JAMP MSDSplus ver.3.00 Instruction Manual

Based on JAMP MSDSplus ver.3.00

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Contents

Note: JAMP MSDSplus ver.3 is referred to hereinafter as “MSDSplus.”

1. Background and purposes

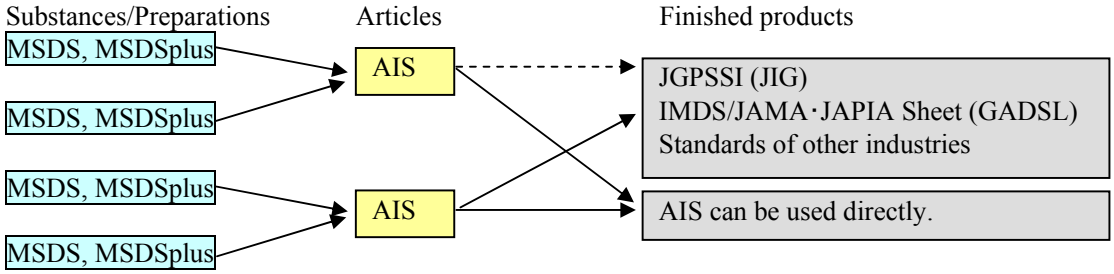
Information on the chemical substances in chemical products (information on chemicals contained in articles) is extremely important in terms of preventing the people involved in the supply chain from having health problems and for protecting the environment.

However, as such information has not necessarily been transferred via an efficient and standardized method, various problems have been encountered throughout the whole supply chain.

Consequently, people from companies involved in the whole supply chain who were interested in this issue gathered together and set up the Joint Article Management Promotion-consortium (JAMP) to work towards the improvement of this issue.

JAMP has recommended that information on the chemical substances in products should be transferred by using the basic information transfer sheet shown below.

- "MSDS" and "MSDSplus" should be used to transfer information for substances and preparation
- Information on the chemical substances contained in articles should be transferred by converting information from MSDS and MSDSplus into the "AIS（Article Information Sheet）"
- Information on the chemical substances contained in finished products should be confirmed by information from "AIS."



The MSDSplus is a sheet prepared by JAMP for the purpose of transferring information on chemical substances in substances/preparations to complement the information provided by MSDS; it is used to enter information such as "names of laws regulating ingredients/constituents contained in products," "presence of declarable substances"," "name of substance," "CAS Number," and "concentration," and transfer such information to downstream users (hereinafter referred to as DSU).

Chemical products are processed by DSU into products such as preparations, articles, and finished products. In doing so, the types or concentrations of the ingredients of a chemical product change according to factors like chemical reaction, condensation, and dilution. As the content and extent of the change largely vary with processing conditions of downstream companies and such conditions vary with each downstream company, it is not possible for a chemical substance or preparation manufacturer that is an upstream company to precisely predict things such as the concentration of a chemical ingredient(substance) after it is processed into an article.

Consequently, it is necessary for each chemical substance or preparation manufacturer to include in its MSDS and MSDSplus the information on an ingredient at the point of time such ingredient becomes its own product and provide it to DSU, which, based on the MSDS and MSDSplus, will need to verify the types and concentrations of the chemical substances contained in their own molded products by taking into account the processing conditions.

As companies that concurrently handle chemical substances, preparations, articles, and finished products exist alongside with each other in the actual supply chain, the guideline for preparing the AIS has been devised in such a way that the MSDS, MSDSplus, and AIS can be effectively used by categorizing these types of industries into seven categories.

In order to enhance the reliability of the transmission of information on the chemical substances contained in articles by means of the MSDSplus and AIS, it is required that each company conduct proper management of the chemical substances in articles. For that purpose, JAMP prepared the guidelines.

Regarding the MSDSplus, improvement was made by reflecting the verification results by the members in 2008, and it was released to public.

