans and ecosystems.
- Sustainable textile production aims to reduce environmental impact by using natural resources more efficiently, reducing waste, and using eco-friendly material.





The BHive®

The BHive® Introduction





Chemical management Challenges for brands and factories

- **Demand for transparency on chemical usage and compliance**
- **Lack of high quality and reliable data**
- Communication with suppliers is **time consuming**
- **Data management is complicated** with inventories coming in different formats
- **Data sharing:** Need for uniform channels and data for easy comparison and analysis



Anyone can become a wine chemical expert.

The Solution

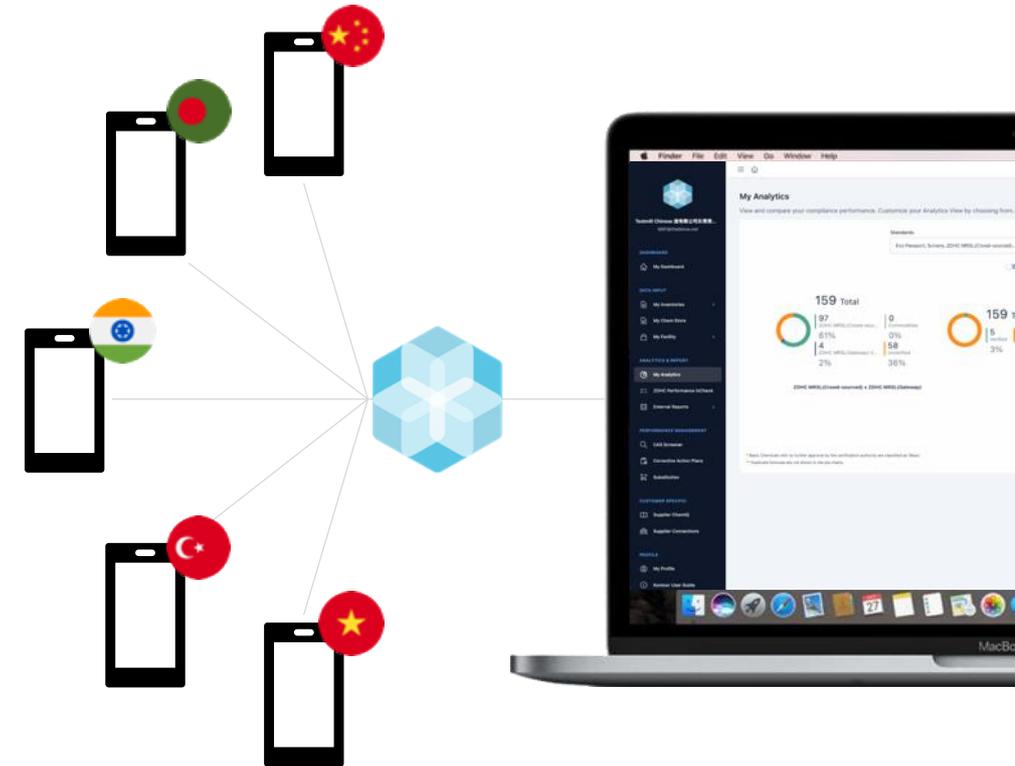
Digital Chemical Management with The BHive®

Made for Factories

The BHive® is an innovative tool that makes it easy for factories to gather and manage all their environmental data in one place. It allows them to easily generate chemical inventories, check chemical compliance and share data with their clients.

Made for Brands/Retailers

Brands and retailers gain full transparency over their supply chain: The BHive® presents all environmental data, including complete and accurate chemical inventories, from all factories in one place.



The BHive®

Driving Transparency Worldwide

170k

Chemical products in the database,
partnered with 4400 chemical
suppliers

2k+

Factories are enrolled in The BHive®

50+

Countries in Africa, Asia, Europe,
North and South America

80

Brands have partnered with
The BHive® (Fashion, Home textiles,
Sports and outdoor)

15

Industry Partners, OEKO-TEX®,
GOTS, TÜV Rheinland, Scivera,
ToxFMD

Brand/Retailer Partners (non-exhaustive list)



Chemical Partners (non-exhaustive list)



Industry Partners (non-exhaustive list)

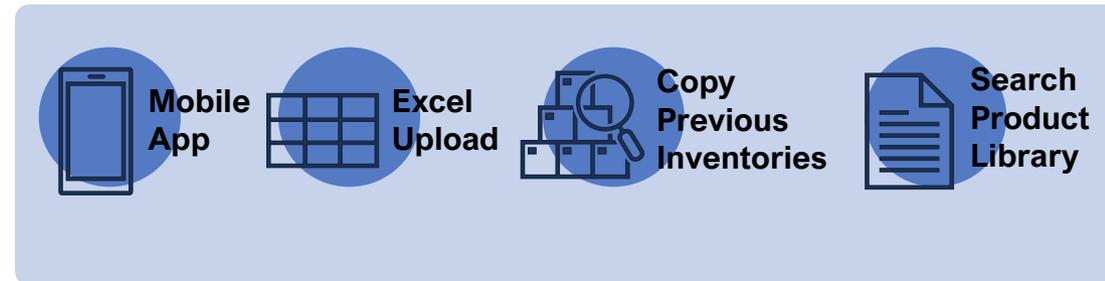




The Solution

How The BHive[®] works

- 1 Factories create digital chemical inventories using simple input methods



- 2 Factories connect to brand partners and clients to share their data



- 3 Factories and brands have access to smart reporting & performance management tools

Inventory Performance Analytics

For industry standards & brand requirements

Category	Count	Percentage
Total	41	
Verified	29	70%
Unverified	12	29%

Category	Count	Percentage
Total	41	
ZDHC MRSL (Crowd-sour...)	23	56%
Commodities	0	0%
ZDHC MRSL (Gateway) V...	6	14%
Unverified	12	29%

Supply Chain Performance Analytics

Customizable to your needs

Performance Management

e.g. through Corrective Action Plans

Remediation	Chemical Name	Deadline	CAP Status
Substitute	Chemical Y	12/31/2022	Resolved

*connecting to your STeP institute partner and OEKO-TEX happens automatically and is free of charge.

→ If you want to connect to other brand customers, additional costs are included. Please contact step@thebhive.net for more information



Data Input

Chemical inventories with input methods designed for factory

Innovative Technology

Upload new chemical products easily

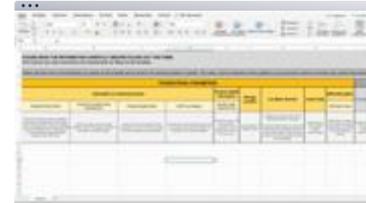


Mobile App

Use the mobile app to take a photo of any textile chemical label and instantly identify and log the chemical in a chemical inventory.

