

chemSHERPA V2R1 Overview

September 12 , 2024

Joint Article Management Promotion Consortium (JAMP)

Part 1 Purpose and Overview of V2R1

**Part 2 Explanation of the Data entry
support tool**

Part 1 Purpose and Overview of V2R1

1. Background and purpose of the development of V2R1
2. Multi-layered representation of parts in chemSHERPA
3. FMD(Full Material Declaration) in chemSHERPA
4. Conversion of FMD to Composition information
5. Linkage from CI (chemicals) to AI (articles)
6. Addition of Candidate of Declarable Substances to the substance list
7. Q&A about V2R1

1. Background and purpose of the development of V2R1

Development Background

- ① chemSHERPA is fundamentally based on the international standard IEC62474, but a delay in the implementation of the next version is anticipated.
- ② It is determined that, to realize the concept of "Connected Chemical Information" of chemSHERPA, support functions that can further promote information communication within the framework of the current V2 are necessary.

Development Objective

To realize the concept of "Connected Chemical Information":

- ① Expansion to "**multi-level representation**" of parts to improve compliance with IEC62474 and linkage with other schemes
- ② Addition of "**FMD(Full Material Declaration)**" function for companies that provide information to both automotive and electrical/electronics customers
- ③ Provision of **CI→AI linkage function** for manufacturers that produce initial articles

To improve utilization and convenience

- ④ Addition of **Candidate of Declarable** Substances to the substance list to suppress individual company investigations before regulations are issued

* Regarding the online update function

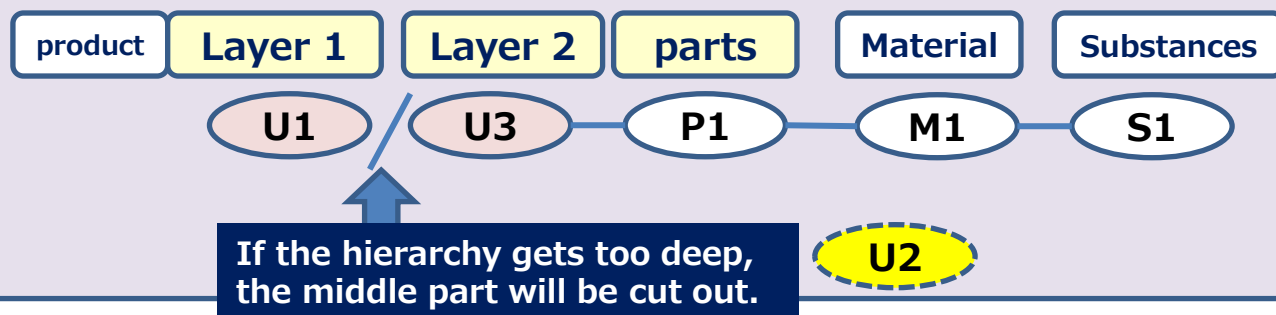
Regarding the online tool update function that was planned to be included in V2R1.00.0 , we will reconsider and revise the specifications from the viewpoint of convenience.

Therefore, we have decided not to include the online update function in this official version of the tool (V2R1.00.0) ."

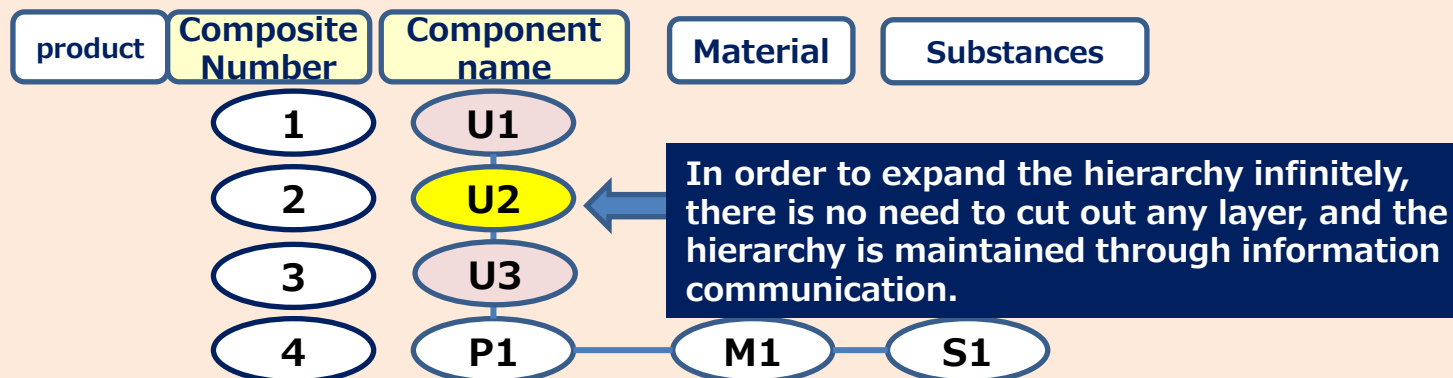
2. Multi-layered representation of parts in chemSHERPA

In the automotive industry, part hierarchies can be expressed infinitely. The current IEC 62474 schema definition also has rules that allow for the description of infinite hierarchies, and from the perspective of collaboration with the automotive industry and international standardization (future collaboration with other systems), it has become necessary to express multi-hierarchical parts hierarchies.

