

Stability and chemical bonding in series of inverse sandwich actinide boride clusters (An_2B_8) with δ bond

Shu-Xian Hu,^{a,b,*} Hai-Tao Liu,^c Zhi-Yu Wei,^a Bo Wang,^a Rui-Min Zuo,^a Ping Zhang^c

^a Department of Physics, University of Science and Technology Beijing, Beijing 100083, China.

^b Beijing Computational Science Research Center, Beijing 100193, China.

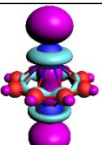
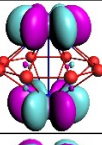
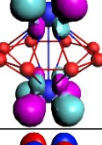
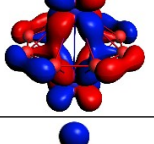
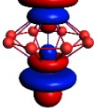
^c Institute of Applied Physics and Computational Mathematics, Beijing 100088, China.

*Corresponding Authors: hushuxian@csrc.ac.cn (S.-X.H.)

Table S1. The relative energies (ΔE , eV), T1 diagnostic and S^2 (ideal value in parentheses) for the first isomers of U_2B_8 from the DLPNO-CCSD(T) calculations with three basis sets, along with the relative energy from PBE calculations with plane-wave basis.

Isomers (ideal S^2)	PBE	cc-pvtz-dk3(U)/cc-pvtz-dk(B)			SARC-DKH-TZVP(U)/DKH-def2-SVP(B)			TZP-DKH		
		ΔE	T1	S^2	ΔE	T1	S^2	ΔE	T1	S^2
ISO0 (6.00)	0.00	0.00	0.018	6.00	0.00	0.019	6.00	0.00	0.044	6.12
ISO1 (6.00)	0.46	0.93	0.020	6.00	0.48	0.022	6.00	2.06	0.057	6.20
ISO2 (6.00)	0.99	1.76	0.024	6.00	1.54	0.027	6.00	0.31	0.024	6.00
ISO3 (0.00)	1.03	4.88	0.019	0.00	3.46	0.022	0.00	3.47	0.019	0.00
ISO4 (12.00)	1.17	2.59	0.029	12.00	2.61	0.031	12.00	2.90	0.029	12.00

Table S2. Energy, occupation number (Occ.), iso-surface, type and percent compositions of the valence molecular orbitals of U_2B_8 at the PBE0/TZ2P levels of theory.

Energy	Occ.	MOs	Isosurface	type	U			B	
					7s	6d	5f	2p	2s
-1.942	0	$6a_{1g}$		$6d\sigma_g$	21.65	42.98		22.95	-1.51
-2.138	0	$1e_{3g}$		$5f\phi_g$			92.72	7.26	
-2.922	0	$2e_{2u}$		$5f\delta_u$		21.56	74.50	3.07	
-4.602	2	$2e_{2g}$		$5f\delta_g$		1.78	70.83	26.41	
-5.503	1	$4a_{2u}$		$5f\sigma_u$	1.40	14.17	81.56	2.23	

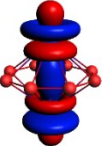
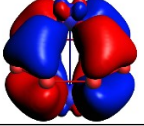
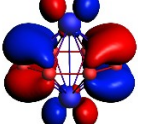
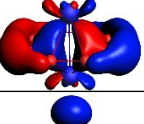
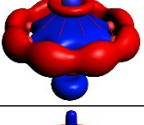
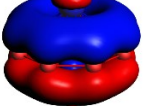
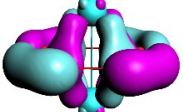
-5.704	1	5a _{1g}		5fσ _g	1.72		94.08	1.05	
-5.989	4	1e _{2u}		(d-p)δ		37.36	20.86	34.94	
-6.118	4	2e _{1g}		(d-π)π		19.22	2.76	62.75	
-6.725	4	3e _{1u}		(d-π)π		11.31	8.27	51.53	20.23
-7.508	2	4a _{1g}		π _{B-B}		33.30	2.29	45.30	10.67
-8.146	2	3a _{2u}		π _{B-B}	17.62	5.60	8.03	71.82	

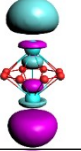
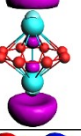
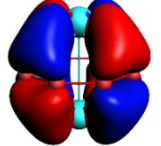
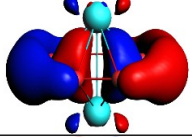
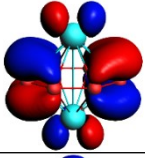
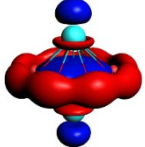
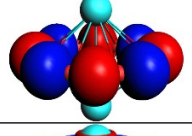
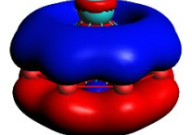
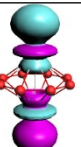
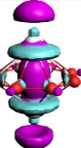
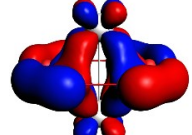
Table S3. The selected bond length (Å, R), bond order (MBO, GJBO, NMBO), spin density ($|e|$, $\mu(\text{An})$) and charge ($|e|$, $Q(\text{An})$ and $Q(\text{B})$), and the measure of 5f-5f overlap ($S(f_{\text{An}}, f_{\text{An}})$) in An_2B_8 compounds.

