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**UN/CEFACT Forum
International Trade and Business Processes Permanent Group
(TBG Group)**

**UN/CEFACT Business Requirement Specification
Material Safety Data Sheet Business Requirement Specification**

Version: 1.0
Revision: R.05A

This document is submitted by the UN/CEFACT Forum Management Group, through the Bureau, **for approval** by the UN/CEFACT Plenary in an intersessional process.

The objective of this business process specification is to specify efficient collection, storage and distribution of the Material Safety Data Sheet (MSDS) data, and thus to protect the safety and health of employees by making those data readily available. Owing to its large size, the full text of the specification cannot be issued as a UN/CEFACT Plenary document. It can be downloaded from the UN/CEFACT website at www.unece.org/cefact

Business Domain: Materials Management
Business Process: Environmental Safety and Health
Document Identification: CEFACT/Forum/2005/TBG/BS005
Title: Material Safety Data Sheet (MSDS) Information

The UN/CEFACT International Trade and Business Process Group: TBG 1 is working in coordination with TBG 3, TBG 4 and TBG 13. Also, TBG 1 will liaise with the United Nations Sub-Committee of Experts on the “Globally Harmonized System of Classification and Labelling of Chemicals (GHS)” Group to coordinate requirements.

Executive Summary

1. The US Government directs that information describing hazardous material (HAZMAT) be widely available to employees who may come in contact with it. The Occupational Safety and Health Administration (OSHA) Hazard Communication (HAZCOM) Standard promulgates the policy and procedures to distribute that information. HAZMAT manufacturers and vendors develop and communicate data describing their products through Material Safety Data Sheets (MSDS) known elsewhere in the world as "Safety Data Sheets (SDS). To help manage MSDS data, the Defense Logistics Agency (DLA) developed a centralized data base repository called the Hazardous Material Information Resource System (HMIRS).

2. The MSDS plays a critical role in purchasing of HAZMAT, in particular for the US Government. Before a purchase can be completed for anything identified as HAZMAT in the United States, a MSDS must be in the HMIRS system.

3. The American National Standards Institute (ANSI) publishes a general MSDS format containing sixteen sections and approximately 350 data elements. The MSDS contains information about the known or possible health and safety effects of exposure to hazardous material. They are also the source document of chemical-specific data for compliance with reporting requirements under two US Government acts. The MSDS may contain the following Hazardous Material information:

- personal protections,
- emergency response,
- proper procedures for shipment and storage,
- pollution prevention,
- release, emission,
- waste generation management,
- regulatory reporting requirements.

4. Currently manufacturers and vendors submit MSDS information via different media and in different formats (i.e. by fax, email, JPEG, PDF, etc)

5. The objective of this business process is to efficiently collect, store and distribute MSDS data, and thus protect the safety and health of employees by making those data readily available.

6. HMIRS is a repository of MSDS information that plays a critical role in the procurement of hazardous material. MSDS information must be made visible to the end consumer prior to a purchase order being completed. If this information is not available, the procurement cannot be completed. Not only must MSDS information be made available to the end consumer, certain data are considered mandatory for the US Government. Once a vendor submits an MSDS, the procurement officer checks to make sure all the required data is provided. The quality of the data is not checked at this time but only that mandatory data fields are filled in. For tracking purposes, each procurement is tied back to a MSDS document. MSDS information becomes a vital part of the procurement process for the information, as well as a way to control backlog and hardcopy documentation.

7. To begin the hazardous material procurement process, an "apparent successful offer" is selected. Then a reviewer/procurement officer examines the procurement request for hazardous material. The reviewer/procurement officer queries HMIRS to determine if a current MSDS with the mandatory data resides in HMIRS. If the MSDS does exist in HMIRS, the reviewer/procurement officer is done and the purchase request is processed. An important goal of the purchase officer is to identify the possibility of using a less hazardous alternative to the requested HAZMAT material. The MSDS weighs heavily in this search because it provides valuable information regarding the product's hazards. Activities involved in shipping, handling, using or disposing of hazardous material require query ready, on-line access to the HMIRS. Often a set of value added attributes is added to the document to enhance the data.

8. Because the MSDS are received in a variety of different formats, and thus are difficult to input, process, store and distribute to users and other systems, one goal of this project is the standardization of the MSDS collection media.

9. Since the United Nations have recently adopted the “Globally Harmonized System of Classification and Labelling of Chemicals (GHS) which contains, in its Annex 4, a recommended format for Safety Data Sheets (SDS)¹, it is proposed that the standardization be based on the United Nations format and terminology.

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¹ ST/SG/AC.10/30/Rev.1, United Nations publication sales number E.05.II.E.13 (also available on the UNECE website at http://www.unece.org/trans/danger/publi/ghs/ghs_rev01/01files_e.html)

² The full text of the specification can be downloaded from the UN/CEFACT website at www.unece.org/cefact