

EMDIS Project

EMDIS Data Dictionary

Last changed: **2016-07-15**

Version **2.67**



Revision History

Version 1.0	1994-03-08	Original draft
Version 1.1	1994-07-05	Minor amendments
Version 1.2	1994-09-23	Corrections to spelling of some field names, and other minor errors
Version 1.3	1994-11-18	Changes to reflect new fields on answer to search request, corrections to typing technique values
Version 1.4	1995-03-07	Additional fields for Marrow Collection request, change to typing resolution values.
Version 1.5	1995-07-26	Changes to some fields, addition of Disease Phase, changes to values of Diagnosis codes.
Version 2.0	1998-04-01	Revised messages (JB)
Version 2.1	1998-07-07	Minor amendments (HP)
Version 2.11	1999-02-26	Final release (JB)
Version 2.12	2000-11-09	Minor corrections (JB)
Version 2.13	2002-06-07	Minor correction (JB)
Version 2.14	2003-08-13	Changes from the Dreieich meeting (HPE)
Version 2.15	2004-03-10	Minor corrections; resulting from the Minneapolis 2003 discussion (JB) <ul style="list-style-type: none"> • DNA fields changed from A8 to A20 • Extended the list of registries for HUB_SND and HUB_RCV to include new EMDIS partners • HLA-C vs. Cw naming convention
Version 2.20	2004-06-11	Included the changes for the EMDIS v3.1 Implementation Package 1 (JB)
Version 2.21	2004-08-03	Minor corrections and updates to v2.2 (JB)
Version 2.30	2005-03-04	Included the changes for the EMDIS v3.2 Implementation Package 2 (JB)
Version 2.31	2005-04-07	Minor corrections to v2.30 for Implementation Package 2 (JB)
Version 2.40	2005-10-24	Included the changes for the EMDIS v3.3 Implementation Package 3 (JB)
Version 2.41	2006-08-17	CD34PC_KG was missing as reported by HPE (JB) A comment about the EMDIS documentation was added to the General section (JB)
Version 2.42	2006-08-24	Included the changes for the EMDIS v3.4 Implementation Package 4 (JB)
Version 2.43	2007-03-13	Minor: Added a footnote that the value "DNA" for PROD1..4 only applies to cords (JB)
Version 2.44	2007-04-02	RES_TYPE added (JB)
Version 2.50	2008-02-19	- Included the changes for the EMDIS v3.5 Implementation Package 5 (JB) - Added a column 'Messages' to reference the messages field codes are used in (JB)
Version 2.51	2009-03-25	- Inserted the new logo on the front page (JB) - Changes for IP6 (JB)
Version 2.52	2009-08-12	- Missing changes for IP6 as reported by HPE (JB)
Version 2.53	2010-02-22	- Introduced appendix to clarify difference between footnotes and notes (JB)
Version 2.54	2010-12-22	- Changes for IP8 (JB) - Per request HPE changed description for phone/fax numbers (JB)
Version 2.55	2011-11-22	- Fixed REQ_TYPE = "ALM" (JB)
Version 2.56	2012-11-19	- Corrected description for P_MATCH_CB - Added RES_REM as a message for field EXPI_DATE (omission) (JB)
Version 2.60	2013-07-11	- Changes for IP9 (JB)
Version 2.61	2013-08-05	- Minor correction: field type for ACCREDITATION corrected from 'A5' to 'B5' (JB)
Version 2.62	2013-09-10	- ALM_RES was missing for the ALM_RES fields (JB)
Version 2.63	2013-09-18	- Corrected the field types for TOTAL_* from 'N' to 'N5'; - Added the omitted PROD4_ATCOL, PROD4_BEFCOL (JB)
Version 2.64	2014-08-26	- Changes for IP10(BS)
Version 2.65	2015-04-14	- EMDISCord data dictionary precision, error corrections and synchronization with EMDISCord DataDictionary 1.3.6 - Formatting changes (YLI, ATI)
Version 2.66	2015-07-01	- Changes for IP11: added new field GRID - Formatting changes (ATI)

- Version 2.67 2016-07-15 - Changes for IP12:
- Added SMP_INFO as relevant message for GRID, REMARK, P_ID, D_ID, REF_CODE
 - Added new fields D_CONTACT_DATE, D_CHECKUP_DATE, D/CB_KIR2DL1, D/CB_KIR2DL2, D/CB_KIR2DL3, D/CB_KIR2DL4, D/CB_KIR2DL5A, D/CB_KIR2DL5B, D/CB_KIR2DS1, D/CB_KIR2DS2, D/CB_KIR2DS3, D/CB_KIR2DS4, D/CB_KIR2DS5, D/CB_KIR2DP1, D/CB_KIR3DL1, D/CB_KIR3DL2, D/CB_KIR3DL3, D/CB_KIR3DS1, D/CB_KIR3DP1, D/CB_KIR_GL, DON_ATTR, DON_POOL, PAT_POOL, D/CB_CCR5, REG_SND, REG_RCV, CB_VIABILITY_CELLS, CB_VIABILITY_METHOD, INFO_TYPE
 - Changed definition of CB_VIABILITY
 - Enlarged D_LABEL_ID to length 19
 - Changes for D_ABO and CB_ABO
 - Corrections regarding fields CB_VOL and CB_VOL_FRZN
 - Minor changes in descriptions of D_ETHN, P_ETHN and CB_ETHN. (ATI)

1 General

- The EMDIS specifications consist of the following documents. When developing an EMDIS implementation all content of the following three documents is relevant and needs to be considered:
 - The Semantics of EMDIS Messages
 - EMDIS Data Dictionary

The latest versions of these documents can be found on the WMDA Collaboration Platform - Confluence Cloud [1] or on the ZKRD EMDIS project website [2].

- The term “donor” in this document should be read as “stem cell donor or cord blood unit”.
- The field type in the data dictionary below determines what kind of data a field can contain. The six kinds of field types are:

A	Alphanumeric
N	Numeric
R	Real number with decimal
F	Numeric, represented in scientific notation
D	Date
B	Binary fixed length string

The maximum length of the field is also specified. As an example, the field type A10 can be used for an alphanumeric field with a maximum length of 10 characters. Several alphanumeric fields have a fixed length and may not be shorter than the number of characters specified. In the data dictionary, these fields will have the comment “fixed length”.

- *Alphanumeric* fields (i.e. strings):
 - Currently only 7-bit ASCII is allowed
 - For patient names we only allow: A..Z, a..z, Blank, ´ (quote), - (dash), . (dot)
 - For address fields we only allow: A..Z, a..z, Blank, ´ (quote), - (dash), Numbers, . (dot), / (slash)
- *Numeric* fields can contain a generic signed integer (i.e. whole numbers).
- *Numeric* fields, represented in *scientific notation* can contain values of the form “d.ddd...Eddd”, where “d” is a character from 0..9. As an example the field value 1.3E6 represents the numeric value 1.3×10^6 or 1.3 million.
- *Real number with decimal* is a number represented by the decimal digits 0 to 9 with a decimal point and one digit after the decimal point.
- *Date* fields always have the format YYYYMMDD. The length of the date fields is always 8 characters.
- *Binary* fixed length strings are strings that contain only 0's and 1's and have a fixed length.
- Highlighted texts in red reflect changes that have been approved during previous meetings, but have not yet been implemented.

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
ACC_DAYS	SMP_REQ	Weekdays acceptable for sample reception	B7	Binary fixed length string for the 7 days in the week. Position 1 corresponds with Monday, position 7 corresponds with Sunday. Default: 1111100 Example: 1110000 means acceptable days for reception are Monday, Tuesday and Wednesday, not acceptable days are Thursday, Friday, Saturday or Sunday.
ACCREDITATION	NEW_ADD	Accreditations obtained	B5	Binary fixed length string, in which each position represents an accreditation status a cord blood bank has obtained. This field is currently only allowed, if the INST_TYPE field in the NEW_ADD message is "CBB". Position 1: NetCord-FACT Position 2: AABB Position 3: <i>to be defined</i> Position 4: <i>to be defined</i> Position 5: <i>to be defined</i>
ACK_DATE	MSG_ACK	Date of acknowledgement	D8	Date format YYYYMMDD
ACK_ID	CBR_REQ, TYP_REQ, SMP_REQ, SMP_ARR, IDM_REQ, RSV_REQ, WOR_REQ, MSG_ACK	Acknowledgement ID	A17	Free form; see note 1 in the appendix
ACTION	ADMIN	Administrative action	A10	"CBU_FULL" = request full inventory
ADDR_1	NEW_ADD	Address Line 1	A40	Free form; see note 1 in the appendix
ADDR_2	NEW_ADD	Address Line 2	A40	Free form; see note 1 in the appendix
ADDR_3	NEW_ADD	Address Line 3	A40	Free form; see note 1 in the appendix
ALTER_DATE1	WOR_REQ	First alternative date for marrow collection / CBU shipment	D8	Date format YYYYMMDD
ALTER_DATE2	WOR_REQ	Second alternative date for marrow collection / CBU shipment	D8	Date format YYYYMMDD
ALTER_REQ_TYPE	WOR_REQ	Workup request type - alternative	A4	PBSC = Request a PBSC collection SCD = Request the workup of a stem cell donor CBU = Request a cord blood unit
ANTI_COAG	WOR_REQ	Type of anticoagulant	A10	ACD, CPD, HEPARIN
ARRV_DATE	SMP_ARR	Date arrival of requested sample	D8	Date format YYYYMMDD
AUTO_DATE	MARR_STAT	Date autologous units	D8	Date format YYYYMMDD
CB_34PC	DONOR_CB, ALM_RES	Collected total number of CD34+ cells	F7	Cells expressed in scientific notation; valid range 0.0E0 to 999.9E6
CB_34PC_FRZN	CBU_DIFF,CBU_FULL, DONOR_CB, ALM_RES	Processed total number of CD34+ cells. Post processing and pre-cryopreservation.	F7	Cells expressed in scientific notation; valid range 0.0E0 to 999.9E6
CB_A1	CBU_DIFF, CBU_FULL	CBU HLA-A, 1 st antigen	A5	Values according to WHO nomenclature – see note 2 in the appendix
CB_A2	CBU_DIFF, CBU_FULL	CBU HLA-A, 2 nd antigen	A5	Values according to WHO nomenclature – see note 2 in the