Mass upload of products

Upload a complete inventory at once

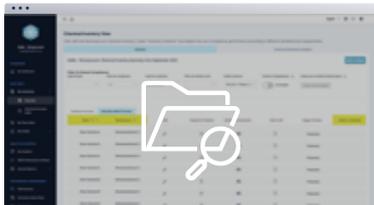


Excel Upload

Upload a complete chemical inventory (incl. SDS & consumption information) using an Excel template.

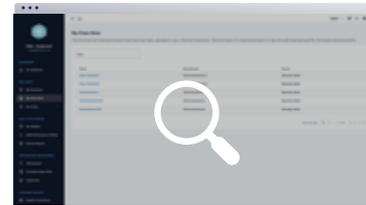
Recycle your data

Save time by transferring previously uploaded chemical products and data



Copying a previous inventory

If the inventory hasn't changed much since the last month, users can simply copy previous inventories and update stock & consumption.



Search all products you uploaded

Users can search and select chemical products from a list of all products that they have ever been uploaded to The BHive.

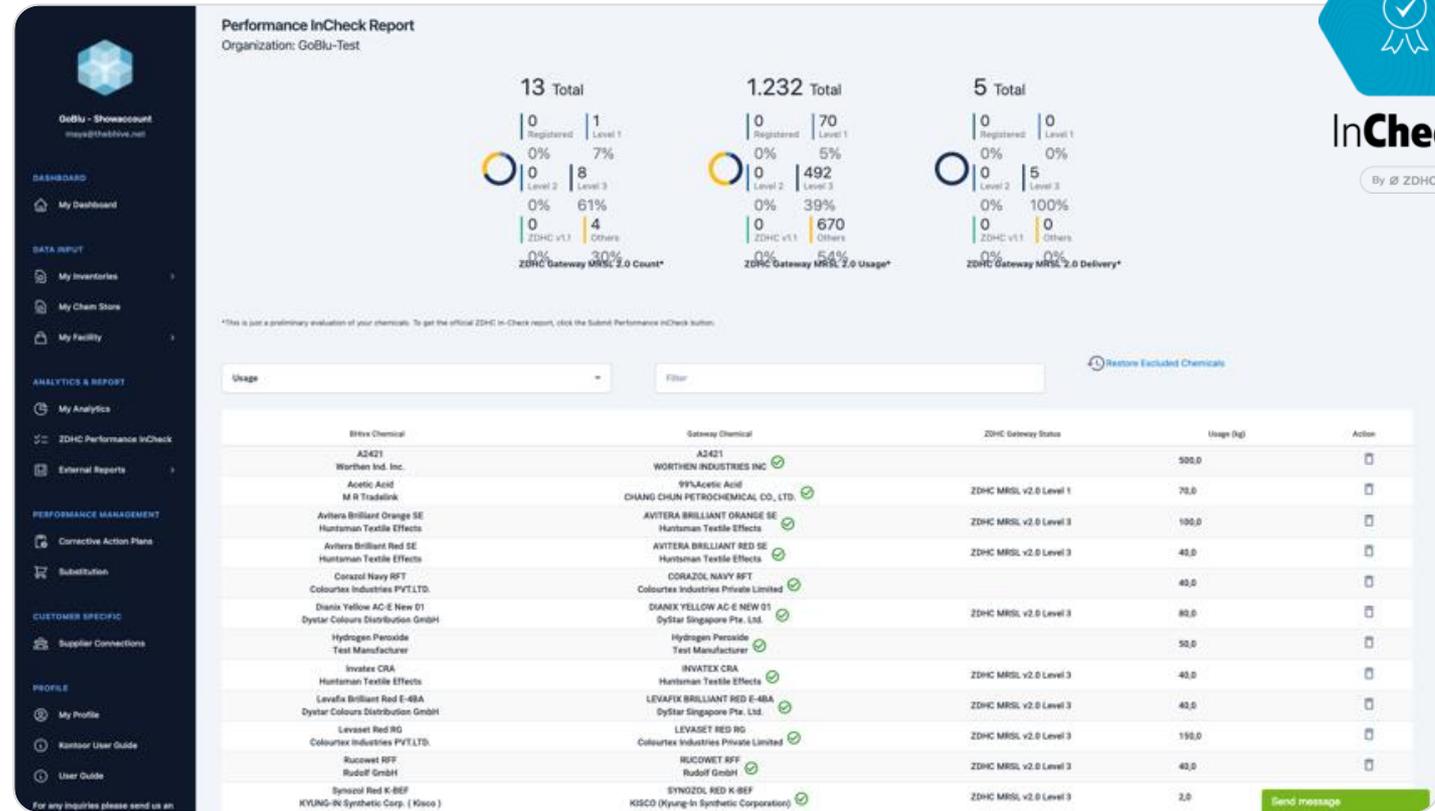


Data Reporting

Generating ZDHC Performance InCheck Report

Performance InCheck Report

On The BHive factories can check the compliance level of their monthly chemical inventories against ZDHC Gateway database. The compliance results are enclosed in the Performance InCheck Report generated on The BHive.