However, in response to the release of first candidate list for Substance of Very High Concern(SVHC) by the European Chemicals Agency(ECHA) in October 2008, JAMP releases the MSDSplus ver.3 which includes this SVHC, the PBT list in ESIS, JIG and GADSL as target substances under management and substance to be notified on AIS.

We hope this will facilitate smooth information transfer in a whole supply chain.

2. Guideline for preparation

The MSDSplus was developed according to the following guidelines.

(1) Stepwise improvement and application

In order to improve problems through actual use, aiming towards practical application in an early stage, the MSDSplus should be started on the basis of a minimal model and improvements should be progressively made by focusing attention on the items that really constitute a problem for supply chain with the agreement of the JAMP members.

(2) Preparation and management of substances under management

"Ingredients falling under substances whose information on the chemical substances in articles should be transferred," which is equal to "target substances under management," are the substances for which management should be conducted for the purpose of preventing human beings from having health problems and protecting the environment. It will be examined how best to establish a mechanism whereby substances which are based on scientific evidence and on which the parties concerned in the whole supply chain can reach a consensus are selected and revisions are made on a regular basis.

As a candidate for target substances under management, the substances regulated by each country's laws and acts are important. Among these, there are many with reliable scientific evidences, which are statutory and should be complied with as an obligation; it is therefore necessary to register them on the list with priority.

Among the target substances under management determined by various industrial organizations, there are also many that have a high necessity for practical purposes such as the promotion of recycling—it is considered them as candidates for target substances under management. However, regarding the substances which still remain many issues such as "if there are problems regarding scientific evidence" and "sometimes there occur serious problems to industries concerned such as the possibility of hindering marketing activities," it is considered necessary to decide which of them should be determined as target substances under management within the scope agreed upon after negotiations with companies in the whole supply chain within the JAMP Target Substances under Management Technical Committee.

In this MSDSplus Ver.3, regarding treating the target substances under management (Table 2-1) the Target Substances under Management Technical Committee agreed in Japan and abroad, it was decided that (Table 2-1) should be treated split between required criteria and optional criteria.

Table 2-1 Target Substances under Management (ver.2.0)

The target substances under management prescribed by the following laws and regulations are determined as target substances under management:

Criteria required to report

Code	Applicable regulatory laws, regulations etc.	Revised version
JP01	Chemical Substances Control Law (Class I Specified Chemical Substances)	Oct. 31, 2007
JP02	Industrial Safety and Health Law (substances prohibited to be manufactured)	Sept. 7, 2007
JP03	Poisonous and Deleterious Substance Control Law (specified poisonous substances)	Aug. 15, 2007

EU01	Restriction of Hazardous Substances Directive	2002/95/EC
EU02	End of Life Vehicles Directive	2000/53/EC
EU03	67/548/EEC（Appendix I, CMR－Cat. 1 and 2）	2008/58/EC
EU04	76/769/EEC（67/548/EEC Appendix I, with CMR－Cat. 1 and 2 excluded）	2007/51/EC
EU05	REACH SVHC to be included on the candidate list	Oct. 28, 2008

Note 1: Addition or deletion in the future is possible.

Criteria to report optionally

Code	Applicable regulatory laws, regulations etc.	Revised version
OT01	ESIS PBT [Fulfilled]	Oct. 28, 2008
1A01	GADSL	2008 GADSL Ver.2.0
1A02	JIG [JIG･A substances]	JIG･101A 2007

Note 2: Subject to addition or deletion in the future.

JP01, JP02, and JP03 are substances that are, in principle, prohibited to be manufactured in or imported to Japan. Originally it was not necessary to have them specified as target substances under management by the applicable regulatory laws, etc., but there is the possibility that they may come into being in a large quantity as byproducts, such as by getting mixed in with overseas raw materials that are not regulated by laws. As the impact could be very large in such a case, they were adopted by suppliers in the sense that these substances should be confirmed in volunteer management.

EU01 and EU02 are the council directives that were recently enforced regarding electric and electronic machinery and cars.

