

Table 6–1 Built-in Data Type Summary

Code	Data Type	Description
1	VARCHAR2(size [BYTE CHAR])	Variable-length character string having maximum length <i>size</i> bytes or characters. Maximum <i>size</i> is 4000 bytes or characters, and minimum is 1 byte or 1 character. You must specify <i>size</i> for VARCHAR2. BYTE indicates that the column will have byte length semantics. CHAR indicates that the column will have character semantics.
1	NVARCHAR2(size)	Variable-length Unicode character string having maximum length <i>size</i> characters. The number of bytes can be up to two times <i>size</i> for AL16UTF16 encoding and three times <i>size</i> for UTF8 encoding. Maximum <i>size</i> is determined by the national character set definition, with an upper limit of 4000 bytes. You must specify <i>size</i> for NVARCHAR2.
2	NUMBER [(p [, s])]	Number having precision <i>p</i> and scale <i>s</i> . The precision <i>p</i> can range from 1 to 38. The scale <i>s</i> can range from -84 to 127. Both precision and scale are in decimal digits. A NUMBER value requires from 1 to 22 bytes.
2	FLOAT [(p)]	A subtype of the NUMBER data type having precision <i>p</i> . A FLOAT value is represented internally as NUMBER. The precision <i>p</i> can range from 1 to 126 binary digits. A FLOAT value requires from 1 to 22 bytes.
8	LONG	Character data of variable length up to 2 gigabytes, or 2 ³¹ -1 bytes. Provided for backward compatibility.
12	DATE	Valid date range from January 1, 4712 BC, to December 31, 9999 AD. The default format is determined explicitly by the NLS_DATE_FORMAT parameter or implicitly by the NLS_TERRITORY parameter. The size is fixed at 7 bytes. This data type contains the datetime fields YEAR, MONTH, DAY, HOUR, MINUTE, and SECOND. It does not have fractional seconds or a time zone.
100	BINARY_FLOAT	32-bit floating point number. This data type requires 4 bytes.
101	BINARY_DOUBLE	64-bit floating point number. This data type requires 8 bytes.
180	TIMESTAMP [(fractional_seconds_precision)]	Year, month, and day values of date, as well as hour, minute, and second values of time, where fractional_seconds_precision is the number of digits in the fractional part of the SECOND datetime field. Accepted values of fractional_seconds_precision are 0 to 9. The default is 6. The default format is determined explicitly by the NLS_TIMESTAMP_FORMAT parameter or implicitly by the NLS_TERRITORY parameter. The size is 7 or 11 bytes, depending on the precision. This data type contains the datetime fields YEAR, MONTH, DAY, HOUR, MINUTE, and SECOND. It contains fractional seconds but does not have a time zone.
181	TIMESTAMP [(fractional_seconds_precision)] WITH TIME ZONE	All values of TIMESTAMP as well as time zone displacement value, where fractional_seconds_precision is the number of digits in the fractional part of the SECOND datetime field. Accepted values are 0 to 9. The default is 6. The default format is determined explicitly by the NLS_TIMESTAMP_FORMAT parameter or implicitly by the NLS_TERRITORY parameter. The size is fixed at 13 bytes. This data type contains the datetime fields YEAR, MONTH, DAY, HOUR, MINUTE, SECOND, TIMEZONE_HOUR, and TIMEZONE_MINUTE. It has fractional seconds and an explicit time zone.

Table 6–1 (Cont.) Built-in Data Type Summary

Code	Data Type	Description
231	TIMESTAMP [(fractional_seconds_precision)] WITH LOCAL TIME ZONE	<p>All values of <code>TIMESTAMP WITH TIME ZONE</code>, with the following exceptions:</p> <ul style="list-style-type: none"> Data is normalized to the database time zone when it is stored in the database. When the data is retrieved, users see the data in the session time zone. <p>The default format is determined explicitly by the <code>NLS_TIMESTAMP_FORMAT</code> parameter or implicitly by the <code>NLS_TERRITORY</code> parameter. The size is 7 or 11 bytes, depending on the precision.</p>
182	INTERVAL YEAR [(year_precision)] TO MONTH	Stores a period of time in years and months, where <code>year_precision</code> is the number of digits in the <code>YEAR</code> datetime field. Accepted values are 0 to 9. The default is 2. The size is fixed at 5 bytes.
183	INTERVAL DAY [(day_precision)] TO SECOND [(fractional_seconds_precision)]	<p>Stores a period of time in days, hours, minutes, and seconds, where</p> <ul style="list-style-type: none"> <code>day_precision</code> is the maximum number of digits in the <code>DAY</code> datetime field. Accepted values are 0 to 9. The default is 2. <code>fractional_seconds_precision</code> is the number of digits in the fractional part of the <code>SECOND</code> field. Accepted values are 0 to 9. The default is 6. <p>The size is fixed at 11 bytes.</p>
23	RAW(size)	Raw binary data of length <code>size</code> bytes. Maximum size is 2000 bytes. You must specify <code>size</code> for a <code>RAW</code> value.
24	LONG RAW	Raw binary data of variable length up to 2 gigabytes.
69	ROWID	Base 64 string representing the unique address of a row in its table. This data type is primarily for values returned by the <code>ROWID</code> pseudocolumn.
208	UROWID [(size)]	Base 64 string representing the logical address of a row of an index-organized table. The optional <code>size</code> is the size of a column of type <code>UROWID</code> . The maximum size and default is 4000 bytes.
96	CHAR [(size [BYTE CHAR])]	<p>Fixed-length character data of length <code>size</code> bytes or characters. Maximum <code>size</code> is 2000 bytes or characters. Default and minimum <code>size</code> is 1 byte.</p> <p><code>BYTE</code> and <code>CHAR</code> have the same semantics as for <code>VARCHAR2</code>.</p>
96	NCHAR[(size)]	Fixed-length character data of length <code>size</code> characters. The number of bytes can be up to two times <code>size</code> for <code>ALL16UTF16</code> encoding and three times <code>size</code> for <code>UTF8</code> encoding. Maximum <code>size</code> is determined by the national character set definition, with an upper limit of 2000 bytes. Default and minimum <code>size</code> is 1 character.
112	CLOB	A character large object containing single-byte or multibyte characters. Both fixed-width and variable-width character sets are supported, both using the database character set. Maximum size is (4 gigabytes - 1) * (database block size).