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
				appendix
CB_ABO	CBU_DIFF, CBU_FULL	CBU blood group and optional rhesus	A3	A, B, O (letter O), AB, all-optional suffixed with P, +, N or -
CB_AL_PLA	CBU_DIFF, CBU_FULL	The total number of CBU plasma aliquots available for testing. These samples may be used for infectious disease testing	N2	
CB_AL_RED_BC	CBU_DIFF, CBU_FULL	The total number of CBU red cell fraction aliquots available for testing. These samples may be used for infectious disease testing	N2	
CB_AL_SER	CBU_DIFF, CBU_FULL	Number of CBU serum aliquots available	N2	
CB_ANTI_HBC	CBU_DIFF, CBU_FULL	CBU Hepatitis B status (antibody to hepatitis B core antigen)	A1	P = Positive N = Negative
CB_ANTI_HCV	CBU_DIFF, CBU_FULL	CBU Hepatitis C status (antibody to hepatitis C virus)	A1	P = Positive N = Negative
CB_ANTI_HIV_12	CBU_DIFF, CBU_FULL	CBU Anti-HIV 1/2 status	A1	P = Positive N = Negative
CB_ATT_SEG	CBU_DIFF, CBU_FULL	Number of attached segments available	N2	
CB_B1	CBU_DIFF, CBU_FULL	CBU HLA-B, 1st antigen	A5	Values according to WHO nomenclature – see note 2 in the appendix
CB_B2	CBU_DIFF, CBU_FULL	CBU HLA-B, 2nd antigen	A5	Values according to WHO nomenclature – see note 2 in the appendix
CB_BACT_CULT	CBU_DIFF, CBU_FULL	Bacterial culture	A1	P = Positive N = Negative D = Not done
CB_BAG_ID	CBU_DIFF, CBU_FULL	The identification as it appears on the bag. If more than one bag is available, do not fill in this field.	A17	Free form; see note 1 in the appendix
CB_BAGS	CBU_DIFF, CBU_FULL	Number of bags for the cord blood sub units	N2	
CB_BANK_DISTRIB_ID	CBU_DIFF, CBU_FULL	The ID of the bank distributing the unit. This may be different to the manufacturer	A10	EMDIS hub code + Local Id
CB_BANK_MANUF_ID	CBU_DIFF, CBU_FULL	The ID of the bank that manufactured the unit	A10	EMDIS hub code + Local Id
CB_BANK_MAT_ID	CBU_DIFF, CBU_FULL	The identification used to identify the maternal donor	A15	Local ID
CB_BIRTH_DATE	CBU_DIFF, CBU_FULL	CBU Date of birth (date the infant was born)	D8	Date format: YYYYMMDD
CB_C1	CBU_DIFF, CBU_FULL	CBU HLA-C, 1st antigen	A5	Values according to WHO nomenclature – see note 2 in the appendix
CB_C2	CBU_DIFF, CBU_FULL	CBU HLA-C, 2nd antigen	A5	Values according to WHO nomenclature – see note 2 in the appendix
CB_CCR5	CBU_DIFF, CBU_FULL	CBU CCR5 status	A2	DD = Deletion (delta 32) - homozygous DW = Deletion (delta 32) / wildtype - heterozygous WW = Wildtype - homozygous
CB_CHAGAS	CBU_DIFF, CBU_FULL	CBU Chagas status	A1	P = Positive N = Negative
CB_CMV	CBU_DIFF, CBU_FULL	CBU CMV status	A1	N = Both IgG and IgM negative Q = Questionable / Unclear G = IgG positive, IgM negative

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
				M = IgG negative, IgM positive B = Both IgG and IgM positive P = IgG or IgM positive, test did not differentiate H = IgG positive, IgM not tested O = IgG negative, IgM not tested
CB_CMV_NAT	CBU_DIFF, CBU_FULL	CBU CMV NAT status	A1	P = Positive N = Negative
CB_COLL_DATE	CBU_DIFF, CBU_FULL	CBU Collection date	D8	Date format: YYYYMMDD
CB_CFU	CBU_DIFF, CBU_FULL, DONOR_CB, ALM_RES	Total CFU post processing count (post processing and pre-cryopreservation). GM method	F7	Cells expressed in scientific notation; valid range 0.0E5 to 999.9E5
CB_CT_COMPLETE_DATE	CBU_DIFF, CBU_FULL, DONOR_CB, ALM_RES	Verification typing (CT) date of the cord blood unit. Definition: CT (Confirmatory Typing) is repeat DNA typing after registration. For the CT to be completed, loci A, B, and DRB1 must all be retested and confirmed consistent with registration typing. The CT completion date is the latest date when A, B, and DRB1 are all complete. If the loci are not all tested at the same time, this date will be the date the last locus was tested.	D8	Date format YYYYMMDD
CB_DNA_A1	CBU_DIFF, CBU_FULL	CBU DNA-A, 1 st allele	A20	Values according to WHO nomenclature – see note 2 in the appendix
CB_DNA_A2	CBU_DIFF, CBU_FULL	CBU DNA-A, 2 nd allele	A20	Values according to WHO nomenclature – see note 2 in the appendix
CB_DNA_B1	CBU_DIFF, CBU_FULL	CBU DNA-B, 1 st allele	A20	Values according to WHO nomenclature – see note 2 in the appendix
CB_DNA_B2	CBU_DIFF, CBU_FULL	CBU DNA-B, 2 nd allele	A20	Values according to WHO nomenclature – see note 2 in the appendix
CB_DNA_C1	CBU_DIFF, CBU_FULL	CBU DNA-C, 1 st allele	A20	Values according to WHO nomenclature – see note 2 in the appendix
CB_DNA_C2	CBU_DIFF, CBU_FULL	CBU DNA-C, 2 nd allele	A20	Values according to WHO nomenclature – see note 2 in the appendix
CB_DNA_SMPL	CBU_DIFF, CBU_FULL	CBU DNA samples available	A1	Y = Yes N = No
CB_DPA11	CBU_DIFF, CBU_FULL	CBU DNA-DPA1, 1 st allele	A20	Values according to WHO nomenclature – see note 2 in the appendix
CB_DPA12	CBU_DIFF, CBU_FULL	CBU DNA-DPA1, 2 nd allele	A20	Values according to WHO nomenclature – see note 2 in the appendix
CB_DPB11	CBU_DIFF, CBU_FULL	CBU DNA-DPB1, 1 st allele	A20	Values according to WHO nomenclature – see note 2 in the appendix
CB_DPB12	CBU_DIFF, CBU_FULL	CBU DNA-DPB1, 2 nd allele	A20	Values according to WHO nomenclature – see note 2 in the appendix
CB_DQ1	CBU_DIFF, CBU_FULL	CBU HLA-DQ, 1 st antigen	A5	Values according to WHO nomenclature – see note 2 in the appendix
CB_DQ2	CBU_DIFF, CBU_FULL	CBU HLA-DQ, 2 nd antigen	A5	Values according to WHO nomenclature – see note 2 in the

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
				appendix
CB_DQA11	CBU_DIFF, CBU_FULL	CBU DNA-DQA1, 1 st allele	A20	Values according to WHO nomenclature – see note 2 in the appendix
CB_DQA12	CBU_DIFF, CBU_FULL	CBU DNA-DQA1, 2 nd allele	A20	Values according to WHO nomenclature – see note 2 in the appendix
CB_DQB11	CBU_DIFF, CBU_FULL	CBU DNA-DQB1, 1 st allele	A20	Values according to WHO nomenclature – see note 2 in the appendix
CB_DQB12	CBU_DIFF, CBU_FULL	CBU DNA-DQB1, 2 nd allele	A20	Values according to WHO nomenclature – see note 2 in the appendix
CB_DR1	CBU_DIFF, CBU_FULL	CBU HLA-DR, 1 st antigen	A5	Values according to WHO nomenclature – see note 2 in the appendix
CB_DR2	CBU_DIFF, CBU_FULL	CBU HLA-DR, 2 nd antigen	A5	Values according to WHO nomenclature – see note 2 in the appendix
CB_DRB11	CBU_DIFF, CBU_FULL	CBU DNA-DRB1, 1 st allele	A20	Values according to WHO nomenclature – see note 2 in the appendix
CB_DRB12	CBU_DIFF, CBU_FULL	CBU DNA-DRB1, 2 nd allele	A20	Values according to WHO nomenclature – see note 2 in the appendix
CB_DRB31	CBU_DIFF, CBU_FULL	CBU DNA-DRB3, 1 st allele	A20	Values according to WHO nomenclature – see note 2 in the appendix
CB_DRB32	CBU_DIFF, CBU_FULL	CBU DNA-DRB3, 2 nd allele	A20	Values according to WHO nomenclature – see note 2 in the appendix
CB_DRB41	CBU_DIFF, CBU_FULL	CBU DNA-DRB4, 1 st allele	A20	Values according to WHO nomenclature – see note 2 in the appendix
CB_DRB42	CBU_DIFF, CBU_FULL	CBU DNA-DRB4, 2 nd allele	A20	Values according to WHO nomenclature – see note 2 in the appendix
CB_DRB51	CBU_DIFF, CBU_FULL	CBU DNA-DRB5, 1 st allele	A20	Values according to WHO nomenclature – see note 2 in the appendix
CB_DRB52	CBU_DIFF, CBU_FULL	CBU DNA-DRB5, 2 nd allele	A20	Values according to WHO nomenclature – see note 2 in the appendix
CB_EBV	CBU_DIFF, CBU_FULL	CBU EBV status	A1	N = Both IgG and IgM negative Q = Questionable / Unclear G = IgG positive, IgM negative M = IgG negative, IgM positive B = Both IgG and IgM positive P = IgG or IgM positive, test did not differentiate H = IgG positive, IgM not tested O = IgG negative, IgM not tested
CB_ETHN	CBU_DIFF, CBU_FULL	CBU ethnic group	A4	AFNA = African: North Africa AFSS = African: Sub-Saharan Africa ASSW = Asian: Southwest Asia (Middle East, Turkey) ASSO = Asian: Southern Asia (India, Pakistan, Bangladesh, Sri Lanka, Bhutan, Nepal) ASCE = Asian: Central Asia (Eastern Russia, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan)

