

## Clarification of TDT 1.6 regarding escaping of characters in URI strings

The following string appears within the characterSet attribute of the TDT definition files for the following EPC schemes: SGTIN-198, GIAI-202, GRAI-170 and SGLN-195

[!%-?A-Z\_a-z\x22]

This represents the ASCII characters that are permitted for use within alphanumeric serial numbers or serial references used with GS1 keys, as defined in the GS1 General Specifications.

Appendix A of the Tag Data Standard (TDS 1.6) provides a table listing these characters explicitly, together with their ASCII values and details of those characters which must be escaped when encoded in URI format.

The permitted characters which must be escaped using percentage escape notation in URI format are as follows:

Character	Description		Escaped notation for use in URIs
"	(Quotation mark)	→	%22
%	(Percent)	→	%25
&	(Ampersand)	→	%26
/	(Solidus)	→	%2F
<	(Less-than sign)	→	%3C
>	(Greater-than sign)	→	%3E
?	(Question mark)	→	%3F

This applies for all EPC schemes that support alphanumeric serial numbers or serial references, including SGTIN-198, GIAI-202, GRAI-170, SGLN-195 and ADI-var

In order to make use of the TDT definition files provided with TDT 1.6, implementations of TDT will need to take the following precautions to correctly escape such symbols in URI strings:

### **1) When parsing a URI string received as the inbound representation of an EPC (e.g. pure-identity URI or tag-encoding URI)**

Convert any percentage-escaped characters in the URI string into the corresponding single ASCII characters BEFORE attempting to parse using the regular expression pattern provided by the pattern attribute of a TDT option element.

### **2) When building a URI string for the outbound representation (where either a pure-identity URI or tag-encoding URI is required)**

Convert any of the characters in the table above into the corresponding percentage-escaped sequences.