EU03 is the existing EU council directive. It covers a lot of substances that will be included in Appendix XIV of the existing REACH in the near future and are highly likely to become candidates for substances to be regulated as authorized target substances (SVHC).

EU04 is the existing EU council directive cited as the restricted substances included in Appendix XVII of the existing REACH (substances whose use applications and use conditions are under restriction).

EU05 is the SVHC which is according to criteria 57 in REACH regulation, criteria 59 specified procedure, and the European Chemicals Agency(ECHA) decided and release after gathering opinions of the member countries.

ESIS PBT set as OT01 is released as PBT substance by ECB. And it is highly possible that the substances from this are contained REACH annex ⅩⅣand are regulated as SVHC.

Form EU03 to EU05 and OT01 were selected for the purpose of making preparations for responding to REACH.

IA01 and IA02 are the industry criteria in the automotive industry and related to green procurement in the electrical and electronics industry. For this reason they are selected considering smooth information transfer in a whole supply chain.

If the substance corresponding to these target substances under management, it should be treated

separately according to the distinction between required to report and optional to report.

The substances “required to report” are those required by public regulations.

The substance optional to report (recommended to report) are not legally required but included in the substance list released by public institutions or the criteria used generally in the industry. If there is information, the substance selected from the criteria would be useful for the related industry.

For details, please refer to the “JAMP list of target substances under management instruction manual ”.

About formulation and revision, the document as of the end of October in 2008 is described as a default.

However regulations will be modified and revised, the substance will be added and deleted, and condition will be changed.

The MSDSplus should be promptly revised after reviewing the target criteria under management and the target substances under management by the Target Substances under Management Technical Committee . However, this update may not be immediate, thus, in the case where an issuer of MSDSplus replies with updated condition, please show relevant revision of regulations and laws.

Table 2-1 shows the target substances under management for the MSDSplus. When more target substances under management are to be added from the viewpoint of providing information to AIS, responding to the revision of REACH or additional important laws and regulations in the U.S. as well as other Asian countries, the table is scheduled to be revised through negotiations with the whole supply chain in the future.

(3) Criterion for entering information on the chemical substances in products

If there is information that among the substances that form a product, those which fall under target substances under management were contained in the product (“added intentionally” or “already known to be contained through a certain method”), “Yes” is to be entered, and if there is no such information, “No” is to be entered.

In the case of “Yes,” the name of the substance, CAS No., and the concentration of the target substance under management should be entered.

Companies that provide the MSDSplus should voluntarily enter with good intentions the information on whether or not target substances under management were contained regarding the “ingredients other than those intentionally added” after they take account of factors such as downstream companies, manufacturing methods, the possibility of containing, and the deadline for transferring information.

“Already known to be contained through a certain method” means that the substances are clearly known to be contained, such as “We have received information from the raw material manufacturer that the substances are contained” and “We have confirmed via a certain method that the substances are contained.” Unclear ingredients are excluded, as it is not clear whether or not they are contained.

Regarding the concentration limit for reporting (hereinafter referred to as the “threshold value”), as it is difficult to regulate in a unified manner based on many conditions to be considered such as the hazard of an ingredient, the comparison to a natural object, and the permissible concentration which varies with the use, for the time being the following are used as basic principles:

① If the threshold value is designated by any regulatory law, follow that value.
② Follow common practice in the industry or widely accepted common sense.
③ Regarding the obtained information on the containing of a substance, follow the threshold value

that the MSDSplus provider voluntarily determined after taking account of factors such as the degree of hazard of a regulated substance, the comparison with the natural background concentration, the use by a customer that has easily been known, and the concentration of a similar substance determined by the regulatory laws.

Reference: Currently, the obligation of notification prescribed in REACH for substances of very high concern applies to the case where the concentration is 0.1wt%.

(4) Scope of information disclosure

JAMP hopes that information can be provided when target substances under management "were intentionally added" to the product or "are known to have been incorporated via a certain method," but it does not regard it as compulsory to determine unclear ingredients in a detailed way to make everything clear.