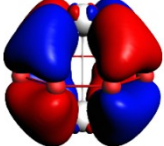
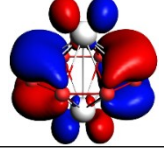
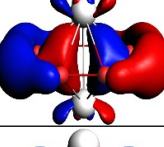
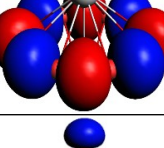
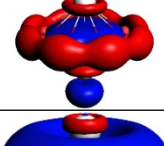
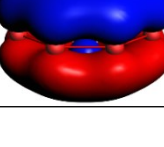
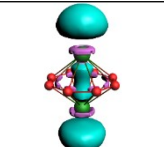
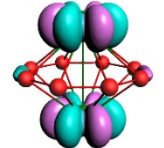
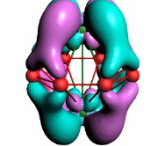
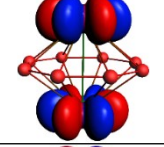
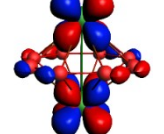
Species	An-An bond order			An-B		B-B		$\mu(\text{An})$	$Q(\text{An})$	$Q(\text{B})$	$S(f_{\text{An}}, f_{\text{An}})$
	MBO	GJBO	NMBO	R	NMBO	R	NMBO				
Th ₂ B ₈	0.90	0.51	0.53	2.677	0.56	1.552	1.23	0.00	0.69	-0.17	-
Pa ₂ B ₈	1.06	1.08	1.27	2.566	0.73	1.554	1.15	0.34	0.67	-0.17	0.139
U ₂ B ₈	0.83	0.80	1.21	2.567	0.75	1.543	1.21	1.89	0.73	-0.18	0.124
Np ₂ B ₈	0.76	0.71	1.20	2.585	0.77	1.540	1.22	3.27	0.73	-0.18	0.109
Pu ₂ B ₈	0.73	0.20	0.25	2.639	0.41	1.548	1.28	4.57	0.76	-0.19	0.094
Am ₂ B ₈	0.66	0.26	0.13	2.714	0.25	1.551	1.36	6.84	0.77	-0.19	0.079
Cm ₂ B ₈	0.60	0.35	0.35	2.667	0.44	1.554	1.29	7.69	0.78	-0.20	0.054
B ₈ (D _{8h})						1.560	1.30			0.00	
B ₈ (D _{7h})						1.789/1.554	0.40/1.26			-0.35/0.05	

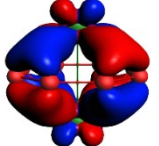
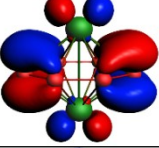
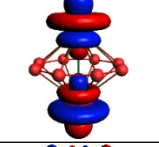
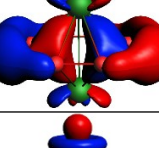
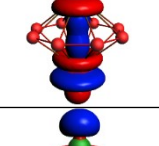
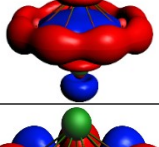
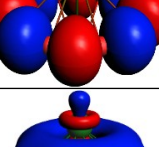
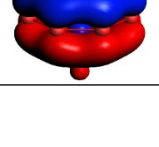
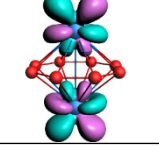
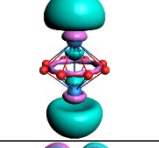
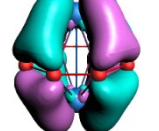
*MBO: Mayer bond-order analysis GJBO: Gopinatan-Jug bond order analysis; NMBO: Nalewajski-Mrozek bond order analysis 5f-5f direct overlap is indicated by the value of $S(f_{\text{An}}, f_{\text{An}}) = \text{integrate area}/(R_{\text{An-An}})^2$.

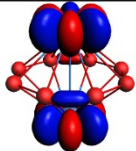
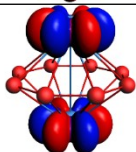
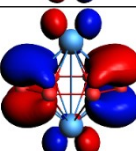
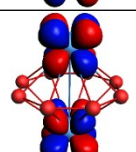
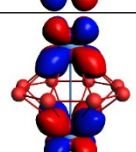
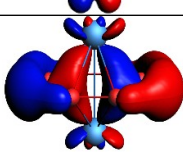
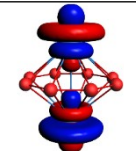
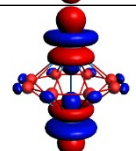
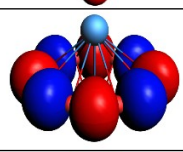
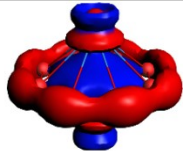
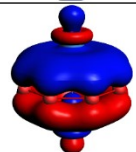
Table S4. Energy, occupation number (Occ.), iso-surface, type and percent compositions of the valence molecular orbitals of An_2B_8 at the PBE0/TZ2P levels of theory.