Current chemSHERPA -AI



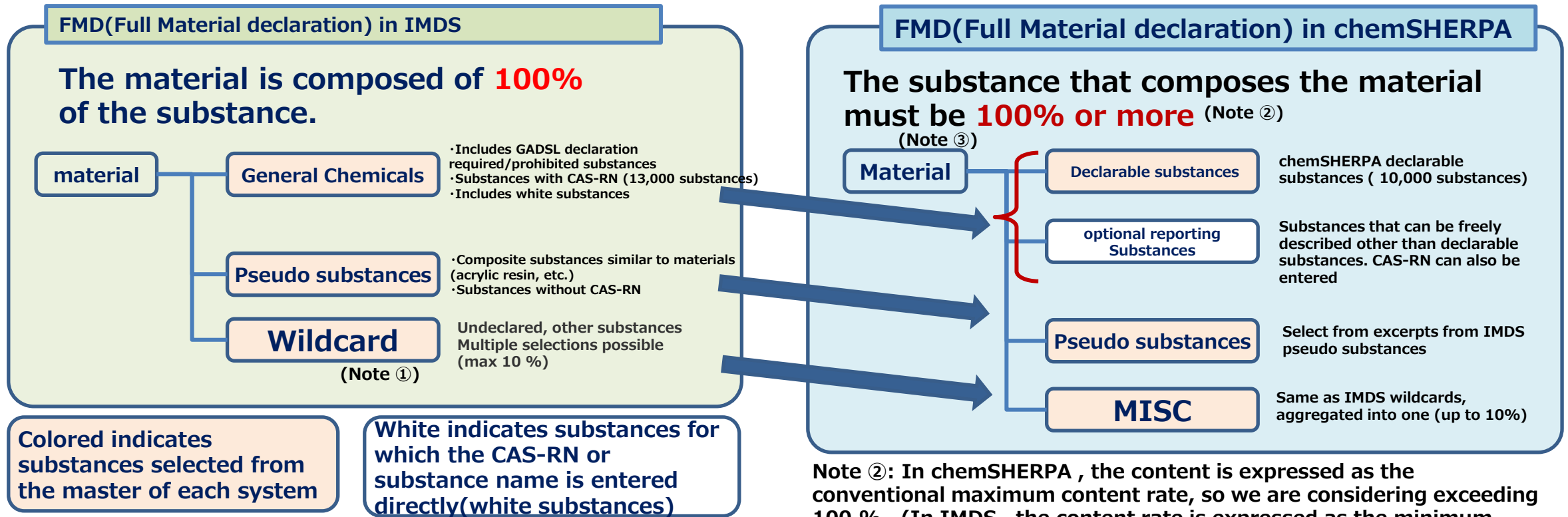
chemSHERPA -AI in V2R1



Multi-layering is achieved through the integration of AI, and does not require any additional work in transmitting information from the original parts.

3. FMD(Full Material Declaration) in chemSHERPA

FMD in V2R1 comply with the Full Material Declaration (FMD) of IEC62474 and enable IMDS substance expression. The selection of conventional optional reportable substances, pseudo substances, and MISC enables substances with a content of 100% or more.



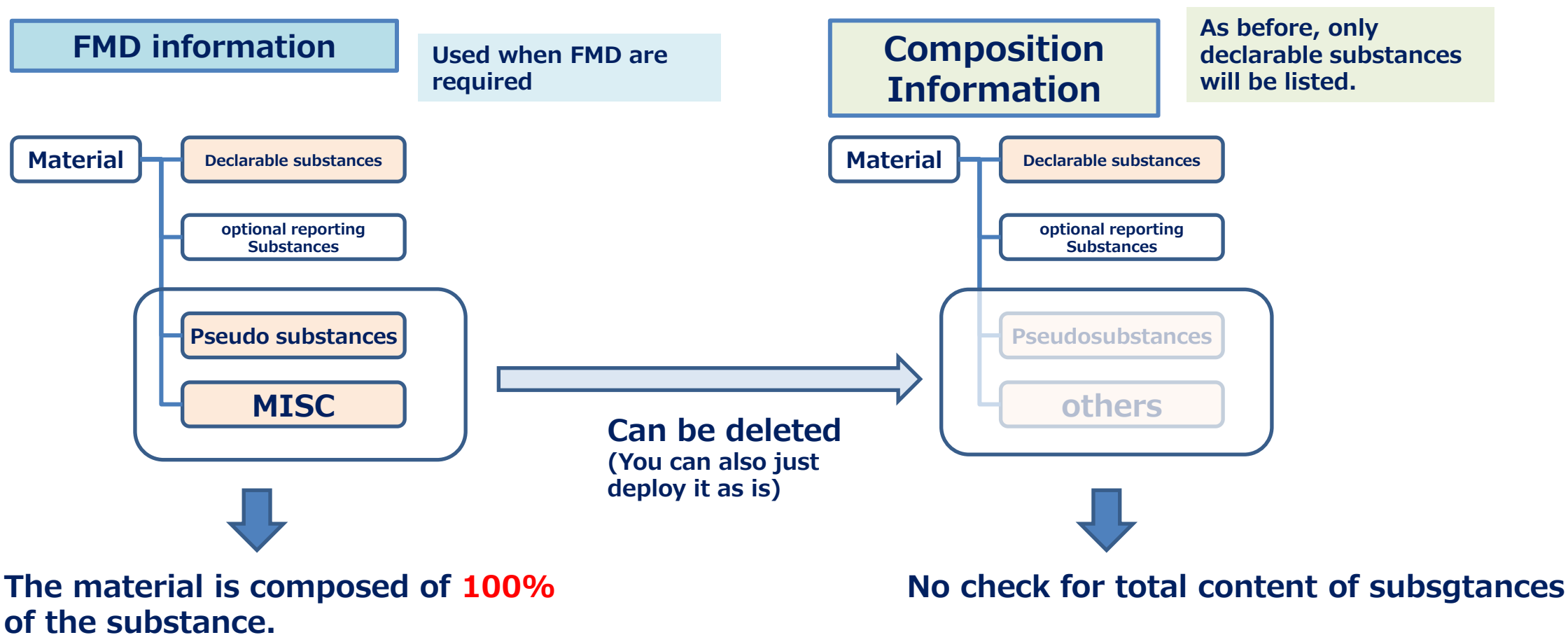
Note ①: Wildcard: Also called a joker, it does not define a specific substance. For example, it is possible to select "Miscellaneous, not to declare" (MISC). It is prohibited to include GADSL declaration required substances in wildcards or pseudo substances.

Note ②: In chemSHERPA, the content is expressed as the conventional maximum content rate, so we are considering exceeding 100 %. (In IMDS, the content rate is expressed as the minimum-maximum content rate, The calculation rules for getting to 100 % are provided.

Note ③ : chemSHERPA uses different material expressions than IMDS . (Does not apply to IMDS VDA material classification)