Therefore, for receivers of information, in order to smoothly and promptly prepare the MSDSplus and AIS for their own products by collecting information from many upstream companies, it is recommended that they prepare the MSDSplus based on the information obtained at that point of time and transmit the information as soon as possible.

However, if the information requires updating, e.g., the information on unclear substances was made known later, please prepare a revised MSDSplus and transmit that information as soon as possible.

In addition, if new information is scheduled to be transferred, please enter that effect in the remarks column in advance.

(5) Determination on whether or not a substance is in the scope of target substances under management

To determine whether or not an ingredient in one's own product falls under the category of "target substances under management" specified by the laws and regulations that serve as a base for those target substances under management or by the standards agreed upon among the industry (hereinafter referred to as "target management standards"), each company should determine this by comparing the ingredient in its own product to the target management standards.

As mentioned above, there is a possibility that substances that did not fall under the substances regulated by the laws and regulations in the stage when the MSDSplus was prepared may become such substances in the stage when they become products of downstream companies because chemical and physical changes take place when chemical products are used by downstream companies and there are diversified uses for these products.

Consequently, in the stage of preparing the MSDS, the information on the condition of containing should be transferred as "Yes" depending on whether they were entered as substances regulated by the target management standards.

To that end, downstream companies should determine whether or not they actually follow the regulations when manufacturing their products.

The target management standards are put on the JAMP website.

(6) Supporting tool for preparing MSDSplus

For confirmation of the above "determination on whether or not a substance falls under target substances under management" and "target management standards," a great deal of knowledge and many man-hours will actually be needed, because there exist many target substances under management.

As a result of verifying the MSDSplus Ver.1, companies have frequently requested that a supporting tool to facilitate the preparation should be provided. Therefore, JAMP provides a program to support the operation of "determination on whether or not a substance falls under target substances under

management" (the supporting tool for MSDSplus preparation).

If the supporting tool for MSDSplus preparation is used, it will be comparatively easier to determine whether or not a substance with a CAS No. falls under target substances under management. However, substances without a CAS No. should be determined by an individual. In addition, the final decision should be made by the person in charge in a comprehensive way.

Among target substances under management, there are some that have no CAS No. and some whose CAS No. cannot be precisely specified because they are indicated by group of substances. Consequently, there are limits to the preparation of a program to support the correct determination of whether or not a substance falls under "target substances under management".

When using the supporting tool, please note that a decision by an individual is needed for things that the supporting tool fails to cover. Before useing the supporting tool, please thoroughly understand its instructions for use.

3. Obligation to use and obligation to provide

Reply with the MSDSplus to requests is not compulsory, but it is highly recommended to use the MSDSplus as much as possible, because it is a standardized sheet based on what has been agreed upon in the whole supply chain.

The MSDSplus is provided when downstream companies have asked for the provision of information. Of course, suppliers are recommended to provide the MSDSplus even if not asked to do so by downstream companies.

When companies are requested by their customers to report target substances under management in products according to those customers' own standards, we hope that they can give an account of the activities and the report standard provided by JAMP in its homepage and report to their customers by using the MSDSplus and AIS.

4. Restriction on the more stringent standards

The objective of the MSDSplus is to overcome the impediment to the transmission of information caused by the inundation of standards of various companies in the past. Consequently, unless permitted by the MSDS, one should pay attention to the following points and under any circumstances should not change the MSDSplus format on its own nor change the condition of entry:

1) Do not change the MSDSplus format without permission.
2) Do not set one's own conditions in the condition of entry in the MSDSplus, such as the requirement to enter the concentration based on the analysis.
3) Do not add, change, or delete target substances under management of the MSDSplus without permission.

Of course, there is no restriction on providing and receiving information other than the items beyond the scope of MSDSplus, but in that case, please do not use MSDSplus, e.g., by attaching another document.