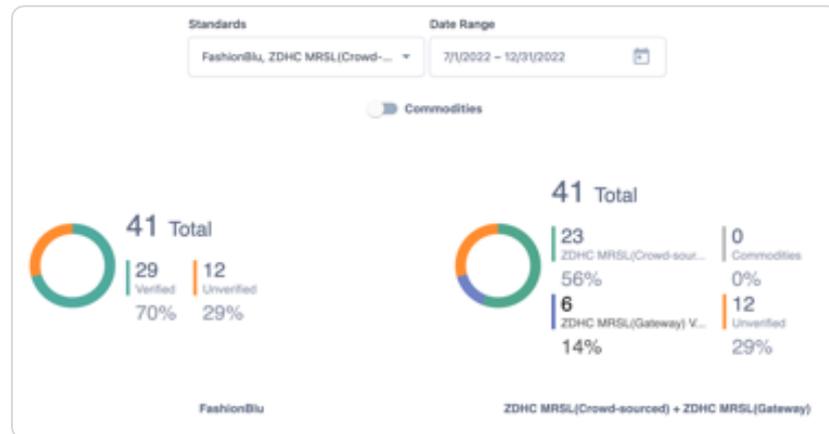


Performance Management

Performance Analytics for Factories

Compliance Performance

Based on different standards & brand requirements



Overall Activity

5
Connected
Brands

Yes
Completed
Inventory

2022-12
Last Scan
Date

2022-11
Last
Generated
Incheck

Verified and unverified chemicals

By chemical, manufacturer and verification

Chemical Name	Manufacturer	Consumption	Compliance Status
Man Addit	Unknow Manufacturer	0.00	Unverified
manth	test	1.00	Unverified
Show Chemical A	Show Manufacturer A	200.00	Unverified
Show Chemical A	Showmanufacturer Z	250.00	Unverified
Show Chemical B	Showmanufacturer Z	80.00	Unverified
Showchemical A	Showmanufacturer	100.00	Unverified
Showchemical BLUE	Showmanufacturer	20.00	Unverified
Showchemical RED	Showmanufacturer	3.89	Unverified
Test Chemical	Test Manufacturer	0.00	Unverified
AK9ZW	NAN PRO Feansa Chemical Co., LTD.	65.00	Verified
AK9 EAA	Transhe Zhilan Co., LTD.	398.00	Verified

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Overall Performance

By count and by weight



Product Category Performance

By count and by weight



INSPIRING CONFIDENCE

OEKO-TEX® CERTIFICATES & PRODUCT LABELS
SHAPING A SUSTAINABLE FUTURE



HOHENSTEIN



ABOUT OEKO-TEX®

1992 Foundation, Hohenstein is founding member

17 independent research & testing institutes in Europe & Japan

100 offices worldwide, more than 60 countries

Institutes develop test methods & limit values for the OEKO-TEX® standards

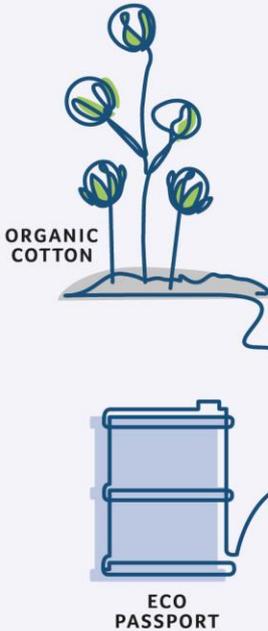
43,786 OEKO-TEX® certificates & labels worldwide*

*Status 30/06/2023



ABOUT OEKO-TEX®

INPUT CONTROL



PROCESS CONTROL



OUTPUT CONTROL



SUPPORTING TOOLS



OEKO-TEX® STeP

SUSTAINABLE TEXTILE & LEATHER PRODUCTION



STeP



OEKO-TEX® STeP

- OEKO-TEX® STeP stands for Sustainable Textile & Leather Production
- Modular certification system for production facilities in the textile and leather industry
- The target groups for STeP certification are textile and leather manufacturers as well as brands and retailers.

GOAL

Long-term implementation of environmentally friendly production processes, social working conditions and optimum health and safety.



Example Customer
Example Street 33
33333 City, Country



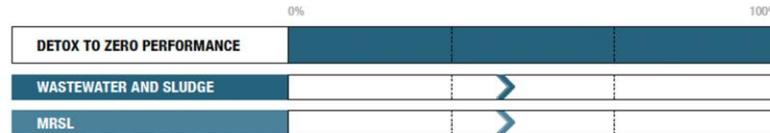
HOHENSTEIN Textile Testing Institute
GmbH & Co. KG
Schlosssteige 1, 74357 Bönningheim,
Germany

Certificate

TYPE
OEKO-TEX® STeP

CERTIFICATE NUMBER
12-34-56

REPORT NUMBER
AUDIT-123-3



SECURITY CODE
SECRET-CODE

TRANSPARENT ASSESSMENT

ADD ONS

OEKO-TEX® IMPACT CALCULATOR



WHAT

Tool to measure carbon & water footprint

WHO

All companies with STeP certification

WHY

- Identify the largest carbon & water impacts
- Take action to improve operations & meet reduction targets
- Share carbon & water footprint data with customers, investors, & other stakeholders

ZDHC & OEKO-TEX® STeP

CHEMICAL USE

- STeP and ZDHC prohibit the intentional use of hazardous chemicals
- STeP verifies that no chemicals listed on MRSL are used

WASTEWATER TESTING

- STeP and ZDHC define requirements for wastewater & sludge
- Wastewater & sludge testing for STeP and/or ZDHC by Hohenstein

ACCEPTANCE OF STEP FOR ZDHC SUPPLIER TO ZERO (S2Z)

- ZDHC foundation level (level 1): 100% discount for STeP customers
- ZDHC progressive level (level 2): 50% discount for STeP customers



STeP



Supplier
to Zero

By ZDHC



The BHive® & OEKO-TEX® STeP

- BHive implemented a STeP functionality
- STeP chemicals inventory is linked to BHive
- Easy and direct check of inventory without extra STeP upload
- Use of BHive is free for STeP customers