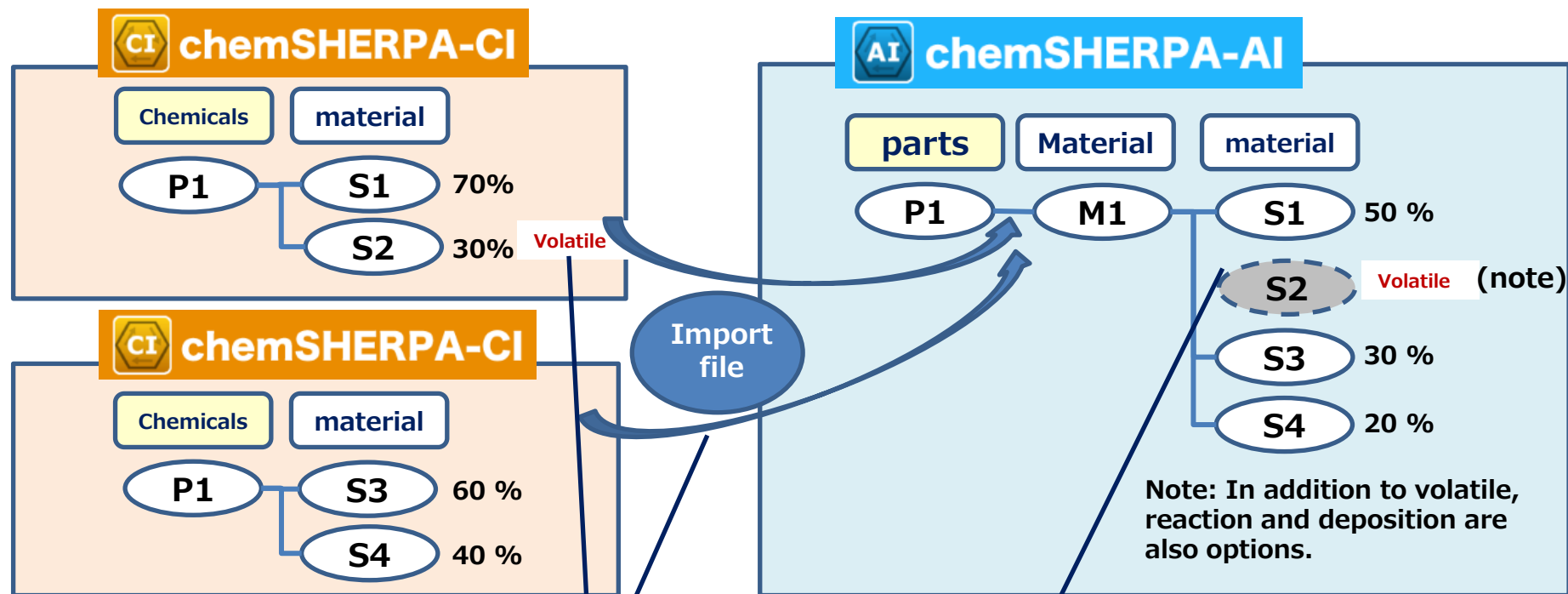
4. Conversion of FMD to Composition information

Pseudo substances and MISC in the FMD, are substances that make up 100 % or more. In the case that they are not necessary in the composition information, a function will be implemented to delete them from the composition information. The composition information will remain as it is in the past, as a means of communicating information on declarable substances.



5. Linkage from CI (chemicals) to AI (articles)

There was no linking function available when changing the composition of CI (chemicals) to the composition of AI (article) because a chemical change is involved. However, to support the transfer of information from CI to AI (linked chemical substance information), we have made it possible to link information under certain conditions.



Marks substances that may volatilize under certain conditions.
(also quoted from substances Master)

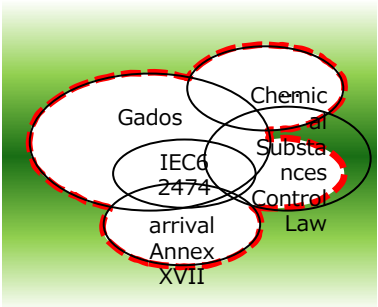
You can quote a CI (.shci) file for a specific material in AI.

For substances with a volatile flag in the CI, the recipient can determine that the substance will volatilize or not at their own responsibility and remove it from the quote.

6. Addition of Candidate of Declarable Substances to the substance list

It is a rule that publicly announced restricted substances cannot be included in the chemSHERPA declarable substances before the enforcement of the regulations. For this reason, investigations of substances before the enforcement were conducted in each company's own format, which caused a huge burden on the supply chain. (TSCA prohibited substances, etc.) From December 2022, it has been implemented as a substance recommended for voluntary reporting, but it is incorporated to the substance list as Candidate of Declarable Substances.

ID	Target laws, regulations, and industry standards
LR01	Japan Chemical Substances Control Law Class 1 specified chemical substances
LR02	Substances prohibited or restricted under the Toxic Substances Control Act (TSCA) (Article 6)
LR03	EU ELV Directive 2000 / 53 / EC
LR04	EU RoHS Directive 2011/65/EU Annex II
LR05	EU POPs Regulation (EC) No 850/2004 Annex I
LR06	EU REACH Regulation (EC) No 1907/2006 Candidate list of substances (substances on the list of candidates for authorisation) and Annex XIV (substances subject to authorisation)
LR07	EU REACH Regulation (EC) No 1907/2006 Annex XVII (Restricted Substances)
LR08	EU Medical Device Regulation (MDR) (EU) No 2017/745 Annex I 10.4.1.(a) and 10.4.1.(b)
LR09	China RoHS (China) Electronic Equipment Restriction and Management of the Use of Hazardous Substances in Electronic Equipment
IC01	Global Automotive Declarable Substance List (GADSL)
IC02	IEC 62474 DB Declarable Substance Groups and Declarable Substances



The total (union) of chemical substances that meet the management standard is called a declarable substance.

What is Candidate of Declarable Substances ?
chemSHERPA management standards that are subject to legal regulations (currently LR01 to LR09), chemical substances in the draft stage are recommended to be subject to voluntary investigation of content information to the extent necessary in the supply chain before they are added to the standards, and are selected by JAMP based on applications from JAMP members .

CD01 Candidate of Declarable Substances

Added specifications for adding to the substance list (as of tool V2R1.00.0, no substances can be added as Candidate of Declarable Substances)

7.Q&A about V2R1

no	Questions about V2R1	Answer
1	Why V2R1 ?	We had planned to comply with the ISO/IEC international standard (V3), but since a delay in its implementation is anticipated, we decided to make the necessary functional enhancements.
2	Will companies that only require the composition information now require to provide Full Material Declaration (FMD)?	It is thought that many downstream electric and electronic companies will not require Full Material Declaration (FMD). In this case, we will state in the "chemSHERPA usage rules," that they will request surveys using the conventional composition information, and request this of JAMP member companies.
3	Can V2R1 be linked to IMDS?	There is insufficient information for complete IMDS integration, so it will be used on the premise that information will be supplemented.
4	What measures will be taken to further popularize chemSHERPA with V2R1?	We plan to conduct a wide range of trials for general users before the release, so that they can actually operate it and understand it. After the release, we will also implement education through various educational courses and seminars, and efforts to ensure proper information communication.

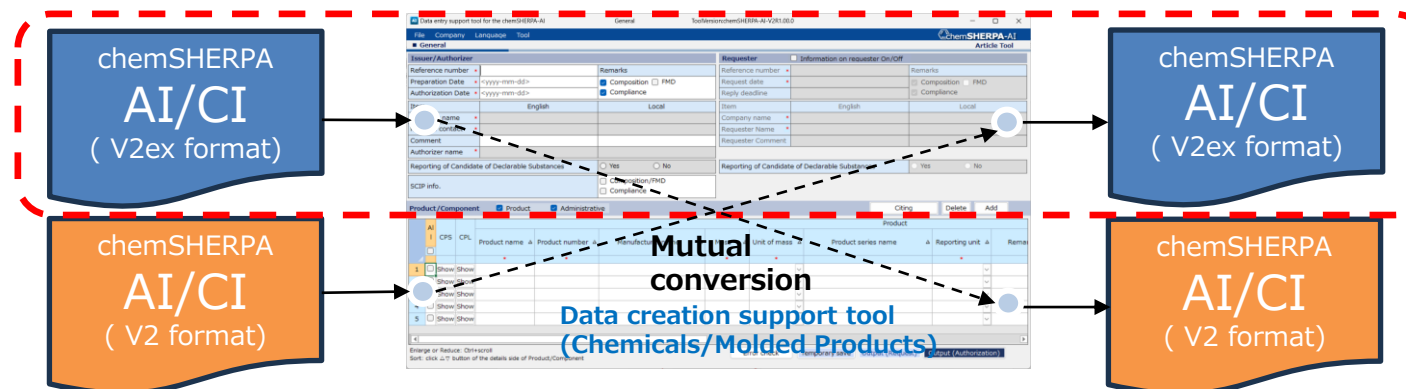
Part 2 Explanation of the Data entry support tool