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
				ASSE = Asian: Southeast Asia (China, Mongolia, Burma, Laos, Cambodia, Thailand, Vietnam, Taiwan) ASNE = Asian: North and Northeast Asia (Japan, North Korea, South Korea) ASOC = Asian: Oceania (Pacific Islands excluding Japan, Australia, Taiwan, Sakhalin, Aleutian Islands) CAEU = Caucasian: Mainland Europe, Greenland, Iceland, Western Russia CAER = Caucasian: Eastern Russia CANA = Caucasian: North America (USA, Canada, Mexico) CAAU = Caucasian: Australia (Australia, New Zealand) HICA = Hispanic : Central America, Caribbean HISA = Hispanic : South America MX = Mixed / multiple OT = Other (e.g. Australian Aborigine) UK = Unknown NOTE: all four character codes may be abbreviated to the first two characters
CB_FREEZE_DATE	CBU_DIFF, CBU_FULL	CBU freezing date	D8	Date format: YYYYMMDD
CB_FREEZE_METH	CBU_DIFF, CBU_FULL	CBU freezing method	A1	C = Controlled Rate M = Manual
CB_FUNG_CULT	CBU_DIFF, CBU_FULL	Fungal culture	A1	P = Positive N = Negative D = Not done
CB_HBS_AG	CBU_DIFF, CBU_FULL	CBU Hepatitis B status (hepatitis B surface antigen)	A1	P = Positive N = Negative
CB_HBV_NAT	CBU_DIFF, CBU_FULL	CBU HBV NAT status	A1	P = Positive N = Negative
CB_HCV_NAT	CBU_DIFF, CBU_FULL	CBU HCV NAT status	A1	P = Positive N = Negative

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
CB_HEMO_STATUS	CBU_DIFF, CBU_FULL	Hemoglobinopathy screening status	A2	DN = Screening done, normal results DU = Screening done, unusual findings NS = No screening done CD = Can be done at time of release NC = Cannot be done DT = Thalassemia DD = Drepanocytosis
CB_HIV_1_NAT	CBU_DIFF, CBU_FULL	CBU HIV-1 NAT status	A1	P = Positive N = Negative
CB_HIV_P24	CBU_DIFF, CBU_FULL	CBU HIV p24 status	A1	P = Positive N = Negative
CB_HTLV	CBU_DIFF, CBU_FULL	CBU HTLV status	A1	P = Positive N = Negative
CB_ID	CBU_DIFF, CBU_FULL, RSV_NOT	The unit identification assigned by the hub. It may be the same as the local ID (CB_LOCAL_ID)	A17	EMDIS hub code + National donor identification
CB_KIR2DL1	CBU_DIFF, CBU_FULL	CBU KIR gene 2DL1	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
CB_KIR2DL2	CBU_DIFF, CBU_FULL	CBU KIR gene 2DL2	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
CB_KIR2DL3	CBU_DIFF, CBU_FULL	CBU KIR gene 2DL3	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
CB_KIR2DL4	CBU_DIFF, CBU_FULL	CBU KIR gene 2DL4	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
CB_KIR2DL5A	CBU_DIFF, CBU_FULL	CBU KIR gene 2DL5A	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
CB_KIR2DL5B	CBU_DIFF, CBU_FULL	CBU KIR gene 2DL5B	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
CB_KIR2DS1	CBU_DIFF, CBU_FULL	CBU KIR gene 2DS1	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
CB_KIR2DS2	CBU_DIFF, CBU_FULL	CBU KIR gene 2DS2	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
CB_KIR2DS3	CBU_DIFF, CBU_FULL	CBU KIR gene 2DS3	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
CB_KIR2DS4	CBU_DIFF, CBU_FULL	CBU KIR gene 2DS4	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
CB_KIR2DS5	CBU_DIFF, CBU_FULL	CBU KIR gene 2DS5	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
CB_KIR2DP1	CBU_DIFF, CBU_FULL	CBU KIR gene 2DP1	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
CB_KIR3DL1	CBU_DIFF, CBU_FULL	CBU KIR gene 3DL1	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
CB_KIR3DL2	CBU_DIFF, CBU_FULL	CBU KIR gene 3DL2	A255	POS = Presence of KIR gene NEG = Absence of KIR gene

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
CB_KIR3DL3	CBU_DIFF, CBU_FULL	CBU KIR gene 3DL3	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
CB_KIR3DS1	CBU_DIFF, CBU_FULL	CBU KIR gene 3DS1	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
CB_KIR3DP1	CBU_DIFF, CBU_FULL	CBU KIR gene 3DP1	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
CB_KIR_GL	CBU_DIFF, CBU_FULL	URI to a GL-String or GL-string for absence/presence for KIR typing results.	A255	URI that refers to a GL-string registered with a GL-service or direct GL-string for absence / presence. Field is not used at the moment and should therefore always be empty.
CB_LOCAL_ID	CBU_DIFF, CBU_FULL	The identification of the CBU locally at the cord blood bank	A17	
CB_MAT_AL_PLA	CBU_DIFF, CBU_FULL	Number of plasma maternal aliquots	N2	
CB_MAT_AL_SER	CBU_DIFF, CBU_FULL	Number of serum maternal aliquots	N2	
CB_MAT_ANTI_HBC	CBU_DIFF, CBU_FULL	Maternal Hepatitis B status (antibody to hepatitis B core antigen)	A1	P = Positive N = Negative
CB_MAT_ANTI_HBS	CBU_DIFF, CBU_FULL	Maternal Hepatitis B status (maternal Anti HBs)	A1	P = Positive N = Negative
CB_MAT_ANTI_HCV	CBU_DIFF, CBU_FULL	Maternal Hepatitis C status (antibody to hepatitis C virus)	A1	P = Positive N = Negative
CB_MAT_ANTI_HIV_12	CBU_DIFF, CBU_FULL	Maternal Anti-HIV 1/2 status	A1	P = Positive N = Negative
CB_MAT_CHAGAS	CBU_DIFF, CBU_FULL	Maternal Chagas status	A1	P = Positive N = Negative
CB_MAT_CMV	CBU_DIFF, CBU_FULL	Maternal CMV status	A1	N = Both IgG and IgM negative Q = Questionable / Unclear G = IgG positive, IgM negative M = IgG negative, IgM positive B = Both IgG and IgM positive P = IgG or IgM positive, test did not differentiate H = IgG positive, IgM not tested O = IgG negative, IgM not tested
CB_MAT_CMV_NAT	CBU_DIFF, CBU_FULL	Maternal CMV NAT status	A1	P = Positive N = Negative
CB_MAT_A1	CBU_DIFF, CBU_FULL	Maternal HLA-A, 1 st antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_A2	CBU_DIFF, CBU_FULL	Maternal HLA-A, 2 nd antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_B1	CBU_DIFF, CBU_FULL	Maternal HLA-B, 1 st antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_B2	CBU_DIFF, CBU_FULL	Maternal HLA-B, 2 nd antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix.

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
CB_MAT_C1	CBU_DIFF, CBU_FULL	Maternal HLA-C, 1 st antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_C2	CBU_DIFF, CBU_FULL	Maternal HLA-C, 2 nd antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_DR1	CBU_DIFF, CBU_FULL	Maternal HLA-DR, 1 st antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_DR2	CBU_DIFF, CBU_FULL	Maternal HLA-DR, 2 nd antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_DQ1	CBU_DIFF, CBU_FULL	Maternal HLA-DQ, 1 st antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_DQ2	CBU_DIFF, CBU_FULL	Maternal HLA-DQ, 2 nd antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_DNA_A1	CBU_DIFF, CBU_FULL	Maternal DNA-A, 1 st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_DNA_A2	CBU_DIFF, CBU_FULL	Maternal DNA-A, 2 nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_DNA_B1	CBU_DIFF, CBU_FULL	Maternal DNA-B, 1 st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_DNA_B2	CBU_DIFF, CBU_FULL	Maternal DNA-B, 2 nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_DNA_C1	CBU_DIFF, CBU_FULL	Maternal DNA-C, 1 st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_DNA_C2	CBU_DIFF, CBU_FULL	Maternal DNA-C, 2 nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_DRB11	CBU_DIFF, CBU_FULL	Maternal DNA-DRB1, 1 st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_DRB12	CBU_DIFF, CBU_FULL	Maternal DNA-DRB1, 2 nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_DRB31	CBU_DIFF, CBU_FULL	Maternal DNA-DRB3, 1 st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_DRB32	CBU_DIFF, CBU_FULL	Maternal DNA-DRB3, 2 st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_DRB41	CBU_DIFF, CBU_FULL	Maternal DNA-DRB4, 1 st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_DRB42	CBU_DIFF, CBU_FULL	Maternal DNA-DRB4, 2 nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_DRB51	CBU_DIFF, CBU_FULL	Maternal DNA-DRB5, 1 st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix.

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
CB_MAT_DRB52	CBU_DIFF, CBU_FULL	Maternal DNA-DRB5, 2 nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_DQA11	CBU_DIFF, CBU_FULL	Maternal DNA-DQA1, 1 st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_DQA12	CBU_DIFF, CBU_FULL	Maternal DNA-DQA1, 2 nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_DQB11	CBU_DIFF, CBU_FULL	Maternal DNA-DQB1, 1 st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_DQB12	CBU_DIFF, CBU_FULL	Maternal DNA-DQB1, 2 nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_DPA11	CBU_DIFF, CBU_FULL	Maternal DNA-DPA1, 1 st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_DPA12	CBU_DIFF, CBU_FULL	Maternal DNA-DPA1, 2 nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_DPB11	CBU_DIFF, CBU_FULL	Maternal DNA-DRB1, 1 st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_DPB12	CBU_DIFF, CBU_FULL	Maternal DNA-DRB1, 2 nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix.
CB_MAT_EBV	CBU_DIFF, CBU_FULL	Maternal EBV status	A1	N = Both IgG and IgM negative Q = Questionable / Unclear G = IgG positive, IgM negative M = IgG negative, IgM positive B = Both IgG and IgM positive P = IgG or IgM positive, test did not differentiate H = IgG positive, IgM not tested O = IgG negative, IgM not tested
CB_MAT_HBS_AG	CBU_DIFF, CBU_FULL	Maternal Hepatitis B status (hepatitis B surface antigen)	A1	P = Positive N = Negative
CB_MAT_HBV_NAT	CBU_DIFF, CBU_FULL	Maternal HBV NAT status	A1	P = Positive N = Negative
CB_MAT_HCV_NAT	CBU_DIFF, CBU_FULL	Maternal HCV NAT status	A1	P = Positive N = Negative
CB_MAT_HIV_1_NAT	CBU_DIFF, CBU_FULL	Maternal HIV-1 NAT status	A1	P = Positive N = Negative
CB_MAT_HIV_P24	CBU_DIFF, CBU_FULL	Maternal HIV p24 status	A1	P = Positive N = Negative
CB_MAT_HTLV	CBU_DIFF, CBU_FULL	Maternal HTLV status	A1	P = Positive N = Negative
CB_MAT_ID	CBU_DIFF, CBU_FULL	The identification of the maternal donor as assigned by the hub. It may be the same as the local ID (CB_BANK_MAT_ID)	A15	Local ID