STeP



The BHive®

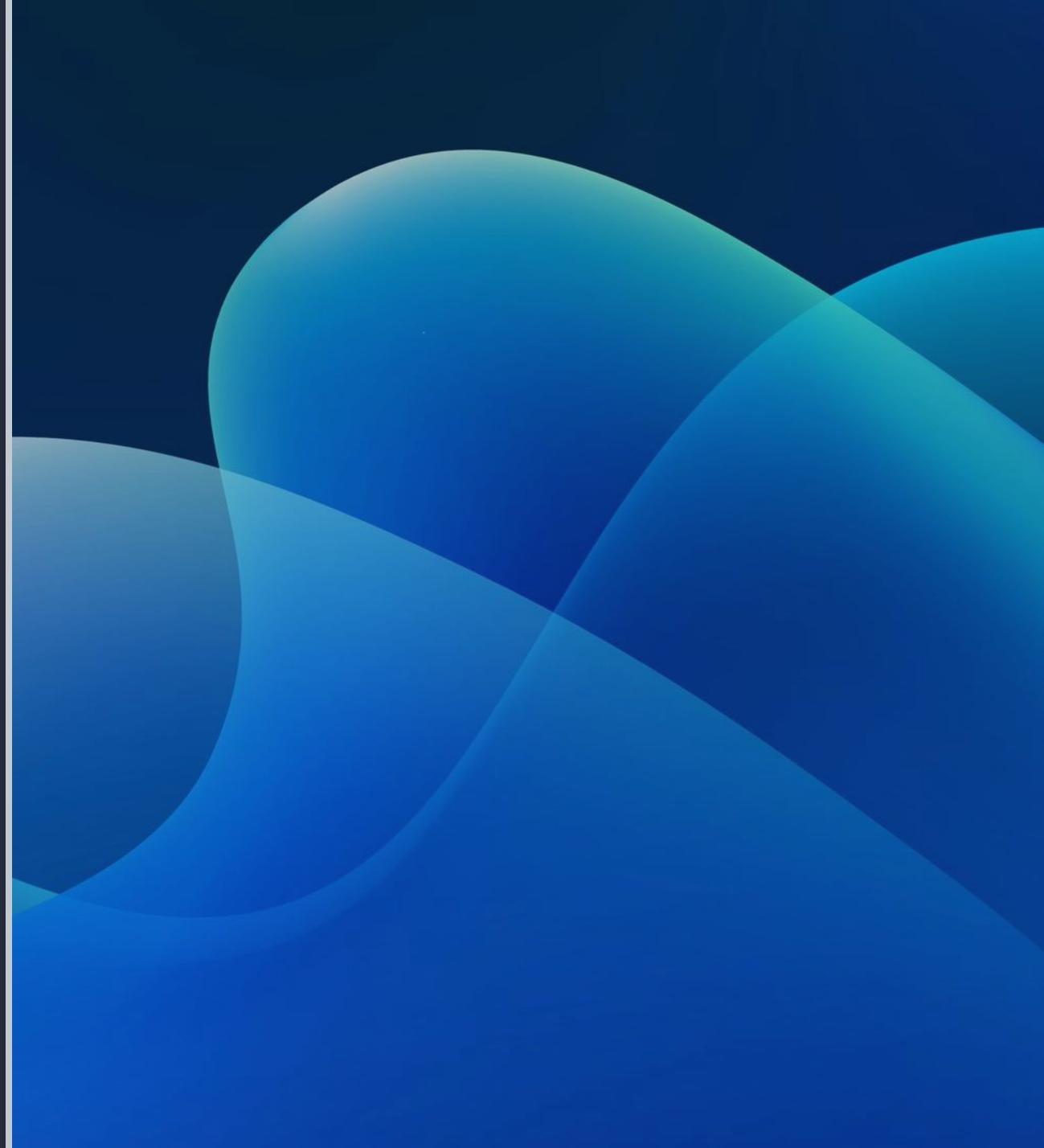
COOPERATION

The BHive[®] & OEKO-TEX[®]



The BHive®

Proposal for STeP- Certified Factories



ADVANTAGE OF The BHive FOR OEKO-TEX® STeP CERTIFICATION

- CAS compliance can be checked with few mouseclicks
- Statistics to calculate performance for STeP assessment
- Customers have comprehensive, high quality chemicals inventory
- Corrective action requests inside BHive possible



HOHENSTEIN HTTI

m.wenzel@hohenstein.com

My Dashboard

My Suppliers

STeP Dashboard

CAS Screener

Analytics

Analytics

Monthly Report

Substitution

User Guide

For any inquiries please send us an email to support@thebhive.net

Overall Analytics

Analytics

Date Range

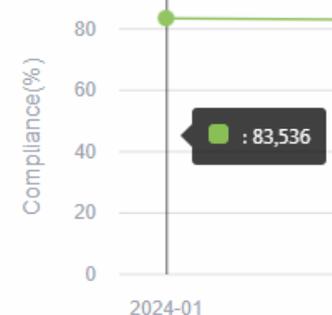
01 Jan : - 31 Mar 2

The List Level

Fabric Roll ID/ Order No

Supply Chain Performance

Overall Supply Chain Performance by



CAS SCREENING CURRENT METHOD

- Different inventory requirements according to buyer
- Re-formatting required for each STeP audit
- CAS-Screening for auditors only

Product Name	CAS Number
Lyoprint RGGR	127-68-4
Pidiprint 910 R	
Prepajet Uni	
Sicoflex H	
Accuro Size Ar	
Sico12	
SERA FAST C-RD	2682-20-4
SERA PRINT C-DF	111-46-6
PLYSTRAN PT 100	
Seycolube 3905	
Dekol 2005.IN liq c 0100	55965-84-9
Glauber Salt	7757-82-6
Reducing Agent D P 0050	
Resist Salt	127-68-4
Setamol WL LIQ	
Soda Ash	497-19-8
Sodium Hydrosulphite	7775-14-6

Screening Result: CAS-Numbers

CAS Number	Product Name (Manufacturer)	Used In Facility	Used fo
111-30-8,111-30-8,	Emulsion Hardener DL Murakami Screen(Singapore) Pte. LTD.	STeP Auditor Training 2024 - Factory Test	
556-67-2,556-67-2,	Asumin C-HW Aplicacion Y Suministros Textiles, S.A.U.	STeP Auditor Training 2024 - Factory Test	
5567-15-7,	Favoprint G.Yellow AF-GRP Veechem Industries (PVT) LTD.	STeP Auditor Training 2024 - Factory Test	
13463-67-7,	Proprint MWS EX Prochem Tekstil Kimya Sanayi Ticaret A.S.	STeP Auditor Training 2024 - Factory Test	
100-42-5,	Easy Binder 280 Chemtech Prochimica Industries	STeP Auditor Training 2024 - Factory Test	

Screening Result: Chemical Products with no CAS-Number

For 16 / 21 chemical products uploaded in your selected time span no CAS Number has

Select Compliance Standard... STeP declaration letter

No Selection ▼

All Products ▼

Product Name (Manufacturer)	Used In Facility	Used for Fabric Roll ID/Order No.	Request CAP	STeP declaration letter	ZDHC MRSL
1000HNX Hardener Inkcups Corporation	STeP Auditor Training 2024 - Factory Test		<input type="checkbox"/>	No	Yes
11888PFX Epic PF Mixing White Avient Corporation	STeP Auditor Training 2024 - Factory Test		<input checked="" type="checkbox"/>	No	
1021N NAN PAO Resins (Foshan) Co., LTD.	STeP Auditor Training 2024 - Factory Test		<input type="checkbox"/>	No	Yes
Ablusoft AC720 Taiwan Surfactant Corp.	STeP Auditor Training 2024 - Factory Test		<input type="checkbox"/>	No	Yes
Alpaprint CAT	STeP Auditor Training 2024 - Factory Test		<input type="checkbox"/>	No	Yes

CAS SCREENING + The BHive

Non-Compliant chemicals shown

Result with No CAS gives compliance information like

- Declaration letter
- ZDHC compliance

PERFORMANCE CHECK

OEKO-TEX® STeP

„STeP Dashboard“ in The BHive gives information about the performance of the inventory