1. Data format (format version)
2. Multi-layered representation of parts
3. Communication in FMD
4. Definition of Conversion Substances in CI and linking to AI
5. Adding Candidate of Declarable Substances to the substance list

1-1 . About data format (format version) :

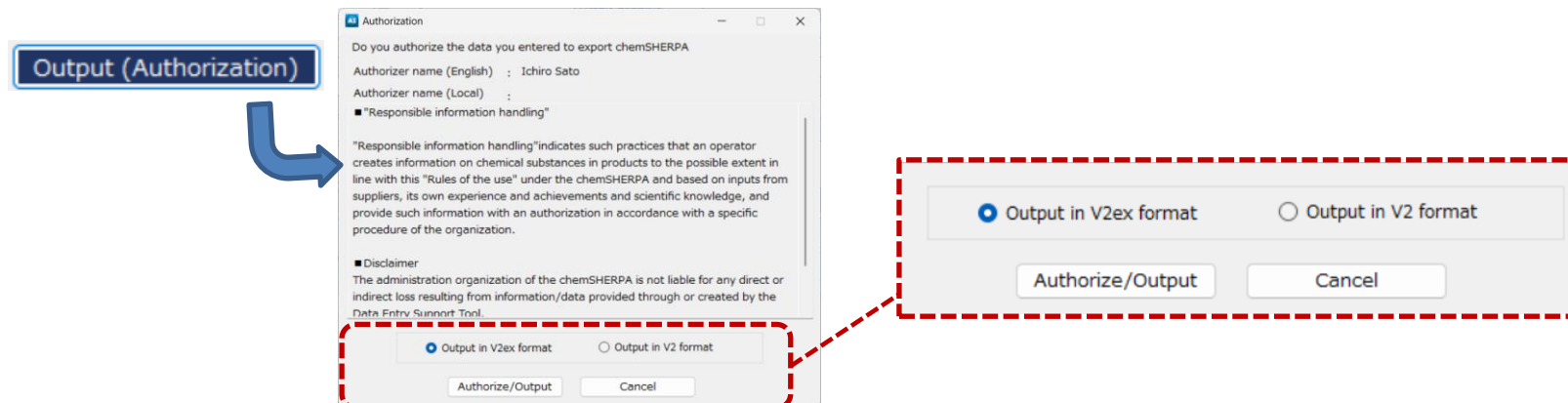
Supported data formats

- The data format handled by chemSHERPA V2R1 will be the V2ex format.
- In order to avoid confusion in the supply chain after the release of the V2ex format, the data entry support tool V2R1 will still allow input and output in the conventional V2 format for the time being.



- V2 format: A chemSHERPA format that complies with IEC62474 ed2 2018 (schema version x8.00) and limits the number of part hierarchies.
- V2ex format: A chemSHERPA format that complies with IEC62474 ed2 2018 (schema version x8.00) and excludes restrictions on the number of part hierarchies

※When loading data, the tool will automatically distinguish between V2ex and V2 formats. When outputting data, select on the screen whether to output in V2ex or V2 format. (The default is V2ex format)



1-2. Data format (format version) :

Identifying and displaying data formats

- The external list version and output format name (V2ex/V2) are included in the default file name so that you can identify which version of the chemSHERPA data file is in. In addition, after loading into the Data Entry Support Tool, the data format is displayed on the screen*. *The actual format will be determined by checking the contents of the data.

[File name naming rules (default)]

Identifier_Issuer Reference Number_External List Version_Output Format_Output Date Hour Minute Second_Extension

ex) article V2ex format: SHAI_9999999999_2.10.00_V2ex_20240701161928.shai

[Check with the Data Entry Support Tool (General Information Screen)]

[chemSHERPA-AI] ■ General information screen

External list version

2.99.00 (SubstanceVer:2.10.00) (AreaVer:2.09.00) schema:V2ex

* Substances (Composition list) * Area (Compliance judgment)

[chemSHERPA-CI] ■ General information screen

External list version

2.99.00 (SubstanceVer:2.10.00) schema:V2ex

* Substances (Composition list)

* Format version: The previous expressions " V1 " and " V2 " will remain unchanged, but a new " V2ex " will be added.

the previous V2 format, which had a "three-level limit," to a data structure that eliminates the level limit.

```

graph LR
    Root["Product Name  
Composit number 1  
Product-sp01"] --- Node2_1["Part Name  
Composit number 2  
module"]
    Root --- Node3_1["Part Name  
Composit number 3  
IC BGA"]
    Node2_1 --- Node3_2["Part Name  
Composit number 3  
Solder Paste01A"]
    Node2_1 --- Node4_1["Part Name  
Composit number 4  
Bond Wire"]
    Node3_1 --- Node4_2["Part Name  
Composit number 4  
Die Attach A"]
    Node3_1 --- Node4_3["Part Name  
Composit number 4  
Mold Compo"]

```

☐ Data entry support tool for the chemSHERPA-AI
 ☐ Composition
 ☐ ToolVersion:chemSHERPA-A2.09.00

File
 ChemSHERPA-AI Article Tool

■ Composition

Product number: product001 Serial number: 2024-06-07 10:14 Subject area: IEC62474
 Product name: product-sp01 Mass of product: 114.4561g Enlarge or Reduce: Ctrl+>/<