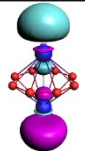
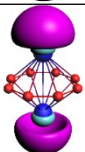
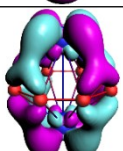
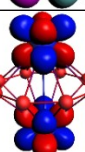
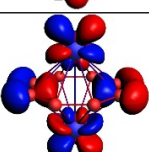
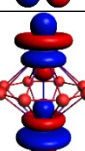
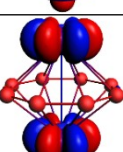
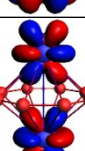
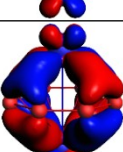
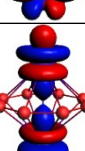
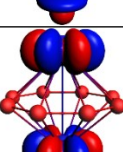
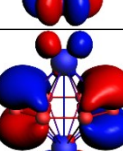
Energy	Occ	MOs	Isosurface	Th			B	
				7s	6d	5f	2p	2s
-1.303	0	2e _{2g}			3.46	7.34	83.54	-4.21

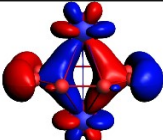
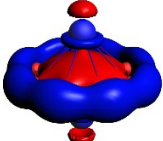
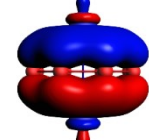
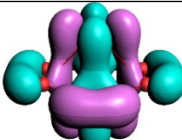
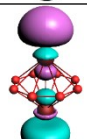
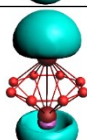
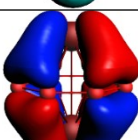
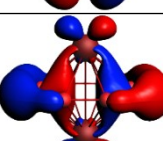
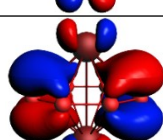
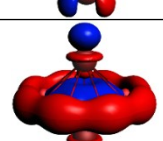
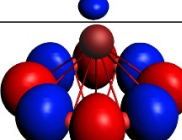
-1.513	0	4a _{2u}		48.51	35.42			
-1.732	0	5a _{1g}		52.87	5.46		1.20	-1.10
-4.803	4	1e _{2u}			48.98	2.58	43.45	
-5.875	4	3e _{1u}			11.58	4.65	59.29	17.22
-5.899	4	2e _{1g}			23.28		63.60	
-7.099	2	4a _{1g}			30.33		46.84	13.85
-7.216	2	1b _{1g}					81.36	
-7.440	2	3a _{2u}		20.51	5.11	2.18	76.36	
Energy	Occ	MOs	Isosurface	Pa			B	
				7s	6d	5f	2p	2s
-1.931	0	4a _{2u}		20.85	47.77	28.77		
-2.510	0	5a _{1g}		22.17	27.20	24.27	18.39	-1.35
-3.992	2	2e _{2g}			-1.11	42.31	51.15	

-5.717	4	1e _{2u}			47.75	6.57	38.27	
-6.181	4	2e _{1g}			20.19	4.49	59.49	
-7.048	4	3e _{1u}			11.39	8.00	49.11	22.27
-7.541	2	1b _{1g}					81.47	
-7.593	2	4a _{1g}			33.77		46.49	10.91
-8.101	2	3a _{2u}		18.31	8.46	2.87	73.53	
Energy	Occ	MOs	Isosurface	Np			B	
				7s	6d	5f	2p	2s
-1.804	0	6a _{1g}		45.61	24.73		10.15	-2.13
-2.774	0	2e _{3u}				93.79	4.59	
-3.251	0	2e _{2u}			41.55	37.16	19.15	
-4.240	2	1e _{3g}				96.14	3.50	
-5.182	2	2e _{2g}			2.05	81.87	15.35	

-5.763	4	1e _{2u}			14.90	59.96	20.62	
-5.903	4	2e _{1g}			18.89	2.32	63.69	
-5.971	1	4a _{2u}		3.28	10.62	79.50	7.12	
-6.431	4	3e _{1u}			10.80	8.54	53.34	18.59
-6.457	1	5a _{1g}			1.17	92.15	2.51	1.62
-7.411	2	4a _{1g}			29.13	5.61	46.01	11.53
-7.413	2	1b _{1g}					80.86	
-7.976	2	3a _{2u}		16.50	3.76	14.19	68.48	
Energy	Occ	MOs	Isosurface	Pu			B	
				7s	6d	5f	2p	2s
-1.831	0	4e _{1u}			12.36	81.85	2.82	
-1.844	0	6a _{1g}		52.46	9.48		1.24	
-3.102	0	2e _{2u}			48.87	8.18	35.43	

-5.135	2	$2e_{3u}$				92.89	3.99	
-5.396	2	$1e_{3g}$				97.59	1.88	
-5.717	4	$2e_{1g}$			14.75	1.34	66.36	
-5.771	2	$2e_{2g}$			2.87	87.53	8.88	
-6.056	4	$1e_{2u}$			1.23	88.81	7.85	
-6.089	4	$3e_{1u}$			5.31	9.29	60.01	15.27
-6.427	1	$4a_{2u}$		10.75	7.89	66.54	16.46	
-6.882	1	$5a_{1g}$		1.35	5.53	74.16	11.83	3.20
-7.370	2	$1b_{1g}$					80.79	
-7.389	2	$4a_{1g}$			20.31	23.36	34.63	14.88
-7.856	2	$3a_{2u}$		13.07	1.40	28.63	59.33	
Energy	Occ	MOs	Isosurface	Am			B	
				7s	6d	5f	2p	2s