86.67% compliance

of 135 chemical products

STeP MRSL compliance (compliant with ZDHC MSRL and/ or ECO PASSPORT certified and/or STeP MRSL Self-Declaration)

3.7%

5/135 chemical products
(7) substances

Composition of the products & CAS n

[Link to CAS Screener](#)

0%

0/135 chemical products

Minimum and maximum stock

2.22%

3/135 chemical products

Application/Used Areas (ZDHC use category)

0%

0/135 chemical products

Storage Location

2.96%

4/135 chemical products

GHS Classifications

0%

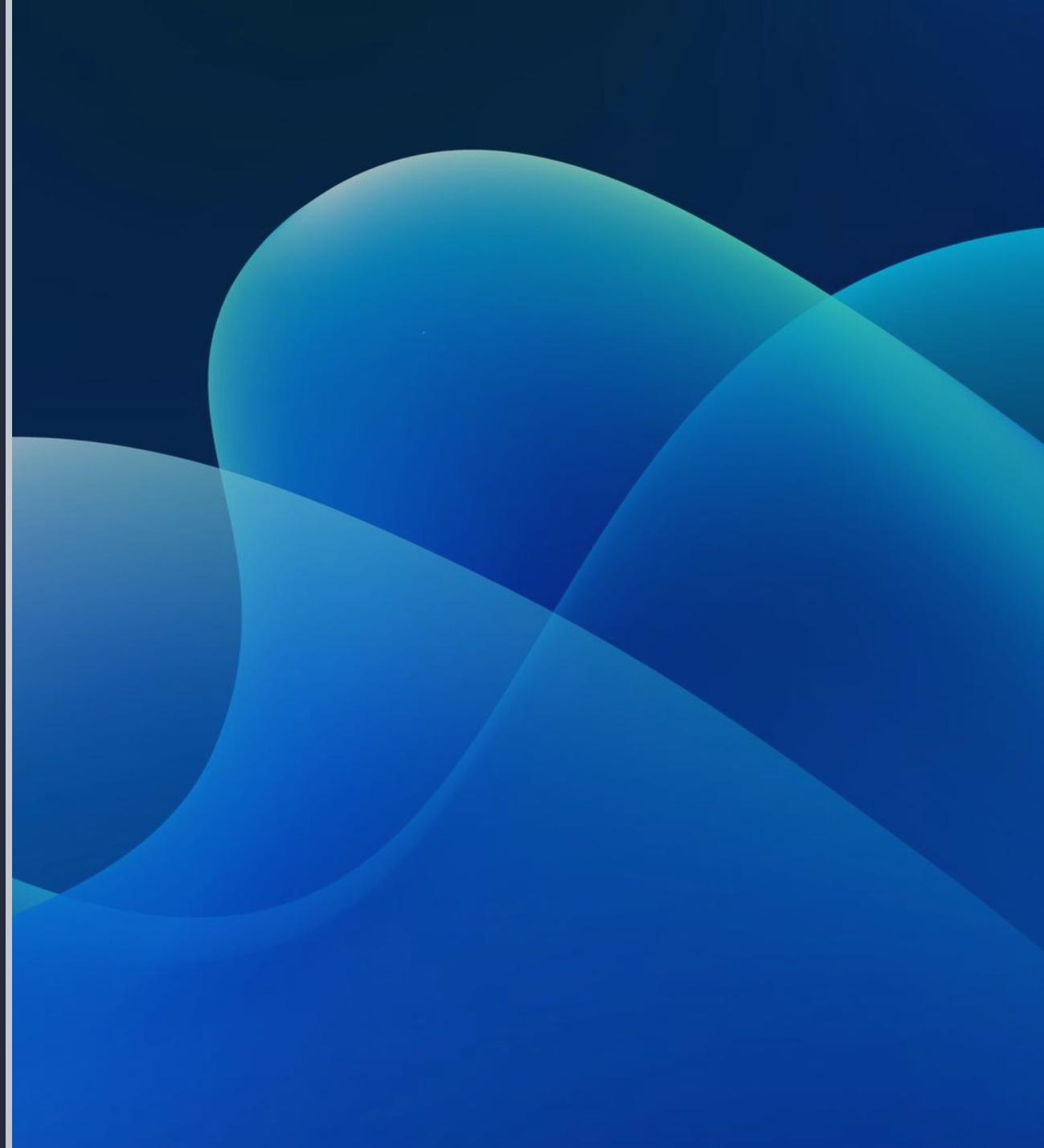
0/135 chemical products

H-Phr



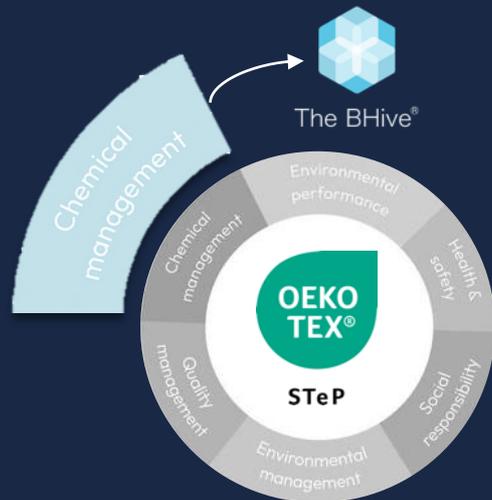
The BHive®

Details: The BHive and OEKO-TEX STeP



About OEKO-TEX® STeP

The OEKO-TEX® STeP certification includes a comprehensive analysis and assessment of the production conditions. STeP analyses all important areas of a company using 6 modules:



1. **Chemical Management**
2. Environmental performance
3. Environmental management
4. Social responsibility
5. Quality management
6. Health protection & safety

Integration of The BHive chemical management platform

With the integration of The BHive, all OEKO-TEX® STeP customers can use The BHive® to fulfill the chemical management module within the STeP assessment. Benefits include:

- ✓ Intelligent **high-quality data** and **reductions in workload, time, and costs**
- ✓ **Improved compliance** with industry standards, e.g. STeP MRSL, ZDHC MRSL
- ✓ Generate **ZDHC Performance InCheck** through The BHive®



Integration of The BHive chemical management platform

Covering the STeP Chemical Module

Upload all necessary information for the STeP chemical module in your chemical inventory