Composition
 Update substance information Delete All clear

Level		Component				Material			
Name	Quantity	Name	Quantity	Usage	Classification symbol	Name	Mass	Unit	
Add		Add		Select	Add				
module/IC BGA	1	Bond Wire		1.base mate...	R312	Copper alloys	2.0142	mg	
		Die Attach A...		1.3.attached a...	N543	Others (Cure...	7.1494	mg	
		Mold Compo...		1.1.base mate...	N551	EP (Epoxy re...	304.6948	mg	
		Semiconduct...		1.1.base mate...	P399	Other nonfer...	22.4687	mg	
		Solder Ball		1.5.solder joint	R361	Lead-free sol...	173.8345	mg	
		Substrate		1.1.base mate...	N551	EP (Epoxy re...	70.5056	mg	
module/Solder Paste01A	1	Solder Paste01A		1.1.base mate...	R312	Copper alloys	46.1628	mg	
				6.plating	S002	Nickel plating	4.4528	mg	
				6.plating	S008	Gold plating	0.5789	mg	
module/Solder Paste01A	1	Solder Paste01A		1.5.solder joint	R361	Lead-free sold...	124.2974	mg	
module/Solder Paste01A	1	Solder Paste01A		6.plating	S008	Solder plating	0.5789	mg	
				6.plating	S002	Nickel plating	1	mg	
				1.1.base mate...	P529	Other therm...	3	mg	
				1.1.base mate...	N543	Others (Cure...	3	mg	
module/Solder Paste01A	1	Solder Paste01A		1.1.base mate...	R311	Copper (e.a...	11	mg	

[illegible]

chem**SHERPA** by JAMP

2-2. Multi-layered representation of parts (Exporting V2 format data)

- ① Output of V2 format data: The components are expanded into hierarchical information. If the hierarchical limit is exceeded, the number is adjusted after hollowing out.

※ This is a temporary measure that allows V2 format data to be output if an individual company's system is not yet supported with the V2ex format.

[V2R1]

[V2]

*In V2R1 , the product number / product name from the general information screen is preset as composite number 1 in the first line of the composition information screen , and cannot be modified on the composition information screen.

Level		Component		Usage	Classification symbol	Material		
Name	Quantity	Name	Quantity			Name	Mass	Unit
Add		Add		Select	Add			
1	part2-A/part4-A1-01	2	part5-A1-01-001	1	1.base mate...	R111	highly alloye...	
2		1	part5-A1-01-002	1	2.clad	P511	PE (Polyethyl...	
3	part2-A/part4-A1-02	2	part5-A1-02-001	1	1.base mate...	R111	highly alloye...	
4		1	part5-A1-02-002	1	2.clad	P511	PE (Polyethyl...	
5	part2-A/part4-A2-01	2	part5-A2-01-001	1	1.base mate...	R111	highly alloye...	
6		1	part5-A2-01-002	1	2.clad	P511	PE (Polyethyl...	
7	part2-A/part4-A2-02	2	part5-A2-02-001	1	1.base mate...	R111	highly alloye...	
8		1	part5-A2-02-002	1	2.clad	P511	PE (Polyethyl...	
9	part2-B/part4-B1-01	2	part5-B1-01-001	1	1.base mate...	R111	highly alloye...	
10		1	part5-B1-01-002	1	2.clad	P511	PE (Polyethyl...	

* Tool V2R1 does not have the V2 format representation shown above. This is to explain that the output data structure is in V2 format.

[Caution] When outputting in V2 format, components in the middle level of the composition information may be aggregated to the higher level. In addition, the aggregation may reduce the "level" mass, and the "Content rate in an article" with the "level" mass as the denominator may change (increase). *If the Article flag is set for an end part (or material), there is no effect because it is calculated with the denominator of that part (or material). For details, please refer to "chemSHERPA_Technical_Guide". <https://chemsherpa.net/english/tool#sample>

2-3. Multi-hierarchical representation of parts (Reading V2 format data)

② Read V2 format data: Expands hierarchical information into components and adjusts the number of parts.

[V2] Data entry support tool for the chemSHERPA-AI Composition ToolVersion:chemSHERPA-A2.09.00

File

■ Composition

Product number	plebel01	Finalization date	2024-08-28 11:29
Product name	Product_label01	Mass of product	20g

Composition

Level	Name	Quantity	Component Name	Quantity	Usage	Classification symbol	Name
Add			Add		Select	Add	
1	part2-A/part4-A1-01	2	part5-A1-01-001	1	1.base mate...	R111	highly alloye...
2			part5-A1-01-002	1	2.clad	P511	PE (Polyethyl...
3	part2-A/part4-A1-02	2	part5-A1-02-001	1	1.base mate...	R111	highly alloye...
4			part5-A1-02-002	1	2.clad	P511	PE (Polyethyl...
5	part2-A/part4-A2-01	2	part5-A2-01-001	1	1.base mate...	R111	highly alloye...
6			part5-A2-01-002	1	2.clad	P511	PE (Polyethyl...
7	part2-A/part4-A2-02	2	part5-A2-02-001	1	1.base mate...	R111	highly alloye...
8			part5-A2-02-002	1	2.clad	P511	PE (Polyethyl...
9	part2-B/part4-B1-01	2	part5-B1-01-001	1	1.base mate...	R111	highly alloye...
10			part5-B1-01-002	1	2.clad	P511	PE (Polyethyl...

[V2R1] Data entry support tool for the chemSHERPA-AI Composition ToolVersion:chemSHERPA-AI-V2R1.00.0

File

■ Composition

Product number	plebel01	Finalization date	2024-08-28 11:29
Product name	Product_label01	Mass of product	20g

Composition

Component No.	Component name	Quantity	Usage	Classification symbol	Name	Mass	Unit	Mat
Add component			Select material	Add material				
Delete component			Quote CI	Delete material				
1	plebel01	Product_label01						
2	Parts00001	part2-A						
3	Parts00002	part4-A1-01						
4	Parts00003	part5-A1-01-001	1	1.base mate...	R111	highly alloye...	1	g
5	Parts00004	part5-A1-01-002	1	2.clad	P511	PE (Polyethyl...	1	g
6	Parts00005	part2-A						
7	Parts00006	part4-A1-02						
8	Parts00007	part5-A1-02-001	1	1.base mate...	R111	highly alloye...	1	g
9	Parts00008	part5-A1-02-002	1	2.clad	P511	PE (Polyethyl...	1	g
10	Parts00009	part2-A						
11	Parts00010	part4-A2-01						
12	Parts00011	part5-A2-01-001	1	1.base mate...	R111	highly alloye...	1	g
13	Parts00012	part5-A2-01-002	1	2.clad	P511	PE (Polyethyl...	1	g
14	Parts00013	part2-A						
15	Parts00014	part4-A2-02						
16	Parts00015	part5-A2-02-001	1	1.base mate...	R111	highly alloye...	1	g
17	Parts00016	part5-A2-02-002	1	2.clad	P511	PE (Polyethyl...	1	g
18	Parts00017	part2-B						
19	Parts00018	part4-B1-01						
20	Parts00019	part5-B1-01-001	1	1.base mate...	R111	highly alloye...	1	g
21	Parts00020	part5-B1-01-002	1	2.clad	P511	PE (Polyethyl...	1	g

- When loading V2 format data, component part numbers are automatically assigned. As shown in this figure, the hierarchical name part2-A will be expanded even if it is the same name. It can be changed as necessary.
- * When converting from V2 format to V2R1, the maximum number of configuration levels is 3 (maximum of 4 for configuration numbers).