-1.451	0	5a _{2u}		59.78	21.43			
-1.927	0	6a _{1g}		54.36				
-2.909	0	2e _{2u}			35.29	35.48	24.42	
-4.869	2	2e _{2g}				88.68	10.14	
-5.036	2	4e _{1u}			9.36	43.46	34.01	5.77
-5.330	1	4a _{2u}		4.08	3.75	90.12	2.55	
-5.490	2	2e _{3u}				95.31	2.77	
-5.568	2	3e _{1g}				94.94	3.46	
-5.570	2	1e _{2u}			10.79	62.35	22.49	
-5.594	1	5a _{1g}		1.66		94.86	2.20	
-5.687	2	1e _{3g}				98.30	1.57	
-6.340	4	2e _{1g}		12.87		3.23	66.01	

-6.357	4	$3e_{1u}$				52.89	36.10	5.94
-7.270	2	$4a_{1g}$			17.68	3.78	54.81	15.58
-7.521	2	$3a_{2u}$					80.99	19.87
Energy	Occ	MOs	Isosurface	Cm			B	
				7s	6d	5f	2p	2s
-1.478	0	$3e_{2g}$			25.20		64.96	-1.86
-1.563	0	$5a_{2u}$		64.50	25.15			
-2.034	0	$6a_{1g}$		54.82			-1.29	
-5.010	2	$2e_{2u}$			49.51	1.76	42.89	
-5.749	4	$4e_{1u}$			13.86	4.97	58.65	11.02
-6.550	4	$3e_{1g}$			13.52		70.26	
-7.361	2	$5a_{1g}$			20.42	4.98	50.50	15.37
-7.600	2	$1b_{1g}$					80.88	

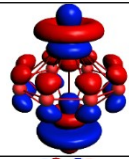
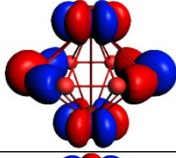
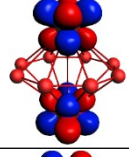
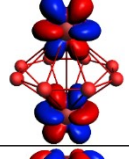
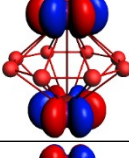
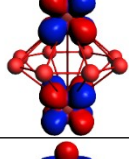
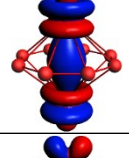
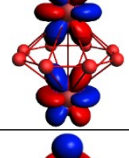
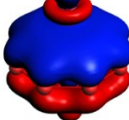
-7.762	1	4a _{2u}		11.87	6.15	53.13	32.36	
-7.943	2	2e _{3u}				72.06	19.08	4.38
-8.185	2	2e _{2g}			2.24	91.77	3.83	1.29
-8.308	2	2e _{1g}			0.70	98.79		
-8.353	2	1e _{3g}				99.19	0.75	
-8.412	2	1e _{2u}				97.21	2.11	
-8.516	1	4a _{1g}		1.61	1.62	94.07	1.57	
-8.536	2	3e _{1u}				92.94	4.21	1.51
-8.926	2	3a _{2u}		10.17	1.48	45.46	44.62	

Table S5. The relative energies (ΔE , eV) between two magnetic structures (FM and AFM), and the corresponding local magnetization (μ_B) on actinide elements and the distance (\AA) for An-B ($R_{\text{An-B}}$) and An-An ($R_{\text{An-An}}$) in bulk ThB₆ from PBE calculations with plane-wave basis.

Species		ΔE	Magnetization	$R_{\text{An-B}}$	$R_{\text{An-An}}$
ThB ₆	FM	0.00	-	3.029	4.123
	AFM	0.00	-	3.028	4.122
PaB ₆	FM	0.00	1.001	2.996	4.081
	AFM	0.46	1.001	2.985	4.065
UB ₆	FM	0.00	2.891	3.036	4.134
	AFM	0.12	2.926	3.035	4.13
NpB ₆	FM	0.00	4.328	3.039	4.132
	AFM	4.08	4.060	3.028	4.123

PuB ₆	FM	0.00	5.770	3.056	4.158
	AFM	10.75	5.424	3.029	4.126
AmB ₆	FM	0.00	6.939	3.063	4.167
	AFM	0.28	6.918	3.064	4.169
CmB ₆	FM	0.00	6.817	3.026	4.122
	AFM	10.90	6.86	3.029	4.124

Table S6. The relative energies (ΔE , eV) between two spin state (nonet and 13-state) from CASPT2 calculations with three active spaces, CAS(12e, 12o), CAS(12e, 14o) and CAS(20e, 16o).

ΔE	Nonet	13-state
CAS(12e, 12o)PT2	0.00	3.32
CAS(12e, 14o)PT2	0.00	4.27
CAS(20e, 16o)PT2	0.00	4.75