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
CB_MAT_PB19_NAT	CBU_DIFF, CBU_FULL	Maternal ParvoB19 NAT status	A1	P = Positive N = Negative
CB_MAT_PLA_QUANT	CBU_DIFF, CBU_FULL	Total quantity of maternal plasma available	R4	In millilitres; valid range 0.0 to 99.9 ml
CB_MAT_SER_QUANT	CBU_DIFF, CBU_FULL	Total quantity of maternal serum available	R4	In millilitres; valid range 0.0 to 99.9 ml
CB_MAT_SYPHILIS	CBU_DIFF, CBU_FULL	Maternal Syphilis status	A1	P = Positive N = Negative
CB_MAT_TOXO	CBU_DIFF, CBU_FULL	Maternal Toxoplasmosis status	A1	N = Both IgG and IgM negative Q = Questionable / Unclear G = IgG positive, IgM negative M = IgG negative, IgM positive B = Both IgG and IgM positive P = IgG or IgM positive, test did not differentiate H = IgG positive, IgM not tested O = IgG negative, IgM not tested
CB_MAT_WNV	CBU_DIFF, CBU_FULL	Maternal West Nile Virus (WNV) status	A1	P = Positive N = Negative
CB_MONO_NC	CBU_DIFF, CBU_FULL, DONOR_CB, ALM_RES	Collected total number of mononucleated cells	F7	Cells expressed in scientific notation; valid range 0.0E0 to 999.9E7
CB_NC	DONOR_CB, ALM_RES	Collected total number of nucleated cells	F7	Cells expressed in scientific notation; valid range 0.0E0 to 999.9E7
CB_NC_FRZN	CBU_DIFF, CBU_FULL, DONOR_CB, ALM_RES	Processed total number of nucleated cells (post processing and pre-	F7	Cells expressed in scientific notation; valid range 0.0E0 to 999.9E7
CB_OTH_SMPL	CBU_DIFF, CBU_FULL	Other type samples available (other than DNA)	A1	Y = Yes N = No
CB_PB19_NAT	CBU_DIFF, CBU_FULL	CBU ParvoB19 NAT status	A1	P = Positive N = Negative
CB_PLA_QUANT	CBU_DIFF, CBU_FULL	Total quantity of CBU plasma available	R4	In millilitres; valid range 0.0 to 99.9 ml
CB_PROC_DATE	CBU_DIFF, CBU_FULL	CBU Processing start date	D8	Date format: YYYYMMDD
CB_PROC_METH	CBU_DIFF, CBU_FULL	Processing methods	A3	HES = Hydroxy-Ethyl-Starch DGS = Density Gradient Separation CEN = Centrifuge FIL = Filtration FIC = FICOL PER = PERCOL OTH = Other
CB_PROC_METH_TYPE	CBU_DIFF, CBU_FULL	Processing method type	A3	MAN = Manual SPX = Sepax OTP = Optipress II AXP = AXP OTH = Other
CB_PROD_MOD	CBU_DIFF, CBU_FULL	Product modifications	A3	BCE = Buffy Coat Enriched DNE = Density Enriched PLR = Plasma Reduced (Volume reduction only) PRR = Plasma and RBC Reduced

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
				RBR = RBC Reduced (depletion) NOT = Not reduced OTH = Other
CB_REDUCTION	DONOR_CB, ALM_RES	Method of volume reduction	A3	HES = Hydroxy-Ethyl-Starch DGS = Density Gradient Separation CEN = Centrifuge FIL = Filtration FIC = FICOL PER = PERCOL NOT = Not reduced OTH = Other UNK = Unknown
CB_RED_BC	CBU_DIFF, CBU_FULL	Total nucleated red blood cell count (post processing and pre-cryopreservation) reflecting the content of the final product that is frozen	F7	Expressed in scientific notation; valid range 0.0E0 to 999.9E7
CB_SAMPLE_TYPE	SMP_ARR, TYP_RES, CBU_DIFF, CBU_FULL	CT Sample type	A2	AS = CBU Contiguous Attached Segment WB = Whole Blood Sample RC = Red Cell Fraction (pellet) FP = Blood Spotted Filter Paper ED = Extracted DNA
CB_SER_QUANT	CBU_DIFF, CBU_FULL	Total volume of CBU serum available	R4	In millilitres; valid range 0.0 to 99.9 ml
CB_SEX	CBU_DIFF, CBU_FULL	CBU sex	A1	M = Male F = Female
CB_STAT_END_DATE	CBU_DIFF, CBU_FULL	Status valid until specified date (e.g. assigned if the unit is temporarily unavailable)	D8	Date format YYYYMMDD
CB_STAT_REASON	CBU_DIFF, CBU_FULL	Reason for status change	A2	Proposed reasons for Status TU: QR = Quarantined; AD = Administrative Proposed reasons for Status DE: CD = Cord Destroyed or Damaged; MR = Medical reasons DS = Distributed for infusion; OT = Unavailable for other reasons; XP = Expired Proposed additional information for AV: NS = No sample available (can't do additional testing, but could ship)
CB_STATUS	CBU_DIFF, CBU_FULL	Status (used to determine unit availability)	A2	AV = Available for transplantation purposes TU = Temporarily unavailable RE = Reserved DE = Deleted, permanently unavailable
CB_SYPHILIS	CBU_DIFF, CBU_FULL	CBU Syphilis status	A1	P = Positive

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
CB_TOXO	CBU_DIFF, CBU_FULL	CBU Toxoplasmosis status	A1	N = Negative N = Both IgG and IgM negative Q = Questionable / Unclear G = IgG positive, IgM negative M = IgG negative, IgM positive B = Both IgG and IgM positive P = IgG or IgM positive, test did not differentiate H = IgG positive, IgM not tested O = IgG negative, IgM not tested
CB_TYP_BAG	CBU_DIFF, CBU_FULL	Type of bag used (CBU bag fractions / split unit)	A5	80/20 50/50 40/60 NS = No split
CB_VIABILITY	CBU_DIFF, CBU_FULL	Viability for collected total nucleated cells count Viability of CB_VIABILITY_CELLS	N3	Percentage
CB_VIABILITY_CELLS	CBU_DIFF, CBU_FULL	Type of cells tested for viability	A4	TNC CD34 CD45
CB_VIABILITY_METHOD	CBU_DIFF, CBU_FULL	Method used to calculate the viability	A2	7A = 7AAD PI = Propidium Iodide TB = Trypan Blue OT = Other
CB_VIABILITY_DATE	CBU_DIFF, CBU_FULL	Date viability was tested	D8	Date format YYYYMMDD
CB_VOL	CBU_DIFF, CBU_FULL DONOR_CB, ALM_RES	CBU collected volume before processing (without additives)	R5	In millilitres; format: ###.#; valid range 10.0 to 999.9 ml; Either CB_VOL or CB_VOL_FRZN is required
CB_VOL	DONOR_CB, ALM_RES	CBU collected volume before processing (without additives)	N5	In millilitres
CB_VOL_FRZN	CBU_DIFF, CBU_FULL DONOR_CB, ALM_RES	Total CBU volume frozen (post processing and pre-cryopreservation)	R5	In millilitres; format: ###.#; valid range 10.0 to 999.9 ml; Either CB_VOL or CB_VOL_FRZN is required
CB_VOL_FRZN	DONOR_CB, ALM_RES	Total CBU volume frozen (post processing and pre-cryopreservation)	N5	In millilitres
CB_WNV	CBU_DIFF, CBU_FULL	CBU West Nile Virus (WNV) status	A1	P = Positive N = Negative
CD3PC_KG	WOR_REQ	Number of CD3+ cells per kilo for recipient	F7	Cells expressed in scientific notation
CD34PC_KG	WOR_REQ	Number of CD34+ cells per kilo for recipient	F7	Cells expressed in scientific notation
CITY	NEW_ADD	City	A40	Free form; see note 1 in the appendix
CLEAR_DATE	MARR_STAT	Date of final clearance before transplantation	D8	Date format YYYYMMDD
COLL_DATE	SMP_ARR	Donor blood collection date	D8	Date format YYYYMMDD
COLSAM_DATE1	WOR_REQ	Date sample collection, range start	D8	Date format YYYYMMDD
COLSAM_DATE2	WOR_REQ	Date sample collection, range end	D8	Date format YYYYMMDD
COND_DAYS	WOR_REQ	Number of days before the agreed upon transplantation date, when the conditioning of the patient will start	N2	Number of days