* When integration, if the source of integration is V2, it will be automatically converted to V2ex (decomposed into hierarchies) and then integrated, so there is no need to convert it in advance.

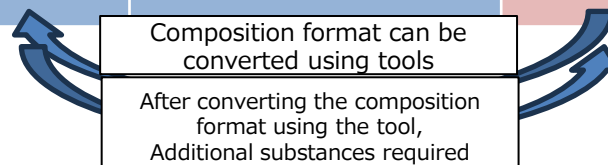
3-1. Communication in FMD

Full Material Declaration (FMD) is the expression where all materials are declared, all substances are declared or declared by anonymous identifying information.

At present, chemSHERPA is intended for communication with the automotive industry and consists of Declarable substances (including Candidates), Voluntary reportable substances, pseudo substances, and MISC . For chemicals, the content rate must be 100% or more per product, and for articles, the content rate must be 100% or more for each material.

	material	Composition Information	Compliance Information	FMD
1	Declarable substances	○	○ IEC 62474 only	○
2	Candidate of Declarable Substances	△Optional	×	△Optional
3	Voluntarily Reportable Substances	△Optional	×	△Optional
4	Pseudo substances *1	×	×	△Optional
5	MISC※2	×	×	△Optional
	Total of reported Substances	No Limit	No limit	100% or more

○: Report required
△: Optional
×: Not applicable



*1 Pseudo-substances:

Refers to chemical substances or groups of chemical substances that do not have a CAS number but can accurately represent the relevant substance. For example, "acrylic resin". Note that these are actual chemical substances and are not wildcards. (From the IMDS user manual). They are cited from the Japan Auto Parts Industries Association's CAS-free substances excluding those that fall under chemSHERPA Declarable substances. In chemSHERPA, pseudo-substances must not include Declarable substances.

*2 What is MISC?

Not to declare / Miscellaneous refers to substances that are not to be declared. MISC should not include Declarable substances. It must be less than 10% per material.

3 -2. Communication in FMD

When intending to communicate Substances in FMD, declare "FMD" as the information to be communicated.

9.1. data preparation and transfer using FMD

- ☐ Requesters can request FMD when there is a special reason, such as use in automotive applications. If there is no special reason agreed upon in B2B, submission in FMD should not be requested.
- ☐ Respondents will submit FMD when requested by product suppliers for special reasons, such as use in automotive applications.

(Quoted from 9.1. of the chemSHERPA Usage Rules)

[chemSHERPA-AI] General information screen

File	Company	Language	Tool
■ General			
Issuer/Authorizer			
Reference number *		Remarks	
Preparation Date *	<yyyy-mm-dd>	☐ Composition ☒ FMD	
Authorization Date *	<yyyy-mm-dd>	☒ Compliance	
Item	English	Local	
Company name *			
Name of contact *			
Comment			
Authorizer name *			
Reporting of Candidate of Declarable Substances		☐ Yes ☐ No	
SCIP info.		☐ Composition/FMD ☐ Compliance	

[chemSHERPA-CI] General information screen

File	Company	Language	Tool
■ General			
Issuer/Authorizer			
Reference number *		Remarks	
Preparation Date *	<yyyy-mm-dd>	☐ Composition ☒ FMD	
Authorization Date *	<yyyy-mm-dd>		
Item	English	Local	
Company name *			
Name of contact *			
Comment			
Authorizer name *			
Reporting of Candidate of Declarable Substances		☐ Yes ☐ No	

3 -3. Communication in FMD

By declaring "FMD" as the information to be communicated, an input check* will be carried out according to the conditions required for FMD.

*In terms of composition information, the content rate of each material, excluding MISC, must be 90% or more, etc.

The screenshot displays the chemSHERPA-AI Article Tool interface. The 'Composition' section is active, showing a table with columns for Component, Material, and Substance. A red box highlights the 'Subject area' dropdown menu, which is set to 'Composition/FMD'. Below this, a table lists components and materials. An 'Error / Warning description view' dialog box is open, showing a list of errors related to the content rate of substances in the material.

Component	Material	Substance	Declarable Substances (including)													
Compos ite No.	Component No.	Component name	Quantity	Usage	Classification symbol	Name	Mass	Unit	code of public standar	Remarks	Substance	CAS No.	content rate per materials	Remarks	Select all	
		Add component		Select material	Add material						Select	Add substance			Applicable	
		Delete component		Quote CI	Delete material							Delete substan				
1	1	WireA-1k1	WireA_1m													
2	2	Parts00001	Wire	1	1.base material	R311	Copper (e.g....	7.5	g			Copper (Cu); Cop...	7440-50-8	99		
3				2	2.clad	P514	PVC (Poly(vi...	0.8	g			Bis(2-ethylhexyl) ...	117-81-7	15		
4	2	Parts00002	Terminal	1	1.base material	R101	Steels/cast s...	2.4997	g			Lead	7439-92-1	0.2		
5				6	6.plating	S008	Gold plating	0.0003	mg							

Error / Warning description view

Error / Warning list

Please correct the "Error". Check the contents of the "Warning" to determine if a correction is necessary.

No.	Type	Name of view	Row	Name of item	Description
1	Error	Composition	2	Usage(Material)	The sum of the Maximum content rate of substances in the material is less than 100%.
2	Error	Composition	3	Usage(Material)	The sum of the Maximum content rate of substances in the material is less than 100%.
3	Error	Composition	4	Usage(Material)	The sum of the Maximum content rate of substances in the material is less than 100%.
4	Error	Composition	5	Usage(Material)	The sum of the Maximum content rate of substances in the material is less than 100%.

*Points to note when declaring "FMD"

- For optional reporting substances other than chemSHERPA Declarable substances, as with "composition", do not select from the substance list, but enter the substance information yourself.
- MISC and automobile-related pseudo-substances are set as substance list data from V2R1, so select them from the list, just like Declarable substances. chemSHERPA pseudo-substances are selected from pseudo-substances used in the automobile-related supply chain (excluding those that fall under chemSHERPA Declarable substances), so please use them in accordance with automobile-related information communication.
- For chemicals, the content rate per product must be 100% or more, and for articles, the content rate per material must be 100% or more. However, Declarable substances must not be included in pseudo substances or MISC.

3 -4. Communication in FMD

For FMD, the substance must be listed at 100% or more for each material.

For optional reporting substances, you do not select from a substance list but enter the substance information yourself. MISC and pseudo-substances can be selected from the substance search screen as shown below.