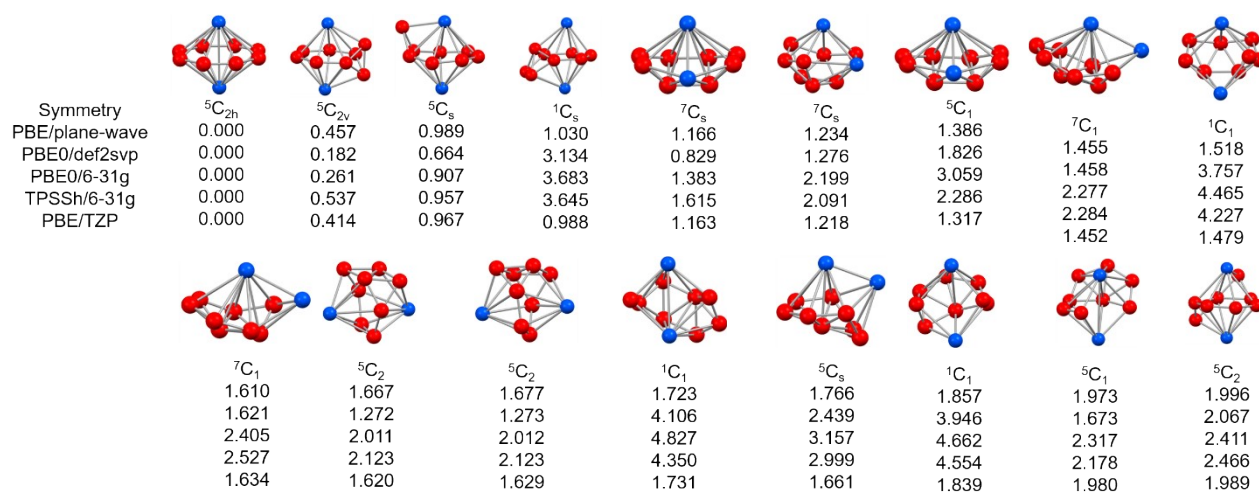


Figure S1. The global minimum and low-lying eight isomers of U₂B₈. Relative energies for the isomers of U₂B₈ are given in eV at the five different levels of theory.

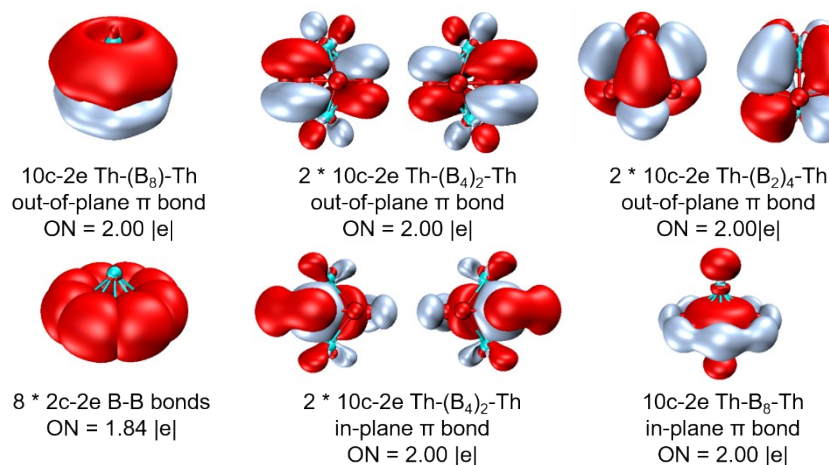


Figure S2. AdNDP analysis for Th₂B₈. ON denotes the occupation number and is equal to 2.00 |e| in the ideal case.

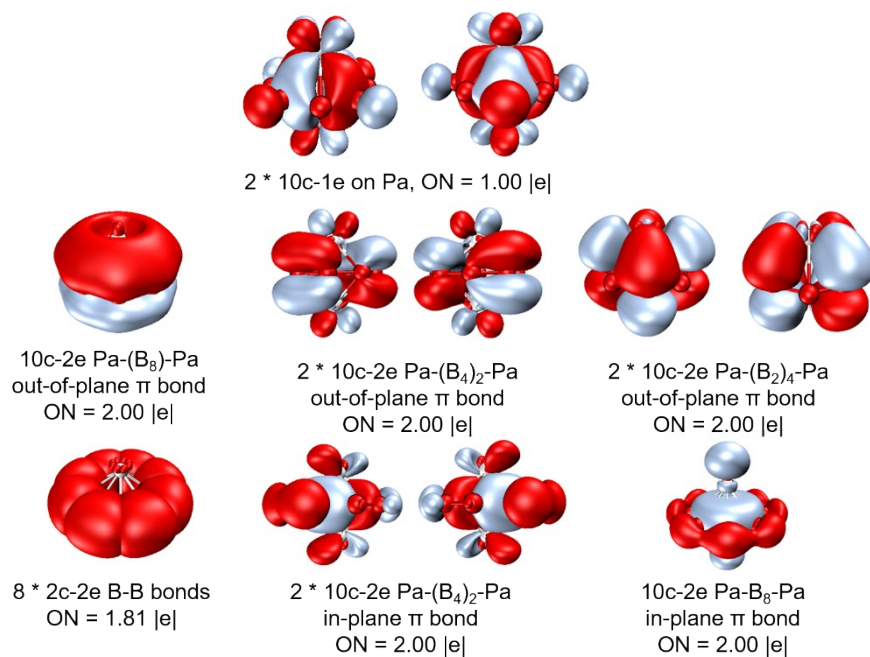


Figure S3. AdNDP analysis for Pa₂B₈. ON denotes the occupation number and is equal to 2.00 |e| in the ideal case.