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
CONF_DATE	MARR_STAT	Date of the confirmation of the workup request	D8	Date format YYYYMMDD
CONFIRM	RSV_RES	Result of donor reservation	A1	Y = Successful N = Not successful
COUNTRY	NEW_ADD	Country	A2	ISO-3166 2 character country code
D_A1	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor HLA-A, 1st antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix
D_A2	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor HLA-A, 2nd antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix
D_ABO	DONOR_CB, ALM_RES, TYP_RES, SMP_RES, IDM_RES	Donor blood group and rhesus	A3	A, B, O (letter O), AB, all suffixed with P, +, N or -
D_ABO	DONOR_CB, ALM_RES, TYP_RES, SMP_RES	Donor blood group and optional rhesus	A3	A,B,O (letter O), AB; optional suffixed with P, +, N or -
D_ALT	SMP_RES, IDM_RES	Donor ALT status	N3	in Units per litre (u/l)
D_ANTI_HBC	SMP_RES, IDM_RES	Donor Hepatitis B status (antibody to hepatitis B core antigen)	A1	P = Positive N = Negative Q = Questionable/Uncertain
D_ANTI_HBS	SMP_RES, IDM_RES	Donor Hepatitis B status (antibody to hepatitis B surface antigen)	A1	P = Positive N = Negative Q = Questionable/Uncertain
D_ANTI_HCV	SMP_RES, IDM_RES	Donor Hepatitis C status (antibody to hepatitis C virus)	A1	P = Positive N = Negative Q = Questionable/Uncertain
D_ANTI_HTLV	SMP_RES, IDM_RES	Donor Antibody to HTLV1.V2	A1	P = Positive N = Negative Q = Questionable/Uncertain
D_B1	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor HLA-B, 1st antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix
D_B2	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor HLA-B, 2nd antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix
D_BIRTH_DATE	DONOR_CB, ALM_RES	Donor date of birth	D8	Date format YYYYMMDD Since this field is a required field as of IP5, YYYY0101 should be given if the exact date of birth is unknown
D_C1	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor HLA-C, 1st antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix
D_C2	DONOR_CB, ALM_RES, PHEN_LIST,	Donor HLA-C, 2nd antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
	TYP_RES, SMP_RES			
D_CCR5	DONOR_CB, ALM_RES	Donor CCR5 status	A2	DD = Deletion (delta 32) - homozygous DW = Deletion (delta 32) / wildtype - heterozygous WW = Wildtype - homozygous
D_CHECKUP_DATE	DONOR_CB, ALM_RES	Date of last medical checkup of the donor	D8	Date format YYYYMMDD
D_CMV	DONOR_CB, ALM_RES, TYP_RES, SMP_RES, IDM_RES	Donor CMV status	A1	N = Both IgG and IgM negative Q = Questionable / Unclear G = IgG positive, IgM negative M = IgG negative, IgM positive B = Both IgG and IgM positive P = IgG or IgM positive, test did not differentiate H = IgG positive, IgM not tested O = IgG negative, IgM not tested
D_CMV_DATE	DONOR_CB, ALM_RES, TYP_RES, SMP_RES, IDM_RES	Date of CMV test	D8	Date format YYYYMMDD
D_COLL_TYPE	DONOR_CB, ALM_RES	Donor collection type – what is the donor willing to donate?	A1	M = Marrow P = PBSC B = Both
D_CONTACT_DATE	DONOR_CB, ALM_RES	Date of last confirmed contact with the donor	D8	Date format YYYYMMDD
D_DNA_A1	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor DNA-A, 1st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
D_DNA_A2	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor DNA-A, 2nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
D_DNA_B1	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor DNA-B, 1st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
D_DNA_B2	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor DNA-B, 2nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
D_DNA_C1	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor DNA-C, 1st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
D_DNA_C2	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor DNA-C, 2nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
D_DPA11	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor DNA-DPA1, 1st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
D_DPA12	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor DNA-DPA1, 2nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
D_DPB11	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor DNA-DPB1, 1st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
D_DPB12	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor DNA-DPB1, 2nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
D_DQ1	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor HLA-DQ, 1st antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix
D_DQ2	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor HLA-DQ, 2nd antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix
D_DQA11	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor DNA-DQA1, 1st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
D_DQA12	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor DNA-DQA1, 2nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
D_DQB11	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor DNA-DQB1, 1st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
D_DQB12	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor DNA-DQB1, 2nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
D_DR1	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor HLA-DR, 1st antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix
D_DR2	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor HLA-DR, 2nd antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix
D_DRB11	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor DNA-DRB1, 1st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
D_DRB12	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor DNA-DRB1, 2nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
D_DRB31	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor DNA-DRB3, 1st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
D_DRB32	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor DNA-DRB3, 2nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
D_DRB41	DONOR_CB, ALM_RES, PHEN_LIST,	Donor DNA-DRB4, 1st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
	TYP_RES, SMP_RES			
D_DRB42	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor DNA-DRB4, 2nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
D_DRB51	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor DNA-DRB5, 1st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
D_DRB52	DONOR_CB, ALM_RES, PHEN_LIST, TYP_RES, SMP_RES	Donor DNA-DRB5, 2nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
D_EBV	DONOR_CB, ALM_RES, SMP_RES, IDM_RES	Donor EBV status	A1	N = Both IgG and IgM negative Q = Questionable / Unclear G = IgG positive, IgM negative M = IgG negative, IgM positive B = Both IgG and IgM positive P = IgG or IgM positive, test did not differentiate H = IgG positive, IgM not tested O = IgG negative, IgM not tested
D_ETHN	DONOR_CB, ALM_RES	Donor ethnic group	A4	AFNA = African: North Africa AFSS = African: Sub-Sahara Africa ASSW = Asian: Southwest Asia (Middle East, Turkey) ASSO = Asian: Southern Asia (India, Pakistan, Bangladesh, Sri Lanka, Bhutan, Nepal) ASCE = Asian: Central Asia (Eastern Russia, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan) ASSE = Asian: Southeast Asia (China, Mongolia, Burma, Laos, Cambodia, Thailand, Vietnam, Taiwan) ASNE = Asian: North and Northeast Asia (Japan, North Korea, South Korea) ASOC = Asian: Oceania (Pacific Islands, excluding Japan, Australia, Taiwan, Sakhalin, Aleutian Islands) CAEU = Caucasian: Mainland Europe, Greenland, Iceland, Western Russia CAER = Caucasian: Eastern Russia CANA = Caucasian: North America (USA, Canada, Mexico) CAAU = Caucasian: Australia (Australia, New Zealand) HICA = Hispanic : Central America, Caribbean HISA = Hispanic : South America MX = Mixed / multiple OT = Other (e.g. Australian Aborigine) UK = Unknown NOTE: all four character codes may be abbreviated to the first two characters (i.e. AF = African, etc.)

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
D_EXTR_DATE	IDM_RES	Date of sample extraction	D8	Date format YYYYMMDD
D_HBS_AG	SMP_RES, IDM_RES	Donor Hepatitis B status (hepatitis B surface antigen)	A1	P = Positive N = Negative Q = Questionable/Uncertain
D_HEIGHT	DONOR_CB, ALM_RES, IDM_RES	Donor height	N3	In centimetres
D_HIV	SMP_RES, IDM_RES	Donor HIV status	A1	P = Positive N = Negative Q = Questionable/Uncertain
D_HIV_P24	SMP_RES, IDM_RES	Donor HIV p24 status	A1	P = Positive N = Negative Q = Questionable/Uncertain
D_ID	DONOR_CB, ALM_RES, TYP_REQ, TYP_RES, SMP_REQ, SMP_ARR, SMP_RES, IDM_REQ, IDM_RES, RSV_REQ, RSV_RES, WOR_REQ, MARR_STAT, REQ_CAN, NO_RES, RES_REM, MSG_DEN, WARNING, TXT_MSG, CBR_REQ, SMP_INFO	Donor identification	A17	EMDIS hub code + National donor identification
D_KIR2DL1	DONOR_CB, ALM_RES	Donor KIR gene 2DL1	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
D_KIR2DL2	DONOR_CB, ALM_RES	Donor KIR gene 2DL2	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
D_KIR2DL3	DONOR_CB, ALM_RES	Donor KIR gene 2DL3	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
D_KIR2DL4	DONOR_CB, ALM_RES	Donor KIR gene 2DL4	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
D_KIR2DL5A	DONOR_CB, ALM_RES	Donor KIR gene 2DL5A	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
D_KIR2DL5B	DONOR_CB, ALM_RES	Donor KIR gene 2DL5B	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
D_KIR2DS1	DONOR_CB, ALM_RES	Donor KIR gene 2DS1	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
D_KIR2DS2	DONOR_CB, ALM_RES	Donor KIR gene 2DS2	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
D_KIR2DS3	DONOR_CB, ALM_RES	Donor KIR gene 2DS3	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
D_KIR2DS4	DONOR_CB, ALM_RES	Donor KIR gene 2DS4	A255	POS = Presence of KIR gene NEG = Absence of KIR gene

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
D_KIR2DS5	DONOR_CB, ALM_RES	Donor KIR gene 2DS5	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
D_KIR2DP1	DONOR_CB, ALM_RES	Donor KIR gene 2DP1	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
D_KIR3DL1	DONOR_CB, ALM_RES	Donor KIR gene 3DL1	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
D_KIR3DL2	DONOR_CB, ALM_RES	Donor KIR gene 3DL2	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
D_KIR3DL3	DONOR_CB, ALM_RES	Donor KIR gene 3DL3	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
D_KIR3DS1	DONOR_CB, ALM_RES	Donor KIR gene 3DS1	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
D_KIR3DP1	DONOR_CB, ALM_RES	Donor KIR gene 3DP1	A255	POS = Presence of KIR gene NEG = Absence of KIR gene
D_KIR_GL	DONOR_CB, ALM_RES	URI to a GL-String or GL-string for absence/presence for KIR typing results.	A255	URI that refers to a GL-string registered with a GL-service or direct GL-string for absence / presence. Field is not used at the moment and should therefore always be empty.
D_LABEL_ID	SMP_ARR	Verbatim CT sample label ID	A19	Free form; see note 1 in the appendix
D_NMBR_MARR	DONOR_CB, ALM_RES	Number of marrow donations	N1	
D_NMBR_PBSC	DONOR_CB, ALM_RES	Number of PBSC donations	N1	
D_NMBR_PREG	DONOR_CB, ALM_RES, IDM_RES	Donor number of pregnancies	N1	
D_NMBR_TRANS	DONOR_CB, ALM_RES, IDM_RES	Donor number of blood transfusions	N1	
D_SEX	DONOR_CB, ALM_RES, TYP_RES	Donor sex	A1	M = Male F = Female
D_STAT_END_DATE	DONOR_CB, ALM_RES	Donor status valid until specified date	D8	Date format YYYYMMDD
D_STAT_REASON	DONOR_CB, ALM_RES	Reason of donor status change	A2	DO = Donor is too old DD = Donor died MR = Medical reasons PR = Personal reasons TX = After transplantation MO = Donor has moved UC = Unable to contact donor NS = no sample available (for CBU's only) OT = Other reasons TQ = Typing questionable UK = Unknown
D_STATUS	DONOR_CB, ALM_RES	Donor status	A2	AV = Available for transplantation purposes TU = Temporarily unavailable, specified in D_STAT_REASON OP = Donor is reserved for another patient DE = Donor deleted, specified in D_STAT_REASON RS = Donor is reserved for the patient the donor was reported for