File ChemSHERPA-AI Article Tool

Composition

Product number WireA-1k1 Finalization date Subject area IEC62474
Product name WireA_1m Mass of product 10.8g Composition/FMD FMD

Composition Update substance information Delete Pseudo

Compos ite No.	Component No.	Component name	Qua ntity	Usage	Classification symbol	Name	Mass	Unit	code of public standar	Remarks	Substance	CAS No.	Maximum content rate per materials(%)	Remarks	Select all	
		Add component		Select material	Add material						Select	Add substance			Applicable	
		Delete component		Quote CI	Delete material							Delete substance				
1	1	WireA-1k1	WireA_1m													
2	2	Parts00001	Wire	1	1.base material	R311	Copper (e.g...	7.5	g		Copper (Cu); Cop...	7440-50-8	99			
3											Misc., not to decl...	W00001	1			☒
4											Bis(2-ethylhexyl) ...	117-81-7	15			☒
5											Plastics PVC	M00688	85			☒
6	2	Parts00002	Terminal	1	1.base material	R101	Steels/cast s...	2.4997	g		Lead	7439-92-1	0.2			☒
7											Steel	12597-69-2	99.8			☒
8											Al...	7440-57-5	100			☒

Substance search

Search misc Partial match Full match
English name CAS No. EC No.

Switch display
☐ Declarable Substances
☒ Pseudo-Substance/Misc

When searching, press the search button, select the substance to be registered, and then press the select button.

CAS	EC No.	NAME
W00001		Misc., not to declare
M05420		Plastics AASMS
M00584		Plastics AB
M00585		Plastics ABK
M06256		Plastics ABMAMOL
M00586		Plastics ABS
M06167		Plastics ABS+PA6
M05411		Plastics ABS+PBT

Substance Name [E] Misc., not to declare
Substance group Name [E]

Substance search

Search PVC Partial match Full match
English name CAS No. EC No.

Switch display
☐ Declarable Substances
☒ Pseudo-Substance/Misc

When searching, press the search button, select the substance to be registered, and then press the select button.

CAS	EC No.	NAME
M00684		Plastics PUR
M05961		Plastics PUR+EVAC
M05261		Plastics PURES
M00685		Plastics PVAC
M00595		Plastics PVAL
M00687		Plastics PVB
M00688		Plastics PVC
M04855		Plastics PVCAC

Substance Name [E] Plastics PVC
Substance group Name [E]

***MISC must be 10% or less per material.**

3 -5. Communication in FMD

When integration, select whether the post-integration treatment will be "FMD" or "composition information."

- You can determine whether the data loaded as the target for integration was created as "FMD" or "Composition Information" by the identification information. If "FMD" and "Composition" data are mixed for the target for integration, if you select "FMD" for the treatment after integration, you will need to add other composition information to make the "Composition" data meet the conditions for "FMD".

■ Integration Article Tool

☒ Administrative ☐ Authorizer ☐ Product
☐ Issuer ☐ Requester

Integration Enlarge or Reduce: Ctrl+scroll Add Delete

	Name of file	Amount used	Reporting unit	Quantity	Subject area	Data entry status			External list version
						FMD	Composition	Compliance	
1	SHAI_20240607110900_product001_001.xml		piece	1	IEC62474		2024-06-07 11:06 Finalize(with SCIP i nfo)	2024-06-07 11:08 Finalize(with SCIP i nfo)	2.99.00
2	SHAI_20240607111025_HIJ4567_001.xml	1	m	1	IEC62474	☐	2024-06-07 11:09 Finalize(with SCIP i nfo)	2024-06-07 11:10 Finalize(with SCIP i nfo)	2.99.00

Return to general

Items for integration ☒ Composition ☒ Compliance Execute integration

Handling of composition after integration ☐ Composition ☒ FMD

4 -1. Definition of Conversion Substances in CI and linking to AI

chemSHERPA-CI (chemical products) allows you to define and communicate Conversion Substances (potential) in the composition information.

The available settings are "volatile," "reaction," and "Deposition."

If there are any specific uses or conditions for the converted material, they can be noted in the "Remarks" field.

[chemSHERPA-CI]

The screenshot displays the 'Composition' tab of the chemSHERPA-CI application. The main window shows a table of substances with columns for Substance name, CAS No., Maximum content rate (%), Conversion chemical, Remarks, and a checkbox for 'Select all'. A red box highlights the 'Conversion chemical' column, which has a 'Select' button. A dialog box titled 'Select Conversion chemical' is open, showing a list of options: 1:Volatile, 2:Reaction, and 3:Deposition. The 'Volatile' option is selected. The dialog box also includes an 'OK' button and a 'Clear' button.

Substance name	CAS No.	Maximum content rate (%)	Conversion chemical	Remarks	Select all
1 Toluene	108-88-3	70	Volatile		☐
2 Zinc oxide; C.I. 77947	1314-13-2	10			☐
3 Acrylonitrile butadiene styrene polymer	9003-56-9	20			☒

Substances for which options can be set

[Volatilization] refers to the property of easily evaporating and becoming a gas in the atmosphere. Set this for substances that are added with the expectation that they will volatilize in the intended use.

[Reaction] refers to a change in which chemical bonds change to produce a substance with different properties. Set this for substances that are added with the intention that they will react with other substances or change properties under specific conditions.

[Deposition] refers to the phenomenon in which a substance in a state other than solid appears as a solid. Set this for substances that are intended to deposit a specific solute as a solid from a solution.

4 -2. Definition of Conversion Substances in CI and linking to AI

chemSHERPA-AI (Articles) allows you to quote data from chemSHERPA-CI (chemical products).

① Select the material cell for which you want to quote CI and press the "Quote CI" button

② When you select an shci file in "Add", its contents will be displayed.

③ Click "Display composition info" button to display the composition information.

④ If the conversion chemicals (potential) are defined in the external list, they will be quoted on the screen together with the CI.*

⑤ Enter the content rate when quoted as an article in AI.

⑥ Click the "Quote" button to add the substance to the composition information.
* Only substances with the "Quote" check box checked will be transcribed.

⑦ CI data will be quoted into the AI composition information.

Composition	
Product number	WireA-1k1
Product name	WireA_1m
Finalization date	
Mass of product	

Component	
Composi te No.	Component No.
Component name	Quantity
1	1 WireA-1k1
2	2 Parts01
3	
4	
5	2 Parts02
6	

Usage	Classification symbol	Name	Mass	Unit	Substance
1. base material	R311	Copper (e.g. ...	7.5	g	Copper (Cu); Cop...
2. clad	P514	PVC (Poly(vi...	0.8	g	Bis(2-ethylhexyl) ...
12. marking	S401	Painted resin	0.02	g	
1. base material	R101	Steels/cast s...	2.4997	g	Lead; Lead powd...
6. plating	S008	Gold plating	0.3	mg	

Name of file	Product name	Content status on declarable substances	External list version	Data entry status	Presence of Conversion chemical
SHCI_20240824141301_H-1A_001.xml	Clear-Coat	1. Content	2,10.00	2024-08-24 14:12Fi...	Exist