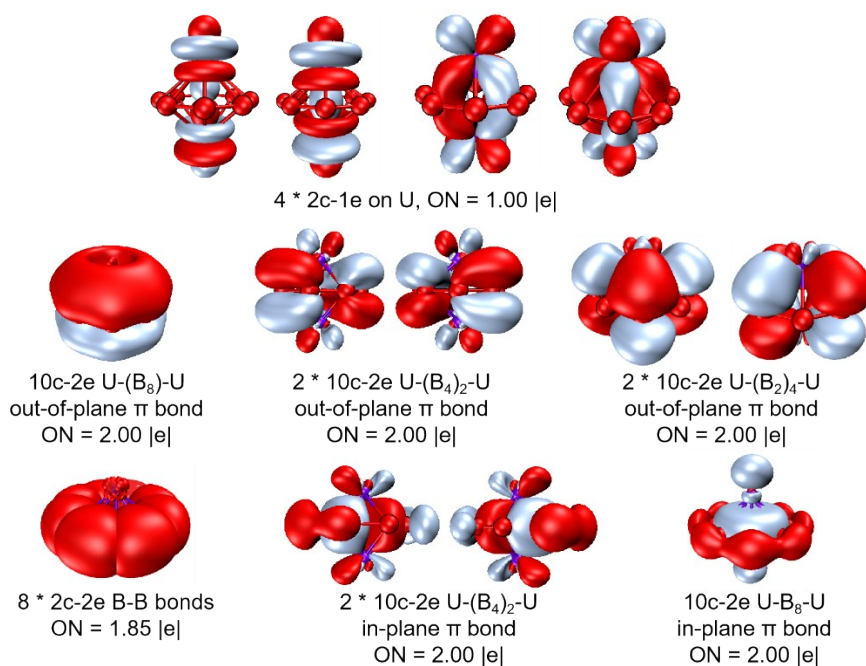


Figure S4. AdNDP analysis for U₂B₈. ON denotes the occupation number and is equal to 2.00 |e| in the ideal case.

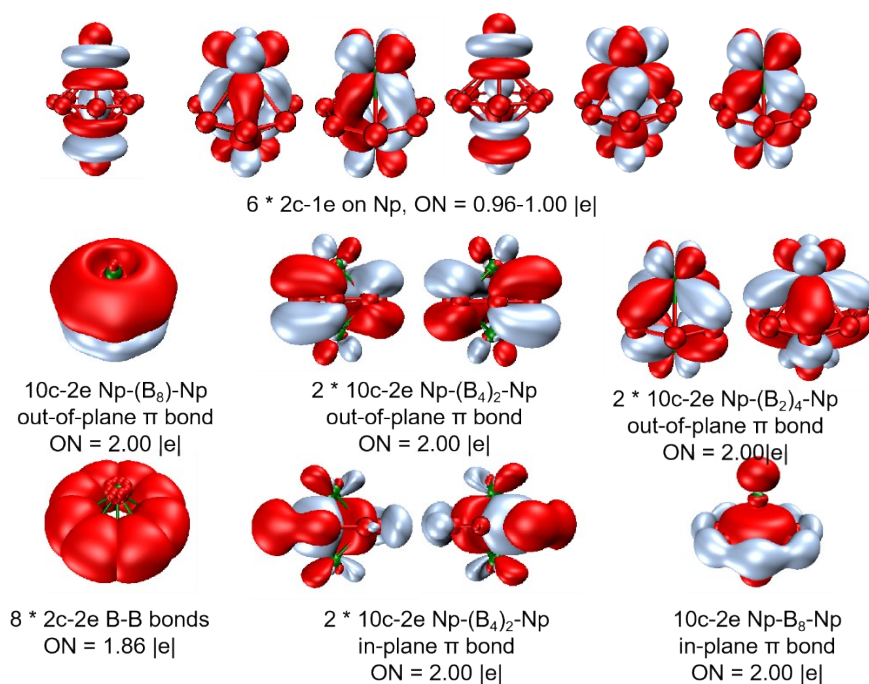


Figure S5. AdNDP analysis for Np₂B₈. ON denotes the occupation number and is equal to 2.00 |e| in the ideal case.

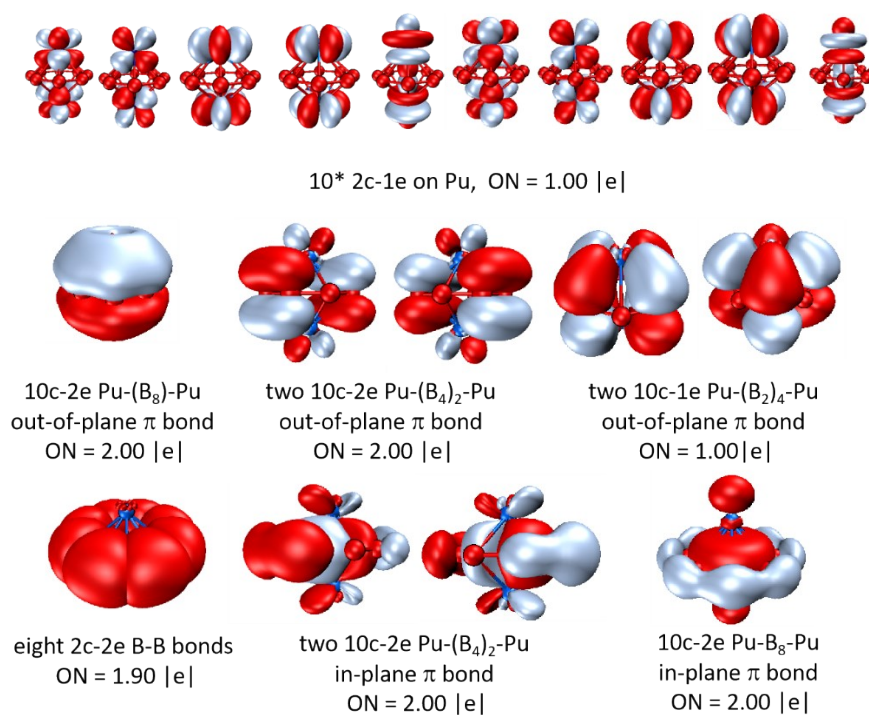


Figure S6. AdNDP analysis for Pu₂B₈. ON denotes the occupation number and is equal to 2.00 |e| in the ideal case.