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
D_TOXO	DONOR_CB, ALM_RES, SMP_RES, IDM_RES	Donor Toxoplasmosis	A1	N = Both IgG and IgM negative Q = Questionable / Unclear G = IgG positive, IgM negative M = IgG negative, IgM positive B = Both IgG and IgM positive P = IgG or IgM positive, test did not differentiate H = IgG positive, IgM not tested O = IgG negative, IgM not tested
D_TPHA	SMP_RES, IDM_RES	Donor Lues status (Treponema pallidum)	A1	P = Positive N = Negative Q = Questionable/Uncertain
D_TYPE	DONOR_CB, ALM_RES, PHEN_LIST	"Stem cell donor" or "Cord blood unit"	A1	C = Cord Blood Unit D = Stem Cell Donor
D_WEIGHT	DONOR_CB, ALM_RES, IDM_RES	Donor weight	N3	In kilos
DNA_AVA	DONOR_CB, ALM_RES	CBU DNA available?	A1	Y = Yes N = No
DON_ACCPT	SMP_RES	Donor still of interest	A1	Y = Yes N = No
DON_ATTR	DONOR_CB, ALM_RES, CBU_FULL, CBU_DIFF	Donor attribute	A3	Free form; see note 1 in the appendix
DON_POOL	DONOR_CB, ALM_RES, CBU_FULL, CBU_DIFF	Physical location of the donor	N4	ION, i.e. 6939. See [3]
EMAIL	NEW_ADD, CBR_REQ	Email	A60	In the format Username@Domainname (i.e. Joe@Company.nl)
EXAM_DATE	MARR_STAT	Date physical examination	D8	Date format YYYYMMDD
EXAM_OK	MARR_STAT	Result physical examination	A1	Y = Yes N = No
EXPI_DATE	RSV_REQ, RSV_RES, RES_REM, RSV_NOT	Date expiration of reservation	D8	Date format YYYYMMDD
FAX	NEW_ADD, CBR_REQ	Fax number	A20	"+" followed by: International Access Code + Area Code + Subscriber number, separated by hyphens (i.e. "+21-72- 5124504").
GRID	CBR_REQ, DONOR_CB, CBU_DIFF, CBU_FULL, ALM_RES, RSV_NOT, TYP_REQ, TYP_RES, SMP_REQ, SMP_ARR, SMP_INFO, SMP_RES, IDM_REQ, IDM_RES, RSV_REQ, RSV_RES,	Global registration identifier for donors	A19	Nineteen character identifier. The donor identifier element must follow the following rules: <ul style="list-style-type: none"> - Only numeric and upper case alpha characters permitted (A-Z, 0-9). Space and punctuation characters are not permitted. (It is recommended to avoid the letters O and I in the identifier to avoid confusion with the digits 0 and 1) - Fixed length, 15 characters. If the donor

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
	WOR_REQ, MARR_STAT, REQ_CAN, NO_RES, RES_REM, MSG_DEN, WARNING, TXT_MSG			identifier used by the registry is less than 15 characters then it must be padded with leading zeros. Further details can be found on: https://collaboration.wmda.info/display/ITWG/GRID+Concept
GVH_REAC	SMP_RES	Graft vs. Host reactivity	N3	Percentage as a round number (i.e. 30 for 30%)
HLA_NOM_VER	PAT_UPD, ALM_REQ, ALM_RES, DONOR_CB, PHEN_LIST, TYP_RES, SMP_RES, CBU_DIFF, CBU_FULL	Major version of the HLA Nomenclature in use ¹	A7	2 = Version 2.x 3 = Version 3.x
HUB_COUNT	PHEN_LIST	Number of donors of the registry with the given HLA phenotype	N5	
HUB_RCV	All messages	Registry receiving the message.	A3	EMDIS hub codes – see [2] for assigned codes
HUB_SND	All messages	Registry sending the message.	A3	EMDIS hub codes – see [2] for assigned codes
HVG_REAC	SMP_RES	Host vs. Graft reactivity	N3	Percentage as a round number (i.e. 30 for 30%)
INFO_DATE	MARR_STAT	Date information session	D8	Date format YYYYMMDD
INFO_TYPE	SMP_INFO	Information type	A3	BMP = Donor only available for bone marrow donation for personal reasons BMM = donor only available for bone marrow donation for medical reasons SCP = donor only available for PBSC donation for personal reasons SCM = donor only available for PBSC donation for medical reasons ABS = (absent) donor not available for a certain period of time MUL = Multidonation UBC = donor unavailable after blood collection RPE = increased risk that donor is declined during physical examination CMV = additional information regarding CMV status ROI = donor was in a region with a higher risk of infection MED = other medical information OTH = other non-medical information
INST_ID	NEW_ADD	Institution identification	A10	EMDIS hub code + Local Id.
INST_MARR_SENT	WOR_REQ	Institution receiving the bone marrow or cord blood unit	A10	EMDIS hub code + Local Id.
INST_PAY	TYP_REQ, SMP_REQ, IDM_REQ, WOR_REQ	Institution paying	A10	EMDIS hub code + Local Id.

¹ The field is proposed to be wide enough to take the full version information of an HLA nomenclature release in the future (major number[1].minor number [up to 3].correction[1], e.g. 3.00.0)

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
INST_SMP_SENT	SMP_REQ, WOR_REQ	Institution receiving sample ("ship-to" address)	A10	EMDIS hub code + Local Id.
INST_TYPE	NEW_ADD	Institution type	A3	HUB = EMDIS Hub DON = Donor centre TRA = Transplant centre HAR = Harvesting centre LAB = Typing laboratory FIN = Financial institution CBB = Cord Blood Bank
MARKER	IDM_REQ, IDM_RES	In the IDM_REQ message the values in this field indicates the infectious disease markers to be tested. In the IDM_RES message the values in this field reflects the infectious disease markers that were tested.	B13	Binary fixed length string in which each position represents a test to be requested: Position 1: Blood group and rhesus Position 2: CMV status Position 3: Toxoplasmosis Position 4: EBV Position 5: HIV status Position 6: HIV P24 Position 7: Hepatitis B surface antigen Position 8: Antibody to Hepatitis B surface antigen Position 9: Antibody to Hepatitis B core antigen Position 10: Antibody to Hepatitis C virus Position 11: Lues status (Treponema pallidum) Position 12: ALT status Position 13: Antibody to HTLV1.V2
MARR_DATE	MARR_STAT	Date marrow collection	D8	Date format YYYYMMDD
MARROW_TU_REQ	WOR_REQ	Number of marrow tubes requested	N2	
MAT_SER_AVA	DONOR_CB, ALM_RES	Maternal serum available for CBU?	A1	Y = Yes N = No
MAT_SER_QUANT	DONOR_CB, ALM_RES	Quantity of maternal serum for CBU	N2	In millilitres
MATCH_DATE	PHEN_LIST, MATCH_SUM	Date phenotype list was generated	D8	Date format YYYYMMDD
MIN_VOL_MARR	WOR_REQ	Estimated minimal volume of marrow	N4	In millilitres
MLC_GVH	SMP_RES	Result MLC, Graft vs. Host	A1	P = Positive N = Negative
MLC_HVG	SMP_RES	Result MLC, Host vs. Graft	A1	P = Positive N = Negative
MONO_NC_KG	WOR_REQ	Number of mononucleated cells per kg for recipient	F7	Cells expressed in scientific notation
MSG_CODE	MSG_DEN, WARNING	Code operation of erroneous message	A10	
NBT1	SMP_REQ	Number of tubes for the first product	N2	See note 2 in the appendix
NBT1_ATCOL	WOR_REQ	Number of tubes for the first product at collection	N2	See note 2 in the appendix
NBT1_BEFCOL	WOR_REQ	Number of tubes for the first product before collection	N2	See note 2 in the appendix
NBT2	SMP_REQ	Number of tubes for the second product	N2	See note 2 in the appendix
NBT2_ATCOL	WOR_REQ	Number of tubes for the second product at collection	N2	See note 2 in the appendix
NBT2_BEFCOL	WOR_REQ	Number of tubes for the second product before	N2	See note 2 in the appendix

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
		collection		
NBT3	SMP_REQ	Number of tubes for the third product	N2	See note 2 in the appendix
NBT3_ATCOL	WOR_REQ	Number of tubes for the third product at collection	N2	See note 2 in the appendix
NBT3_BEFCOL	WOR_REQ	Number of tubes for the third product before collection	N2	See note 2 in the appendix
NBT4	SMP_REQ	Number of tubes for the fourth product	N2	See note 2 in the appendix
NBT4_ATCOL	WOR_REQ	Number of tubes for the fourth product at collection	N2	See note 2 in the appendix
NBT4_BEFCOL	WOR_REQ	Number of tubes for the fourth product before collection	N2	See note 2 in the appendix
NC_KG	WOR_REQ	Number of nucleated cells per kilo for recipient	F7	Cells expressed in scientific notation
NC_RESEA	WOR_REQ	Number of nucleated cells for research	F7	Cells expressed in scientific notation
ORG_DEN	MSG_DEN, WARNING	Origin of denial	A20	Where the message was rejected
P_A1	PAT_UPD, ALM_REQ	Patient HLA-A, 1st antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix
P_A2	PAT_UPD, ALM_REQ	Patient HLA-A, 2nd antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix
P_ABO	PAT_UPD	Patient blood group and rhesus	A3	A, B, O (letter O), AB, all suffixed with P, +, N or -
P_B1	PAT_UPD, ALM_REQ	Patient HLA-B, 1st antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix
P_B2	PAT_UPD, ALM_REQ	Patient HLA-B, 2nd antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix
P_BIRTH_DATE	PAT_UPD	Patient date of birth	D8	Date format YYYYMMDD
P_C1	PAT_UPD	Patient HLA-C, 1st antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix
P_C2	PAT_UPD	Patient HLA-C, 2nd antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix
P_CMV	PAT_UPD	Patient CMV status	A1	P = Positive N = Negative
P_DIAG	PAT_UPD	Patient diagnosis	A3	AML = Acute Myelogenous Leukaemia ALL = Acute Lymphoblastic Leukaemia CML = Chronic Myelogenous Leukaemia OL = Other Leukaemia HL = Hodgkin's Lymphoma MDS = Myelodysplastic Disorders NHL = Non-Hodgkin's Lymphoma PCD = Plasma Cell Disorder OM = Other Malignancy HIS = Histiocytic Disorders IEA = Inherited Erythrocyte Abnormality IIS = Inherited Immune System Disorder IMD = Inherited Metabolic Disorder IPA = Inherited Platelet Abnormality SAA = Severe Aplastic Anaemia OND = Other Non-malignant Disease