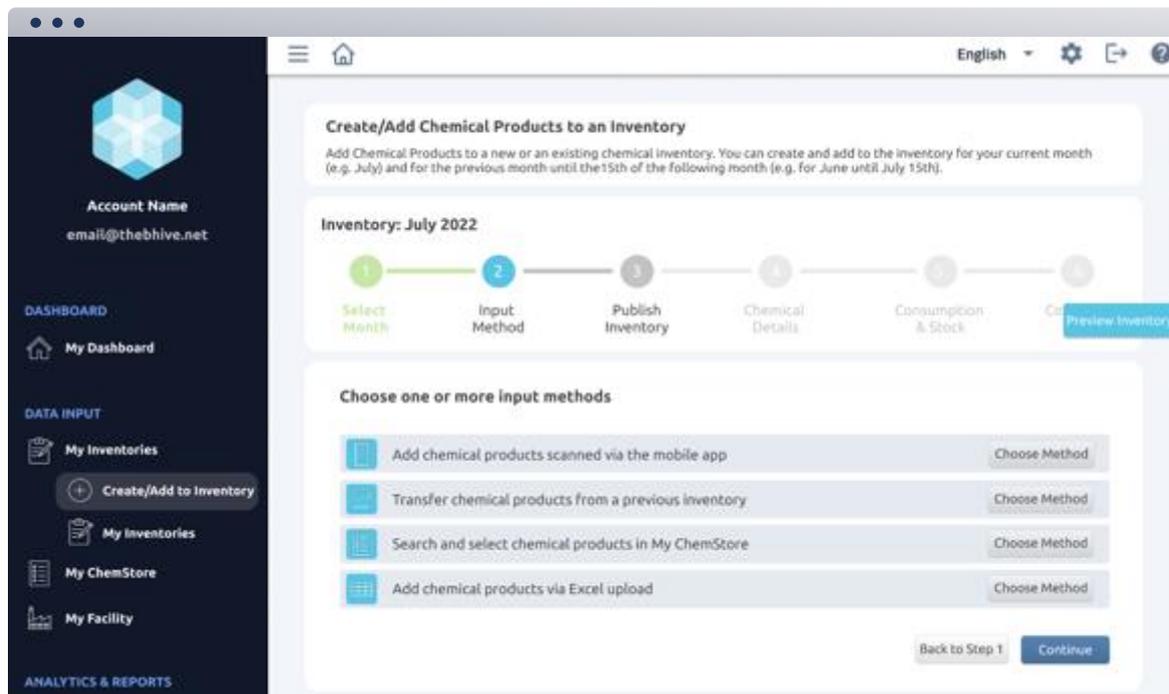
- **Chemical Inventory List** incl. the product names
- **Safety Data Sheet** upload for each chemical product
- **Minimum and Maximum Stock**
- **Application/Use Areas**
- **Composition and CAS-Numbers**
- **Hazard Codes** (GHS Classifications, H-/P-Phrases)

Use the CAS-Screener to screen chemical products against the STeP MRSL

- **Screen all your products against the OEKO-TEX STeP MRSL** in a certain time span
- **Screen all your products for a certain CAS-Number** in a certain time span
- **Initiate Remediation if needed**

Covering the STeP Chemical Module

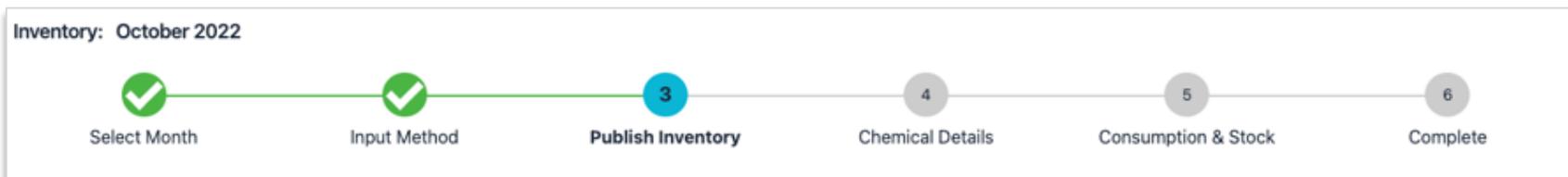
Create your (first) chemical inventory



Focus on user friendliness and workload reduction with data upload automation

Our inventory creation flow is designed to be user friendly – by following the 6 steps, you are guided through the entire inventory process:

From adding chemical products to your inventory, to uploading chemical detail information based on Safety Data Sheets, to editing the Consumption and Stock information.



Covering the STeP Chemical Module

SDS, GHS Classification, CAS-Number & Composition, H/P-Phrases

Chemical Details

View and edit the chemical details of a product, following the structure of the ZDHC CIL. If available, start by uploading the SDS. The BHive can read and automatically fill in some of the information from the SDS. Please note that the information added to this chemical product here will be updated in all your chemical inventories, which include this product.

Product Name : Abctest Manufacturer Name : Test

Read Data from SDS

Issue Date * I agree with T&C and aware that uploaded document will be visible to connected brands

Information parsed from SDS will overwrite existing information in your inventories

Safety Data Sheet

1. PRODUCT NAME AND COMPANY INFORMATION

Product Name: Show Chemical A
Company: Show manufacturer Z

2. HAZARD IDENTIFICATION

H302 Harmful if swallowed.
H318 Causes serious eye damage
H402 Harmful to aquatic life.

Precautionary Statements

Prevention:
P264 Wash skin thoroughly after handling.
P273 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear eye protection/ face protection.

Response:
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
Rinse mouth.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

Storage:
Not available

Disposal:
P501 Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Concentration (% w/w)
ABC	113741-62-7	>= 30 - < 50
ABC	111-96-9	>= 30 - < 50

GENERAL FOUNDATIONAL PROGRESSIVE ASPIRATIONAL

General Usage in Factory
Production (dyes, pigments and aux)

GHS MSDS Available
Yes

GHS Classification
ABC

Use of PPE
Use PPE

Notes
Test Notes

Chemical Formulations
Name CAS No. Concentration Action

Automatic Data Input or Manual Upload

Choose between 2 easy upload methods

1. Use the SDS Reader to upload your chemical detail information. Start by uploading the SDS. The BHive can read and automatically fill in some of the information from the SDS.
2. Fill in the chemical detail information manually in the fields to the right.

Covering the STeP Chemical Module

Minimum and Maximum Stock

Consumption & Stock Back to Step 4

To add consumption and stock information to a chemical product in your inventory, you have two options.

- When you click the "Edit" button next to any of the chemical products in your inventory, you can add the information manually.
- You can choose the Excel Upload function. Find information on how to do this below.

NOTE: You can only upload one Batch/Lot Number per chemical product. If you want to upload multiple Batches/Lots, you need to upload the chemical product again. In the new entry of this product, you can then add the new Batch/Lot.