Product name	Substance Name	CAS No.	Content rate(%) (CI)	Conversion chemical (CI)	Conversion chemical (External list)	Content rate(%) (Posted to AI)	Remarks	Quote
Clear-Coat	Toluene	108-88-3	70	Volatile	Volatile			☐
Clear-Coat	Zinc oxide; C.I. 77947	1314-13-2	10			33.4		☒
Clear-Coat	Acrylonitrile butadiene styrene polymer	9003-56-9	20			66.6		☒

Material		Substance				
Classification symbol	Name	Mass	Unit	Substance	CAS No.	content rate per materials
R311	Copper (e.g. ...	7.5	g	Copper (Cu); Cop...	7440-50-8	99
P514	PVC (Poly(vi...	0.8	g	Bis(2-ethylhexyl) ...	117-81-7	15
S401	Painted resin	0.02	g	Zinc oxide; C.I. 7...	1314-13-2	33.4
R101	Steels/cast s...	2.4997	g	Acrylonitrile buta...	9003-56-9	66.6
S008	Gold plating	0.3	mg	Lead; Lead powd...	7439-92-1	0.2

* Currently, only "Volatilization" is selected from the options "Volatilization", "Reaction", and "Deposition" for the Conversion Substances (potential) on the substance list.

The selection of volatile substances is based on the following list published in NITE-CHRIP, and does not cover all substances on the substance list.

- Industrial Safety and Health control Law: Substances designated as special organic solvents among those subject to the Special Law.
- Industrial Safety and Health control Law: Substances subject to the Organic Law
- Air Pollution Control Act VOC (Volatile Organic Compounds)

5-1. Adding Candidate of Declarable Substances to the substance list

As the draft candidate substances are incorporated into the substance list as "Candidate of Declarable Substances"*, a new identifier (CDS)* will be added to the composition information screen.

*No "Candidate of Declarable Substances" have been added in Tool V2R1.00.0.

[chemSHERPA-AI]

Relevant standard									Candidate Substances
SVHC		REACH Annex XVII		MDR	China-RoHS		GADSL	IEC62474	CDS
Applicable	Substance Use	Applicable	Substance Use	Applicable	Applicable	Exempted application	Applicable	Applicable	Applicable
							D/P		1
A		1		1			D/P	R	1
									1

[chemSHERPA-CI]

Relevant standard											Candidate Substances
LR01	LR02	LR03	LR04	LR05	LR06	LR07	LR08	LR09	IC01	IC02	CD01
CSCL	TSCA	ELV	EU-RoHS	POPs	SVHC	REACH Annex XVII	MDR	China-RoHS	GADSL	IEC62474	CDS
						1			D		
									D		1

* What is a Candidate of Declarable Substances (CDS)?

CDS refers to a chemical substance selected by JAMP as a chemical substance for which it is recommended to investigate the content information to the extent necessary in the supply chain before the draft chemical substance is added to the standard that is subject to legal regulations among the chemSHERPA management criteria.

Therefore, Candidate of Declarable Substances do not fall under the category of Declarable substances.

5-2. Adding Candidate of Declarable Substances to the substance list

Candidate of Declarable Substances can be searched/narrowed down just like other legal regulations/industry standards.

[chemSHERPA-AI] Substance selection screen

Substance search

Filter substances

Filter

Cancel

LR01 LR05 LR09
LR02 LR06 IC01
LR03 LR07 IC02
LR04 LR08 ☒ CD01

Search

Partial match
Full match

English name

CAS No.

EC No.

Switch display

Declarable Substances
Pseudo-Substance/Misc

When searching, press the search button, select the substance to be registered, and then press the select button.

CAS	EC No.	NAME
SN9001		Substances recommended to declare 1
78-40-0		Triethyl Phosphate
77-90-7		Citric acid, tributyl ester, acetate
103-23-1		Bis(2-ethylhexyl)adipate
1569-69-3		Cyclohexanethiol

CAS

EC No.

Select

Cancel

Substance Name [E]

Substance group Name [E]

LR01[CSCL] LR05[POPs] LR09[China-RoHS]
LR02[TSCA] LR06[SVHC] IC01[GADSL]
LR03[ELV] LR07[REACH Annex XVII] IC02[IEC62474]
LR04[EU-RoHS] LR08[MDR] ☒ CD01[CDS]

[chemSHERPA-CI] Substance selection screen

Substance search

Filter substances

Filter

Cancel

LR01 LR05 LR09
LR02 LR06 IC01
LR03 LR07 IC02
LR04 LR08 ☐ CD01

Search

Partial match
Full match

English name

CAS No.

EC No.

Switch display

Declarable Substances
Pseudo-Substance/Misc

When searching, press the search button, select the substance to be registered, and then press the select button.

CAS	EC No.	NAME
SN9001		Substances recommended to declare 1
78-40-0		Triethyl Phosphate
77-90-7		Citric acid, tributyl ester, acetate
103-23-1		Bis(2-ethylhexyl)adipate
1569-69-3		Cyclohexanethiol

CAS

EC No.

Select

Cancel

Substance Name [E]

Substance group Name [E]

LR01[CSCL] LR05[POPs] LR09[China-RoHS]
LR02[TSCA] LR06[SVHC] IC01[GADSL]
LR03[ELV] LR07[REACH Annex XVII] IC02[IEC62474]
LR04[EU-RoHS] LR08[MDR] ☐ CD01[CDS]

5-3. Adding Candidate of Declarable Substances to the substance list

Reporting on Candidate of Declarable Substances remains voluntary, but a new "declaration" will be added to communicate downstream whether or not the confirmation of the presence of Candidate of Declarable Substances was intentional.

[chemSHERPA-AI] General information screen

File Company Language Tool		
■ General		
Issuer/Authorizer		
Reference number *	samp001	Remarks
Preparation Date *	2024-06-07	☒ Composition ☐ FMD
Authorization Date *	2024-06-07	☒ Compliance
Item	English	Local
Company name *	ASSY CORPORATION	
Name of contact *	Taro Yamada	
Comment		
Authorizer name *	Ichiro Sato	
Reporting of Candidate of Declarable Substances	☒ Yes ☐ No	
SCIP info.	☒ Composition/FMD ☒ Compliance	

[chemSHERPA-CI] General information screen

File Company Language Tool		
■ General		
Issuer/Authorizer		
Reference number *	Adhesive	Remarks
Preparation Date *	2024-06-07	☒ Composition
Authorization Date *	2024-06-07	☐ FMD
Item	English	Local
Company name *	SHERPA CORPORATION	シェルパ株式会社
Name of contact *	Hanako Tanto	担当花子
Comment		
Authorizer name *	Taro Shonin	承認太郎
Reporting of Candidate of Declarable Substances	☐ Yes ☒ No	

- If there are no "Candidate of Declarable Substances" (not included in the substance list), there is no need to select the declaration (No error check will be performed).
- If there are "Candidate of Declarable Substances" (included in the substance list), an error will occur if the declaration is not selected.