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
P_DIAG_DATE	PAT_UPD	Date of patient diagnosis	D8	Date format YYYYMMDD
P_DIAG_TEXT	PAT_UPD	Additional explanatory text describing the diagnosis of the patient for P_DIAG codes OL, OM and OND	A50	Free form; see note 1 in the appendix
P_DIS_PHA	PAT_UPD, WOR_REQ	Patient disease phase	A2	PI = Primary Induction Therapy PF = Primary Induction Failure Cn = n-th Complete Remission Nn = n-th Chronic Phase Pn = n-th Partial Remission Rn = n-th Relapse AP = Accelerated Phase BC = Blast Crisis AD = Advanced Disease SD = Stable Disease RD = Refractory Disease NA = Not Applicable (n is a 1-digit numeric value; n=0 means unknown)
P_DNA_A1	PAT_UPD, ALM_REQ	Patient DNA-A, 1st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
P_DNA_A2	PAT_UPD, ALM_REQ	Patient DNA-A, 2nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
P_DNA_B1	PAT_UPD, ALM_REQ	Patient DNA-B, 1st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
P_DNA_B2	PAT_UPD, ALM_REQ	Patient DNA-B, 2nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
P_DNA_C1	PAT_UPD	Patient DNA-C, 1st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
P_DNA_C2	PAT_UPD	Patient DNA-C, 2nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
P_DPA11	PAT_UPD	Patient DNA-DPA1, 1st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
P_DPA12	PAT_UPD	Patient DNA-DPA1, 2nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
P_DPB11	PAT_UPD	Patient DNA-DPB1, 1st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
P_DPB12	PAT_UPD	Patient DNA-DPB1, 2nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
P_DQ1	PAT_UPD	Patient HLA-DQ, 1st antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix
P_DQ2	PAT_UPD	Patient HLA-DQ, 2nd antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix
P_DQA11	PAT_UPD	Patient DNA-DQA1, 1st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
P_DQA12	PAT_UPD	Patient DNA-DQA1, 2nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
				appendix
P_DQB11	PAT_UPD	Patient DNA-DQB1, 1st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
P_DQB12	PAT_UPD	Patient DNA-DQB1, 2nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
P_DR1	PAT_UPD, ALM_REQ	Patient HLA-DR, 1st antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix
P_DR2	PAT_UPD, ALM_REQ	Patient HLA-DR, 2nd antigen	A5	Values according to WHO nomenclature – see note 3 in the appendix
P_DRB11	PAT_UPD, ALM_REQ	Patient DNA-DRB1, 1st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
P_DRB12	PAT_UPD, ALM_REQ	Patient DNA-DRB1, 2nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
P_DRB31	PAT_UPD	Patient DNA-DRB3, 1st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
P_DRB32	PAT_UPD	Patient DNA-DRB3, 2nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
P_DRB41	PAT_UPD	Patient DNA-DRB4, 1st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
P_DRB42	PAT_UPD	Patient DNA-DRB4, 2nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
P_DRB51	PAT_UPD	Patient DNA-DRB5, 1st allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
P_DRB52	PAT_UPD	Patient DNA-DRB5, 2nd allele	A20	Values according to WHO nomenclature – see note 3 in the appendix
P_ETHN	PAT_UPD	Patient ethnic group	A4	<p>AFNA = African: North Africa AFSS = African: Sub-Saharan Africa ASSW = Asian: Southwest Asia (Middle East, Turkey) ASSO = Asian: Southern Asia (India, Pakistan, Bangladesh, Sri Lanka, Bhutan, Nepal) ASCE = Asian: Central Asia (Eastern Russia, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan) ASSE = Asian: Southeast Asia (China, Mongolia, Burma, Laos, Cambodia, Thailand, Vietnam, Taiwan) ASNE = Asian: North and Northeast Asia (Japan, North Korea, South Korea) ASOC = Asian: Oceania (Pacific Islands excluding Japan, Australia, Taiwan, Sakhalin, Aleutian Islands) CAEU = Caucasian: Mainland Europe, Greenland, Iceland, Western Russia CAER = Caucasian: Eastern Russia CANA = Caucasian: North America (USA, Canada, Mexico) CAAU = Caucasian: Australia (Australia, New Zealand)</p>

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
				<p>HICA = Hispanic: Central America, Caribbean HISA = Hispanic: South America MX = Mixed / multiple OT = Other (e.g. Australian Aborigine) UK = Unknown</p> <p>NOTE: all four character codes may be abbreviated to the first two characters (i.e. AF = African, etc.)</p>
P_FNAME	PAT_UPD	Patient first name	A30	See note 1 in the appendix
P_GRAF_ID	PAT_UPD	Grafting physician identification	A10	Unique value that represents the Transplant Centre physician of the patient
P_ID	All messages except NEW_ADD and MSG_ACK	Patient identification	A17	EMDIS hub code + National patient identification
P_LNAME	PAT_UPD	Patient last name	A30	See note 1 in the appendix
P_MATCH_AB	PAT_UPD	Matching preference for HLA-A, and -B typed adult donors	A30	See section 4.1.1 of the EMDIS Semantics
P_MATCH_CB	PAT_UPD	Matching preference for cord blood units	A30	See section 4.1.1 of the EMDIS Semantics
P_MATCH_DR	PAT_UPD	Matching preference for HLA-A, -B and -DR typed adult donors	A30	See section 4.1.1 of the EMDIS Semantics
P_MAX_DON_AB	PAT_UPD, ALM_REQ	Maximum number of HLA-A, and -B typed donors	N4	Default value is 0
P_MAX_DON_CB	PAT_UPD, ALM_REQ	Maximum number of cord blood units	N4	Default value is 0
P_MAX_DON_DR	PAT_UPD, ALM_REQ	Maximum number of HLA-A, -B and -DR typed donors	N4	Default value is 0
P_NEW_STAT	PAT_STAT	New patient state	A3	PRE = Preliminary Search ACT = Active SUS = Suspended STP = Stopped
P_OLD_STAT	PAT_STAT	Old patient state	A3	PRE = Preliminary Search ACT = Active SUS = Suspended STP = Stopped
P_SEX	PAT_UPD	Patient sex	A1	M = Male F = Female
P_WEIGHT	PAT_UPD	Patient weight	N3	In kilos
PAT_POOL	PAT_UPD	Physical location of the patient	A2	Two character ISO country code (i.e. US, DE, IT)
PARAM	ADMIN	Parameter for ACTION	A50	There are currently no valid values defined; if this (optional) field is included in the ADMIN message, its value should be left blank ("" or "?")
PBSC_COLL_DATE1	MARR_STAT	First PBSC collection date	D8	YYYYMMDD
PBSC_COLL_DATE2	MARR_STAT	Second PBSC collection date	D8	YYYYMMDD
PBSC_GCSF_DATE	MARR_STAT	Start G-CSF date	D8	YYYYMMDD
PERSON	NEW_ADD	Contact person	A40	Free form; see note 1 in the appendix
PHONE	NEW_ADD	Phone number	A20	"+" followed by: International Access Code + Area Code +

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
				Subscriber number, separated by hyphens (i.e. "+21-72-5124504")
PRECOLL_DATE	MARR_STAT	Date arrival pre-collection	D8	Date format YYYYMMDD
PROD1	SMP_REQ	First product required	A10	EDTA, ACD, CPD, HEPARIN, CLOTTED, DNA ¹ , MAT_SERUM ¹
PROD1_ATCOL	WOR_REQ	First product at collection	A10	EDTA, ACD, CPD, HEPARIN, CLOTTED
PROD1_BEFCOL	WOR_REQ	First pre-collection product	A10	EDTA, ACD, CPD, HEPARIN, CLOTTED, MAT_SERUM ¹
PROD2	SMP_REQ	Second product required	A10	EDTA, ACD, CPD, HEPARIN, CLOTTED, DNA ¹ , MAT_SERUM ¹
PROD2_ATCOL	WOR_REQ	Second product at collection	A10	EDTA, ACD, CPD, HEPARIN, CLOTTED
PROD2_BEFCOL	WOR_REQ	Second pre-collection product	A10	EDTA, ACD, CPD, HEPARIN, CLOTTED, MAT_SERUM ¹
PROD3	SMP_REQ	Third product required	A10	EDTA, ACD, CPD, HEPARIN, CLOTTED, DNA ¹ , MAT_SERUM ¹
PROD3_ATCOL	WOR_REQ	Third product at collection	A10	EDTA, ACD, CPD, HEPARIN, CLOTTED
PROD3_BEFCOL	WOR_REQ	Third pre-collection product	A10	EDTA, ACD, CPD, HEPARIN, CLOTTED, MAT_SERUM ¹
PROD4	SMP_REQ	Fourth product required	A10	EDTA, ACD, CPD, HEPARIN, CLOTTED, DNA ² , MAT_SERUM ¹
PROD4_ATCOL	WOR_REQ	Fourth product at collection	A10	EDTA, ACD, CPD, HEPARIN, CLOTTED
PROD4_BEFCOL	WOR_REQ	Fourth pre-collection product	A10	EDTA, ACD, CPD, HEPARIN, CLOTTED, MAT_SERUM ¹
PROP_DATE	WOR_REQ	Proposed date for marrow collection / CBU shipment	D8	Date format YYYYMMDD
QU1	SMP_REQ	First product quantity per tube (see also NBTx)	N4	In millilitres
QU2	SMP_REQ	Second product quantity per tube (see also NBTx)	N4	In millilitres
QU3	SMP_REQ	Third product quantity per tube (see also NBTx)	N4	In millilitres
QU4	SMP_REQ	Fourth product quantity per tube (see also NBTx)	N4	In millilitres
QUANT1_ATCOL	WOR_REQ	Quantity of first product at collection per tube (see also NBTx_ATCOL)	N4	In millilitres
QUANT1_BEFCOL	WOR_REQ	Quantity of first pre-collection product per tube (see also NBTx_BEFCOL)	N4	In millilitres
QUANT2_ATCOL	WOR_REQ	Quantity of second product at collection per tube (see also NBTx_ATCOL)	N4	In millilitres
QUANT2_BEFCOL	WOR_REQ	Quantity of second pre-collection product per tube (see also NBTx_BEFCOL)	N4	In millilitres
QUANT3_ATCOL	WOR_REQ	Quantity of third product at collection per tube (see also NBTx_ATCOL)	N4	In millilitres
QUANT3_BEFCOL	WOR_REQ	Quantity of third pre-collection product per tube (see also NBTx_BEFCOL)	N4	In millilitres
QUANT4_ATCOL	WOR_REQ	Quantity of fourth product at collection per tube (see also NBTx_ATCOL)	N4	In millilitres
QUANT4_BEFCOL	WOR_REQ	Quantity of fourth pre-collection product per tube (see	N4	In millilitres

¹ The values "DNA" (DNA or cellular material) and "MAT_SERUM" are only applicable in product requests for cord blood units.

