

# Matisse Data Type Reference

## Matisse Scalar and Media Data Types

C API	C enum	C++	Java	.NET	ODL	SQL	notes
MtBoolean	MT_BOOLEAN	bool	boolean	bool	Boolean	BOOLEAN	TRUE or FALSE
MtByte	MT_BYTE	unsigned char	byte	byte	Byte	BYTE	8-bit signed integer
MtChar	MT_CHAR	char	byte	char	Char	CHAR	single 8-bit character
MtDouble	MT_DOUBLE	double	double	double	Double	DOUBLE	64-bit floating-point
MtFloat	MT_FLOAT	float	float	float	Float	FLOAT	32-bit floating-point
MtInteger	MT_INTEGER	int	int	int	Integer	INT / INTEGER	32-bit signed integer
MtInterval	MT_INTERVAL	matisse::MtInterval	long (millisec)	TimeSpan	Interval	INTERVAL	[+/-]d[[:ys hh:mm:ss[.uuuuuu]] max. 1,491,308 days
MtLong	MT_LONG	MtLong	long	int64	Long	LONG	64-bit signed integer
MtNumeric	MT_NUMERIC	matisse::MtNumeric	java.math.BigDecimal	Decimal	Numeric <sup>1</sup>	NUMERIC <sup>2</sup>	fixed-point; 19 digits max.
MtShort	MT_SHORT	short	short	short	Short	SHORT	16-bit signed integer
MtString	MT_STRING	std::string	String	string	String	VARCHAR / STRING	2GB max.
MtString	MT_STRING	std::string	String	string	String UTF16	NVARCHAR / VARCHAR CHARACTER SET UTF16	UTF16 'aabb..' 2GB max.
MtTimestamp	MT_DATE	matisse::MtTimestamp	java.util.GregorianCalendar	DateTime	Date	DATE	yyyy-mm-dd 0001-01-01 to 8163-12-31
MtTimestamp	MT_TIMESTAMP	matisse::MtTimestamp	java.util.GregorianCalendar	DateTime	Timestamp	TIMESTAMP	yyyy-mm-dd hh:mm:ss.[uuuuuu] 0001-01-01 00:00:00.000000 to 8163-12-31 23:59:59.999999
MtAudio	MT_AUDIO	MtArray<unsigned char>	byte[]	byte[]	MtAudio	AUDIO	streamable; 2GB max.
MtByte*	MT_BYTES	MtArray<unsigned char>	byte[]	byte[]	List<Byte>	BLOB / BYTES	streamable; 2GB max.
MtImage	MT_IMAGE	MtArray<unsigned char>	byte[]	byte[]	MtImage	IMAGE	streamable; 2GB max.
MtText	MT_TEXT	MtArray<unsigned char>	byte[]	string	MtText	CLOB / TEXT	streamable; 2GB max.
MtVideo	MT_VIDEO	MtArray<unsigned char>	byte[]	byte[]	MtVideo	VIDEO	streamable; 2GB max..
NULL	MT_NULL	NULL	null	null	NULL	NULL	

1. See *Matisse ODL Programmer's Guide* for instructions on setting precision and scale.
2. See *Matisse SQL Programmer's Guide* for instructions on setting precision and scale.

# Matisse List Data Types

C API	C enum	C++	Java	.NET	ODL	SQL
MtBoolean*	MT_BOOLEAN_LIST	MtArray<bool>	boolean[]	bool[]	List<Boolean>	LIST(BOOLEAN)
MtByte*	MT_BYTES	MtArray<unsigned char>	byte[]	byte[]	List<Byte>	BLOB / BYTES
MtDouble*	MT_DOUBLE_LIST	MtArray<double>	double[]	double[]	List<Double>	LIST(DOUBLE)
MtFloat*	MT_FLOAT_LIST	MtArray<float>	float[]	float[]	List<Float>	LIST(FLOAT)
MtInteger*	MT_INTEGER_LIST	MtArray<int>	int[]	int[]	List<Integer>	LIST(INTEGER)
MtInterval*	MT_INTERVAL_LIST	MtArray<matisse::MtInterval> <sup>1</sup>	long[]	DateTime[]	List<Interval>	LIST(INTERVAL)
MtLong*	MT_LONG_LIST	MtArray<MtLong>	long[]	int64[]	List<Long>	LIST(LONG)
MtNumeric*	MT_NUMERIC_LIST	MtArray<matisse::MtNumeric> <sup>1</sup>	java.math.BigDecimal[]	Decimal[]	List<Numeric>	LIST(NUMERIC)
MtShort*	MT_SHORT_LIST	MtArray<short>	short[]	short[]	List<Short>	LIST(SHORT)
MtString*	MT_STRING_LIST	MtArray<std::string>	String[]	string[]	List<String>	LIST(STRING)
MtString	MT_STRING	std::string	String	string	List<String UTF16>	LIST(NVARCHAR / VARCHAR CHARACTER SET UTF16)
MtTimestamp*	MT_DATE_LIST	MtArray<matisse::MtTimestamp> <sup>1</sup>	java.util. GregorianCalendar[]	Date[]	List<Date>	LIST(DATE)
MtTimestamp*	MT_TIMESTAMP_LIST	MtArray<matisse::MtTimestamp> <sup>1</sup>	java.util. GregorianCalendar[]	TimeSpan[]	List<Timestamp>	LIST(TIMESTAMP)

1. Requires namespace.