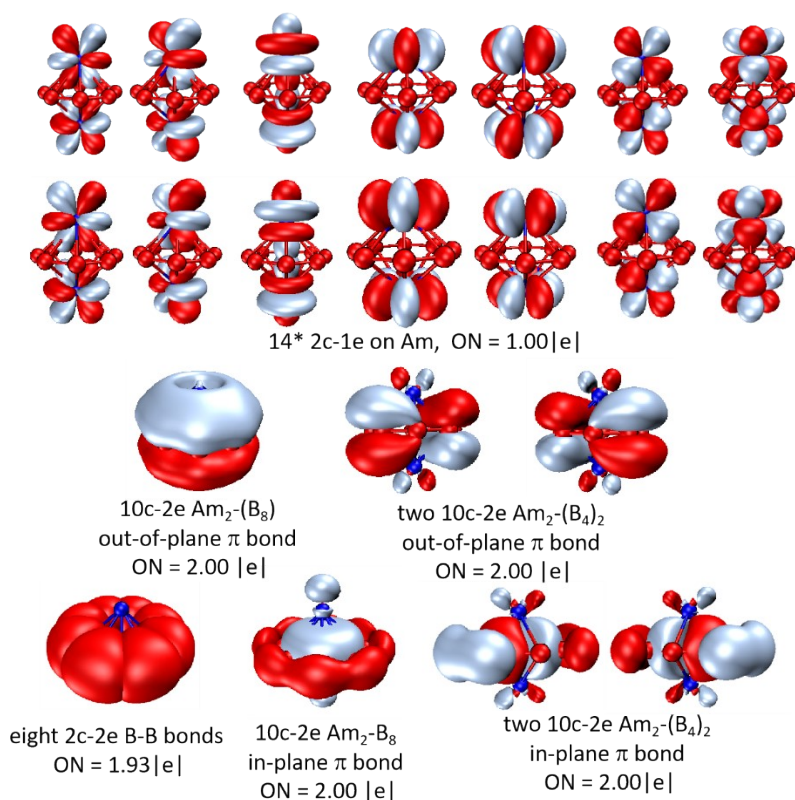


Figure S7. AdNDP analysis for Am_2B_8 . ON denotes the occupation number and is equal to 2.00 |e| in the ideal case.

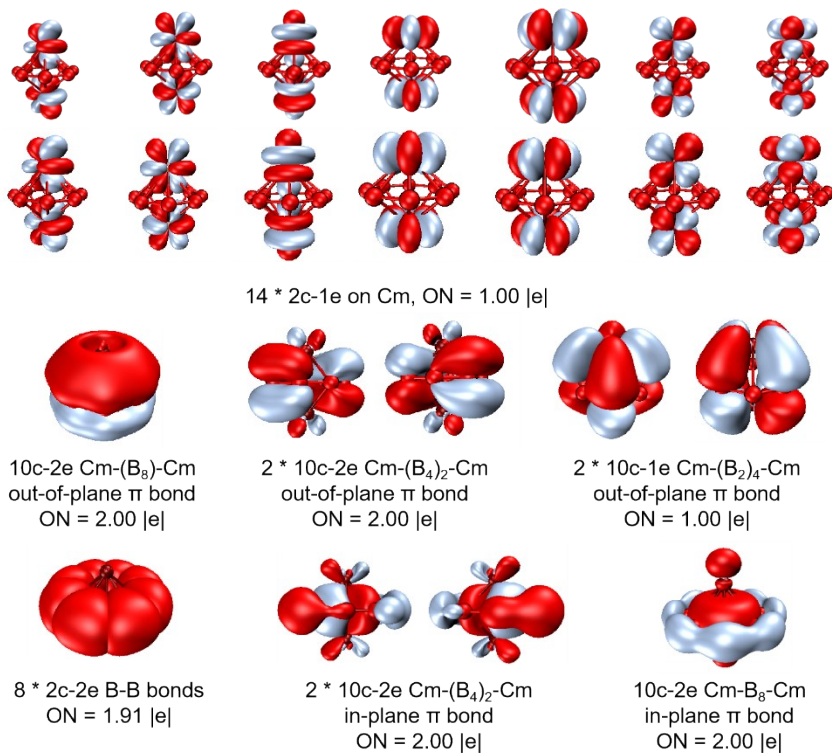


Figure S8. AdNDP analysis for Cm_2B_8 . ON denotes the occupation number and is equal to 2.00 |e| in the ideal case.