Also, when it is considered necessary to add standards that should be attached to the MSDSplus or to delete them, please convey that to JAMP for its consideration.

5. Concurrent use with MSDS

Information on chemical products such as hazards and measures to prevent accidents is transferred through the MSDS. The MSDSplus transmits information by supplementing what the MSDS lacks. Therefore, in principle, the MSDS and the MSDSplus should be used together to transmit information.

When the content of the MSDSplus is included in the MSDS, it is also possible to transmit information

only through the MSDS, but actions practically made by downstream companies are to be considered, e.g., transmit that the information to the supply chain by filling it in the remarks column of the MSDSplus or item 16 of the MSDS.

6. Revision number of MSDSplus

When issuing MSDSplus it should be confirmed which version of the "criteria for preparing MSDSPlus" was used at the time it was prepared since the criteria is progressively updated by JAMP.

For this purpose, the revision number of an MSDSplus is to be shown in the following way.

When showed as JAMP MSDSplus Ver.X.○△, JAMP MSDSplus means a revised version as follows.

X: The number gradually becomes larger when the format, content, and method of description have been fundamentally changed.
○: The number gradually becomes larger when revisions have been made along with the changes in the target management standards.
△: The number gradually becomes larger when minor revisions (such as the correction of misprints) other than the above-mentioned ones have been made.

7. Outline of the process to prepare MSDSplus

For details, please refer to each item of this manual.

1. It is necessary to transmit information on target substances for management. (such as that published by the company itself and as a response to customer demand)

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2. Select the means for transferring information.
   - ① **Use MSDSplus if the product is a chemical product or mixture but not an article.**
   - ② **Use AIS if the product is an article.**
   - ③ If a customer requires that investigation be conducted according to its own standard, ask the customer for permission to comply with the MSDSplus or AIS.

→ In case of ②: Preparation of AIS (Refer to the AIS Manual to be published later.)

↓ In case of ①

3. Make MSDSplus ready for use.
The following can be downloaded from JAMP's website:
   - ① MSDSplus format
   - ② MSDSplus manual
   - ③ Guide for preparing the MSDSplus
   - ④ JAMP list of target substances under management
   - ⑤ Supporting system for MSDSplus preparation

↓

4. Confirm the ingredients of one's own products.
The following should be confirmed regarding the constituent ingredients (intended constituent ingredients) of one's own products:
   - ① Name of ingredient
   - ② Concentration
   - ③ CAS No.

↓

5. Confirm the following ① and ②.
   - ① **Confirm whether or not each ingredient of one's own product is identical with that showed in the list of the target substances under management.**
   - ② **Based on the information from raw material manufacturers and inside the company, confirm whether or not ingredients other than in ① are identical to those showed in the JAMP list of target substances under management.**

Note: You may use the supporting system for preparation in a supplementary way.

→ ← Use the supporting system for preparation to determine whether or not a substance falls under the list (Attention should be paid to the limit of the said tool, such as the failure to search for substances without CAS Nos. **The final confirmation should be made by the person who prepared the MSDSplus.).**

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6. Confirm under which of the following the result in 5. falls:
   - ① None of the ingredients fall under the judgment standard on the ingredients contained in products.
   - ② Some of the ingredients fall under the judgment standard on the ingredients contained in products.

→ In case of ①: **If none of the ingredients fall under the judgment standard, make a notification by entering the column of "Information on target substances under management in products" of the MSDSplus as "This product contains no target substances under management as listed in the following target management standards."**

↓ In case of ②

7. If such ingredients are contained:
   - ① The column of "Information on target substances under management in products" of the MSDSplus should be entered as "This product contains the target substances under management as listed in the following target management standards."
   - ② Next, make a notification by entering into the "Column of target substances under management" the following information on ingredients that fall under the judgment standard on ingredients contained in the products: name of ingredient, CAS No., concentration, and name of applicable regulatory standard and name of its revised version.

Note:No need for entering substances except for target substances under management.

End