

SEMI C61-0707 (Withdrawn 0114)

SPECIFICATION FOR BAR-CODE CONTAINER IDENTIFICATION

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NOTICE: This Document was balloted and approved for withdrawal in 2013.

1 Purpose

1.1 Companies, when dealing with chemical materials supplied in containers, need to control the correct use of these containers and need to verify that the materials they contain are fit for use. To that purpose, the containers need to sufficiently identify the material they contain. To allow automation of these control and verification tasks, the container's identification data needs to be computer readable.

1.2 Various semiconductor producers, as well as their suppliers, have to this purpose defined their own identification standard. This leads to extra complexity on the suppliers' side, and requires customers each time to negotiate the use of their own standard with each of the suppliers.

1.3 This SEMI Specification for a Bar-Code Container Identification intends to offer a clear and ready-to-use solution by standardizing the contents and layout of a bar-coded container identification.

1.4 Customers not yet using bar-code support in this context, or customers relying on supplier specific bar-coded information, can now expect that all suppliers use the same approach. This simplifies the customer's software systems and avoids being confronted with supplier specific changes.

1.5 Customers that already have agreements with some suppliers on the use of a customer specific label can now expect that all products of all their suppliers and all products of new suppliers show the standard information, avoiding the need for additional one-to-one negotiations and avoiding implementation lead times on the supplier side.

2 Scope

2.1 The bar-coded identification allows suppliers and customers to automate control and verification processes in their production and warehousing/storage areas. Typical control and verification tasks that are supported by the Specification:

- registration of volumes consumed
- verifying remaining shelf life
- recording incoming/outgoing storage quantities
- verifying correct tool connectivity

2.2 The Specification is used to identify primary and secondary packages of packaged commercial materials, and primary packages (e.g., isotainer) of commercial bulk materials.

2.3 Small primary packages might not have enough surface space to allow a correct application of bar-codes. In those instances, suppliers are encouraged to look for labeling solutions that would allow the application of this SEMI Specification.

NOTICE: SEMI Standards and Safety Guidelines do not purport to address all safety issues associated with their use. It is the responsibility of the users of the Documents to establish appropriate safety and health practices, and determine the applicability of regulatory or other limitations prior to use.

3 Referenced Standards and Documents

3.1 None.

4 Terminology

4.1 Bar-code Technology Related Definitions

4.1.1 *1-dimensional bar-code* — array of parallel rectangular bars and spaces that together represent data elements in a particular symbology.

4.1.2 *application identifier* — prefix, used in the GS1 EAN/UCC 128 symbology that uniquely identifies the content and the format of the data field that follows the identifier (e.g., Application identifier ‘11’ indicates that the next 6 numerical positions are the manufacturing date in the form YYMMDD).

4.1.3 *bar-code symbology* — specific technique to represent information by a bar-code. Examples: Code 39, Code 128.

4.1.4 *Code 39 symbology* — a discrete, variable length, self-checking (no check digit required) symbology. Supports alpha-numeric data elements.

4.1.5 *GS1 EAN/UCC128 symbology* — standard developed by GS1 (<http://www.gs1.com/>), based upon the Code 128 symbology. http://www.gs1.org/productssolutions/barcodes/technical/application_identifiers.html

4.2 Functional Data Element Definitions

4.2.1 *batch number* — code identifying a specific batch of a bulk or packaged material.

4.2.2 *bulk material* — material packaged in a primary package with a varying fill volume or weight. The Material identifier, in this case, does not uniquely define the fill volume or weight.

4.2.3 *commercial material* — bulk or packaged materials being part of the supplier’s standard product portfolio. R&D samples, products under development, or materials in nonstandard packages are excluded from this definition.

4.2.4 *expiration date* — last date the batch is to be used.

4.2.5 *key data element* — data element that uniquely identifies one or more Derivable data elements. Computer applications use key data elements to access master tables that contain the key element’s derivable data. Examples: Material identifier, Supplier identifier, or combinations thereof.

4.2.6 *derivable data elements* — data element that is uniquely determined by a Key data element. Typically, Derivable data elements are stored in a Masterfile, with a Key data element as unique access key. Suppliers are to communicate Key and any relevant Derivable data elements to their customers. Example 1: Supplier name, address: both derived from a Master file using the Supplier identifier. Example 2: Material name, material type: derived from a Master file using the Supplier identifier and Material identifier.

4.2.7 *manufacturing date* — depends on the manufacturing and filling/packaging process and is defined by the supplier.

4.2.8 *material* — liquid or solid chemical of a specific quality. Gases, at this stage of the guideline, are not included.

4.2.9 *material identifier* — for packaged materials, this code identifies the material in a specific packaging configuration (primary and secondary package, fill volume, weight). For bulk materials, this code identifies the material only, with no reference to the fill volume or weight. The code is assigned by the supplier and is unique for the Supplier identifier code. Suppliers need to communicate the Material identifier and any relevant derivable data elements to their customers.

4.2.10 *one way container identification* — code assigned by the supplier to a primary package that will not return to the supplier for re-use. The code is applied to the package at filling/packaging time and is unique within the material’s filling/packaging operation that produced the material batch.

4.2.11 *packaged material* — material packaged in a primary package with a constant fill volume and weight.

4.2.12 *primary package* — package that directly holds the material (e.g., bottle, drum, IBC, canister, isotainer). Plastic bags, commonly used with bottle, drum or IBC packaged materials, are not considered primary packages.

4.2.13 *returnable container identification number* — code assigned by the supplier to a primary package that will return to the supplier for re-use. The code is assigned to the package when the package is initially prepared for use, and stays on the package during its lifetime.