² The values "DNA" (DNA or cellular material) and "MAT_SERUM" are only applicable in product requests for cord blood units.

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
REASON	NO_RES	also NBTx_BEFCOL) Reason why a service cannot be performed	A3	<p>For transplant centre (TC) to donor centre (DC): BCC = Clinical condition of patient deteriorated (i.e. Relapse) FND = Other / better donor found LAB = Laboratory problem / Typing failed / Not enough sample NSP = No sample received OLD = Sample too old PDC = Patient deceased before request was completed STP = Search stopped TRX = Patient already transplanted OTH = Other reason</p> <p>For donor centre (DC) to transplant centre (TC): DO = Donor is too old DD = Donor died MR = Medical reasons PR = Personal reasons TX = After transplantation MO = Donor has moved UC = Unable to contact donor NS = No sample available (for CBU's only) OT = Other reasons UK = Unknown EX = Expired MM = HLA mismatch</p>
REASON_CHNG	PAT_STAT	Reason for patient status change	A3	<p>ATX = Autologous Transplantation RMT = BMSC Transplantation with related donor¹ UMT = BMSC Transplantation with unrelated donor¹ RCT = CBSC Transplantation with related CBU¹ UCT = CBSC Transplantation with unrelated CBU¹ RPT = PBSC Transplantation with related donor¹ UPT = PBSC Transplantation with unrelated donor¹ GCC = Good clinical condition of patient (i.e. remission) BCC = Clinical condition of patient deteriorated (i.e. relapse) PDC = Patient deceased before transplantation PAT = Patient responds to alternative therapy PPR = Patient withdrawal (non medical, personal reasons) ICH = Transplantation indication changed (i.e. wrong diagnosis) FND = Other / better donor found NDF = No suitable donor found NPH = Send new phenotype list</p>

¹ The transplantation of the donor or CBU may be planned or performed

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
				NML = Send new match list RCM = Send new phenotype list and new match list (complete match list) OTH = Other reason UNK = Unknown reason
REASON_CNCL	REQ_CAN	Reason for request cancellation	A3	ATX = Autologous Transplantation RMT = BMSC Transplantation with related donor ¹ UMT = BMSC Transplantation with unrelated donor ¹ RCT = CBSC Transplantation with related CBU ¹ UCT = CBSC Transplantation with unrelated CBU ¹ RPT = PBSC Transplantation with related donor ¹ UPT = PBSC Transplantation with unrelated donor ¹ GCC = Good clinical condition of patient (i.e. remission) BCC = Clinical condition of patient deteriorated (i.e. relapse) PDC = Patient deceased before transplantation PAT = Patient responds to alternative therapy PPR = Patient withdrawal (non medical, personal reasons) ICH = Transplantation indication changed (i.e. wrong diagnosis) FND = Other / better donor found NDF = No suitable donor found COR = Correction of request HMM = HLA mismatch DRR = Donor related reason OTH = Other reason UNK = Unknown reason
REC_DATE1	SMP_REQ	Earliest date of sample reception	D8	Date format YYYYMMDD
REC_DATE2	SMP_REQ	Latest date of sample reception	D8	Date format YYYYMMDD
REF_CODE	ALM_REQ, ALM_RES, TYP_REQ, TYP_RES, SMP_REQ, SMP_ARR, SMP_INFO, SMP_RES, IDM_REQ, IDM_RES, RSV_REQ, RSV_RES, WOR_REQ, MARR_STAT, REQ_CAN, NO_RES, RES_REM, MSG_DEN, WARNING, CBR_REQ, RSV_NOT	Reference code	A15	
REG_RCV	All messages	Receiving EMDIS registry	N4	ION (i.e. 6939) of receiving EMDIS registry. See [3].
REG_SND	All messages	Sending EMDIS registry	N4	ION (i.e. 6939) of sending EMDIS registry. See [3].
REMARK	TYP_REQ, TYP_RES, SMP_REQ, SMP_ARR,	Remark	A120	Free form; see note 1 in the appendix

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
	SMP_RES, IDM_REQ, IDM_RES, RSV_REQ, RSV_RES, WOR_REQ, MARR_STAT, REQ_CAN, NO_RES, RES_REM, MSG_DEN, WARNING, MSG_ACK, RSV_NOT			
REMARK	SMP_INFO	Remark	A255	Free form, see note1 in the appendix
REQ_DATE	TYP_REQ, SMP_REQ, IDM_REQ, RSV_REQ, WOR_REQ, RES_REM	Request date	D8	Date format YYYYMMDD
REQ_TYPE	REQ_CAN, NO_RES	Type of request	A3	ALM = Alternative Match List (ALM) request BLS = Blood sample request CBR = Cord Blood Unit Report IDM = Infectious disease marker request RSV = Donor reservation request TYP = Typing request WOR = Workup request (stem cell donor, PBSC, DLI, or CBU)
RES_TYPE	RES_REM	Type of result reminded	A9	ALM_RES = Alternative match list request result CBR_RES = Cord Blood Unit Report request result IDM_RES = Infectious disease marker request result MARR_STAT = Workup request result RSV_RES = Donor reservation request result SMP_ARR = Sample request arrival notification SMP_RES = Sample request result TYP_RES = Typing request result
RESOLUT	TYP_REQ	Resolution required	A11	Character string with fixed length in which each position represents a HLA locus. The coding of the resolution required for every position is: "S" = serological "L" = DNA low resolution "M" = DNA medium resolution "H" = DNA high resolution "-" (hyphen) = not requested The character string is interpreted from left to right, with position 1 as the leftmost position. The positions for the HLA loci are defined as: Position 1: HLA-A Position 2: HLA-B Position 3: HLA-C Position 4: HLA-DRB1 Position 5: HLA-DRB3

FIELD CODE	MESSAGES	FIELD DESCRIPTION	FIELD TYPE	RULE or INTEGRITY
				Position 6: HLA-DRB4 Position 7: HLA-DRB5 Position 8: HLA-DQA1 Position 9: HLA-DQB1 Position 10: HLA-DPA1 Position 11: HLA-DPB1
SEND_PREF	CBR_REQ	Preferred sending method of CBU report	A1	E = E-mail F = Fax
SENT_DATE	TXT_MSG	Date text message was sent	D8	Date format YYYYMMDD
TOTAL_AB	MATCH_SUM	Total number of matching AB typed stem cell donors	N5	
TOTAL_DR	MATCH_SUM	Total number of matching ABDR typed stem cell donors	N5	
TOTAL_CB	MATCH_SUM	Total number of matching cord blood units	N5	
TRNS_MEDIUM	WOR_REQ	Transport medium for marrow	A10	RPMI, HANKS, OTH, NOPREF
TRX_DATE	MARR_STAT	Date of the transplantation	D8	Date format YYYYMMDD
TXT_LINE _n	TXT_MSG	Line of text	A60	Free form; n = 1..20; see note 1 in the appendix
URGENT	TYP_REQ, SMP_REQ	Urgent request	A1	Y = Yes N = No (default)
VIROL_DATE	MARR_STAT	Date virology	D8	Date format YYYYMMDD
VIROL_OK	MARR_STAT	Result virology	A1	P = Positive N = Negative Q = Questionable / Uncertain
WOR_REQ_TYPE	WOR_REQ	Workup request type - preferred	A4	PBSC = Request a PBSC collection SCD = Request the workup of a stem cell donor CBU = Request a cord blood unit DLI = Donor Leukocyte Infusion
ZIP	NEW_ADD	ZIP Code	A10	Free form; see note 1 in the appendix

Appendix

Note 1: Use of special characters in free text fields

In order to avoid errors, when exchanging information between various computer systems, it is not allowed to use characters from the extended ASCII character set (characters with umlauts or various accent-marks) in e.g. the first and/or last name of the patient (PAT_UPD message), the address information for centres (NEW_ADD message), or the free text messages (TXT_MSG).

See also the comments about alphanumeric fields in section 1.

NEW_ADD messages containing ship-to addresses (i.e. transplant centres to ship samples to) should not contain P.O. boxes.

The following characters are allowed in the free form fields in the NEW_ADD message:

()	(parentheses)	
,	(comma)	
:	(colon)	
;	(semi-colon)	
&	(ampersand)	
@	(at sign)	- limited to EMAIL field only
_	(underscore)	- limited to EMAIL field only
+	(plus sign)	- limited to PHONE and FAX fields only

Note 2: Number of tubes requested in a sample request or marrow request

The maximum amount of material, requested in one sample request or pre-collection sample request, is 100 ml, if not stated otherwise in the national rules. If the number of tubes is unassigned, not given in the request, the default value number of tubes is one.

Note 3: HLA / DNA values according to International Nomenclature

Information about the nomenclature for HLA and DNA values can be found here:

- WHO Nomenclature for factors of the HLA system <http://hla.alleles.org>
- WMDA HLA Guidelines <http://www.worldmarrow.org>
- NMDP Multiple Allele Codes http://bioinformatics.nmdp.org/HLA/Allele_Codes/

References

[1] WMDA Collaboration Platform - Confluence Cloud
<https://collaboration.wmda.info/display/EMDIS/EMDIS>

[2] ZKRD EMDIS project website:
<http://www.emdis.net>

[3] List of organizations including IONs
<https://share.wmda.info/display/WMDAREG/Database>