Product Name : Abctest **Manufacturer Name :** Test

Name *	Manufacturer *	Batch/Lot Number	Purchase Date	Manufacture Date	Expiry Date
<input type="text" value="Abctest"/>	<input type="text" value="Test"/>	<input type="text" value="12345"/>	<input style="border: 1px solid #ccc;" type="text" value="1/1/2022"/>	<input style="border: 1px solid #ccc;" type="text" value="1/1/2021"/>	<input style="border: 1px solid #ccc;" type="text" value="1/1/2023"/>
Used for Customer	Consumption (/month)	Delivered Quantity (KG)	Stock Volume	Minimum Stock	Maximum Stock
<input type="text" value=""/>	<input type="text" value="100,0"/>	<input type="text" value="50,0"/>	<input type="text" value="200,0"/>	<input type="text" value="150,0"/>	<input type="text" value="300,0"/>
Stock Location	Storage Condition	Fabric Roll ID/ Order No			
<input type="text" value="Storage 1"/>	<input type="text" value="Good"/>	<input style="border: 1px solid #ccc;" type="text" value="1234"/> Fabric Roll id/ Order No...			

Back to Overview Save Changes

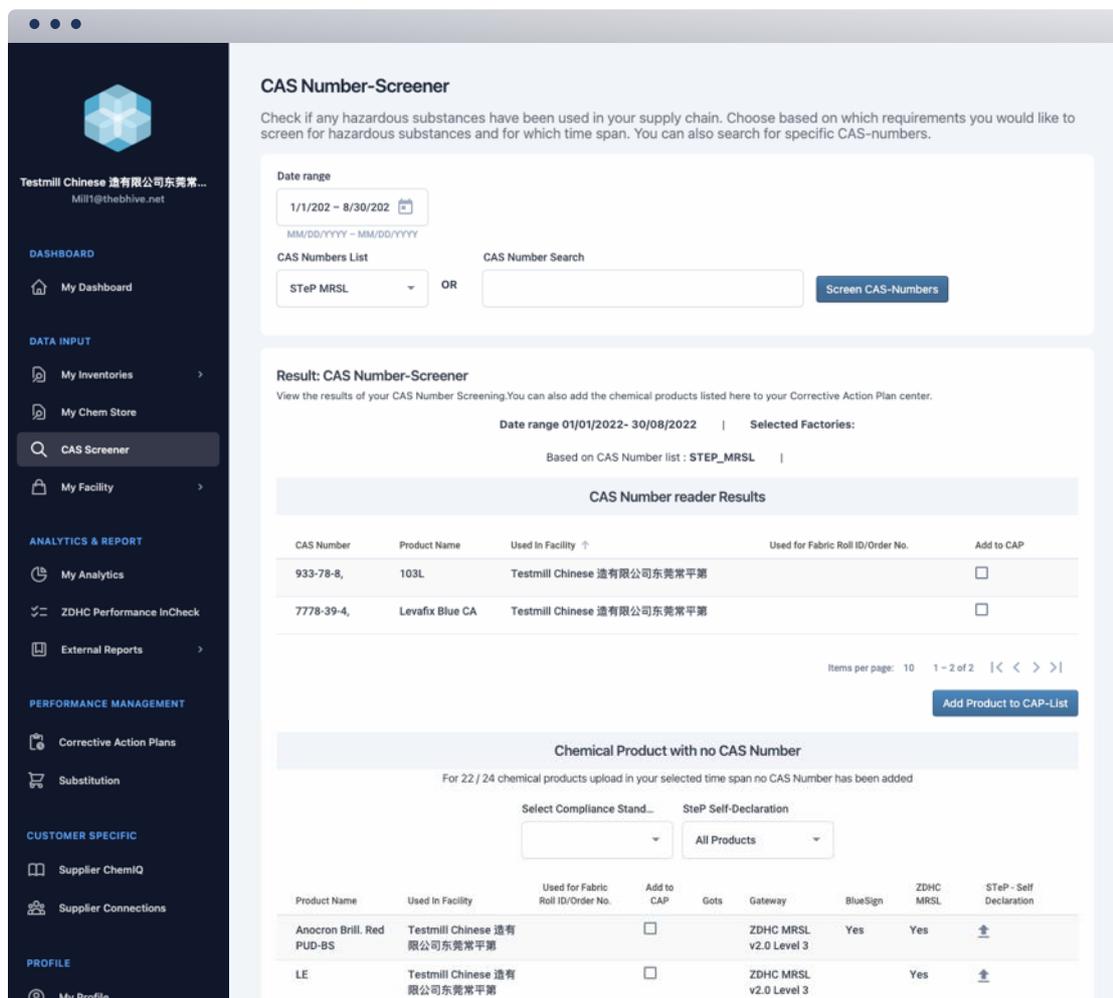
Upload Consumption & Stock Information

Choose between 2 easy upload methods

1. Use the Excel Upload function to add your Consumption and Stock information bulk
2. Fill in the Consumption and Stock information manually.

Covering the STeP Chemical Module

CAS-Number Screener



CAS Number-Screener

Check if any hazardous substances have been used in your supply chain. Choose based on which requirements you would like to screen for hazardous substances and for which time span. You can also search for specific CAS-numbers.

Date range: 1/1/202 - 8/30/202

CAS Numbers List: STeP MRSL OR CAS Number Search: [] **Screen CAS-Numbers**

Result: CAS Number-Screener

View the results of your CAS Number Screening. You can also add the chemical products listed here to your Corrective Action Plan center.

Date range 01/01/2022- 30/08/2022 | Selected Factories:

Based on CAS Number list : STeP_MRSL |

CAS Number reader Results

CAS Number	Product Name	Used In Facility	Used for Fabric Roll ID/Order No.	Add to CAP
933-78-8,	103L	Testmill Chinese 造有限公司东莞常平第		<input type="checkbox"/>
7778-39-4,	Levafix Blue CA	Testmill Chinese 造有限公司东莞常平第		<input type="checkbox"/>

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Chemical Product with no CAS Number

For 22 / 24 chemical products upload in your selected time span no CAS Number has been added

Select Compliance Stand... SteP Self-Declaration

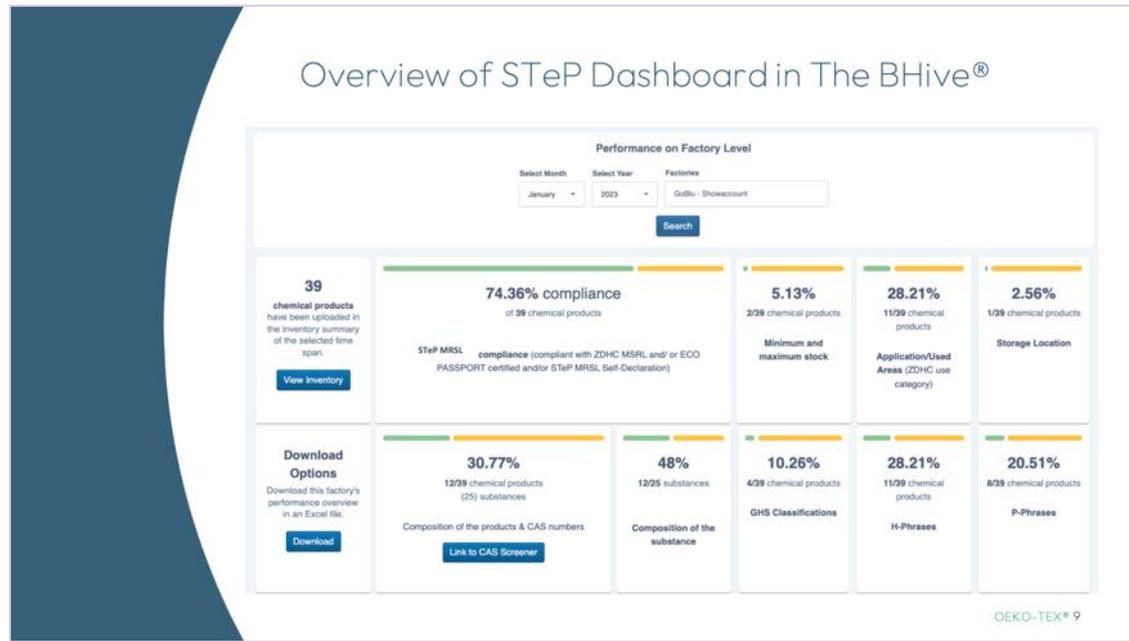
Product Name	Used In Facility	Used for Fabric Roll ID/Order No.	Add to CAP	Gots	Gateway	BlueSign	ZDHC MRSL	STeP - Self Declaration
Anocron Brill. Red PUD-BS	Testmill Chinese 造有限公司东莞常平第		<input type="checkbox"/>		ZDHC MRSL v2.0 Level 3	Yes	Yes	<input type="checkbox"/>
LE	Testmill Chinese 造有限公司东莞常平第		<input type="checkbox"/>		ZDHC MRSL v2.0 Level 3		Yes	<input type="checkbox"/>

Screen against the STeP MRSL

1. Go to the CAS Screener
2. Select Date range and STeP MRSL
3. Click on „Screen CAS Numbers“
4. You will find a list of all chemical products which contain these CAS Numbers under „CAS Number reader results“.
5. For those products without a CAS-Number, you can also provide a STeP MRSL Declaration Letter

Your data in the STeP Assessment

The Auditor View

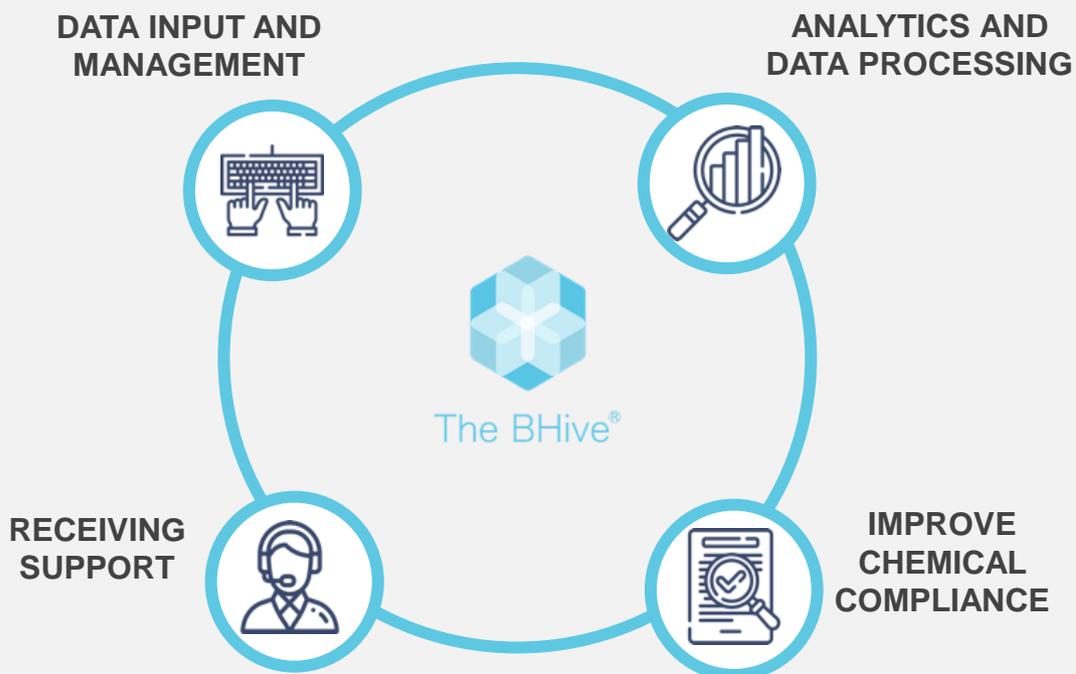


STeP Dashboard

Once you're connected with your STeP Auditor, your data will be presented to them in a convenient Dashboard. This way, they can see at a glance, if all your data has been submitted completely for the assessment.

One Integrated System

For your chemical management needs



The BHive Benefits for OEKO-TEX® STeP-certified factories

Workload Reduction:

The BHive is one, integrated and user-friendly platform to manage your chemical & environmental data all in one place and with one click.

Easy data processing:

SMART data and intuitive reporting tools are made available on The BHive to check your chemical inventories compliance and meet your factory needs.

Pre-audit Check:

STeP factories can have access to pre-audit checks to ensure you meet all the OEKO-TEX STeP requirements.

CAS Screener:

Screen the CAS number of chemical products uploaded in your monthly inventory list against various standards, e.g. OEKO-TEX® STeP, ZDHC MRSL REACH, CP 65, etc.

The BHive® x STeP **Cost & services**

Special Offer for Hohenstein's STeP-Certified Factories

Factories under STeP programme use The BHive **free of cost** (without InCheck)
Including free trainings and onboarding support

To meet your company needs, The BHive offers you:

1

STeP PROGRAMME

- The BHive data management platform
- Data sharing with Hohenstein / OEKO-TEX® available via the platform

Free of Cost

2

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