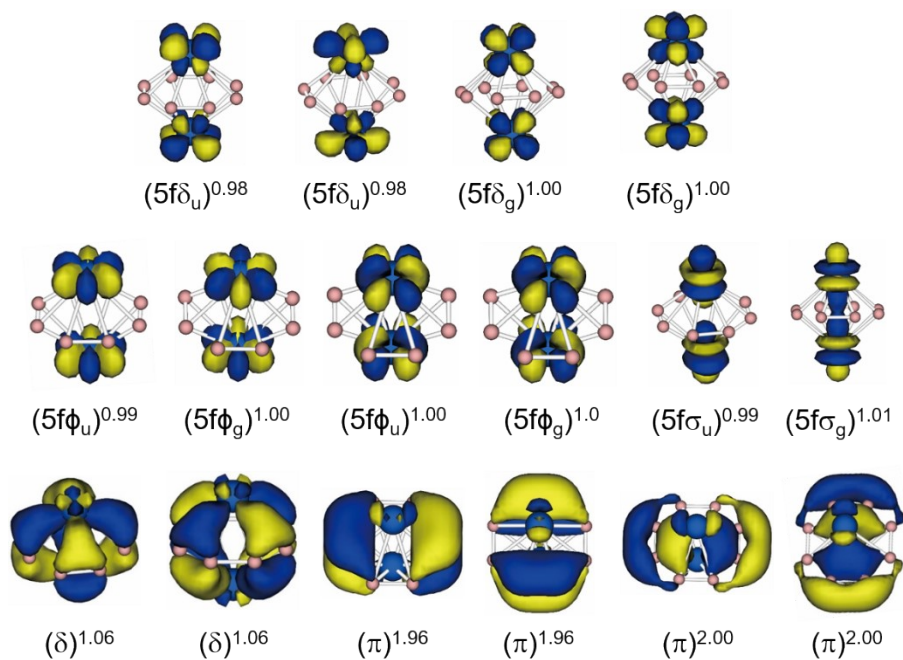


Figure S9. Pu_2B_8 orbitals predicted by CASSCF (20e, 16o) for the nonet spin state along with the occupation number of the orbitals.

Table S7. Coordinates of the global minimum U_2B_8 at the PBE/planewave level (in Å) using VASP 5.0 software.

ISO0_0.000_M4

10

U2B8

U 11.25655041 11.04792422 9.52260023

U 9.53487249 8.64213338 10.66013157

B 8.77736675 11.05374518 10.20060225

B 12.01405605 8.63631242 9.98212965

B 9.61974923 11.06365033 11.49487227

B 11.17167357 8.62640727 8.68785953

B 10.91393569 10.36156883 11.96700393

B 9.87748711 9.32848877 8.21572787

B 11.90588769 9.35498373 11.34318043

B 8.88553511 10.33507387 8.83955137

ISO1_0.457_M4

10

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B 10.25298496 8.46787105 8.96732556
B 9.15257847 9.72673617 8.77073595
B 11.85470898 9.03947270 11.22047037
B 11.60423156 8.41814068 9.80383355
B 8.65941919 8.30075659 9.48317041
B 8.58452404 9.73825592 10.35548629

ISO2_0.989_M4

10

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B 7.94156007 9.29610913 8.59434513
B 10.05042425 7.53133788 9.24326858
B 9.66529317 10.96811572 10.12657862
B 11.08462532 8.45295213 9.93807269
B 8.44530441 10.66262632 9.12457086
B 8.69179741 7.92364682 8.57375556
B 10.88630259 9.94536402 10.50361164
B 9.84970444 10.46504728 11.71701470

ISO3_1.030_M0

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B 11.20141446 8.49708381 9.81847836
B 11.45663552 9.76807293 10.77432397
B 10.16637450 10.78614765 10.91286356
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ISO4_1.166_M6

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B 9.22414083 10.31590723 10.66033976
B 10.59967848 10.87855007 10.04379728
B 8.85745824 7.67016543 8.21212235
B 10.20611493 8.03764351 7.41511818
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ISO5_1.234_M6

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B 8.48102383 10.76146603 9.58470462
B 9.67567332 7.60069139 10.89449028
B 10.17425398 8.67669727 8.02298319
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ISO6_1.386_M4

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B 9.47099917 11.34780005 10.44970617
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ISO7_1.455_M6

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ISO8_1.455_M6

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B 9.94330904 9.75243773 7.35416598
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ISO9_1.518_M0

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ISO10_1.518_M0

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B 9.22106392 8.62620139 10.79449389
B 8.10388341 8.85166912 9.64895002
B 8.08520435 10.07305689 8.54175744

ISO11_1.610_M6

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B 11.26692719 8.33100647 8.83969304
B 9.64218012 7.90018570 9.21734956
B 10.20678644 8.84224768 7.60520972
B 10.94799514 8.54514651 10.49917452
B 11.43324672 9.79942403 8.10135813
B 9.41658349 8.33157499 10.87938861
B 8.67391031 8.62246405 7.97577427

ISO12_1.677_M4

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U2B8

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U 8.96503798 11.32326754 8.08950877
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B 8.27539230 9.18791183 8.82286675
B 10.61165761 11.66889311 9.67111894
B 9.85058295 9.14629227 8.26897314
B 9.05641092 10.10375662 11.55359674
B 8.10855054 10.12140464 10.16821999
B 10.54637859 10.43981476 10.81017044
B 9.15908357 11.41504946 10.51336303

ISO13_1.677_M4

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U2B8

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B 8.98847275 10.07526587 7.22661219
B 10.76726686 8.86690094 9.29691314
B 9.84269521 11.02083408 8.31691788
B 11.30230839 10.41784277 8.94244527
B 8.13496750 9.31072485 9.98290485
B 9.52373122 8.43280224 10.28533137
B 10.51107660 9.53808065 7.75419854

ISO14_1.723_M0

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U2B8

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B 11.34996609 11.22372807 9.82866713
B 11.03802437 10.20900985 11.06344769
B 9.04671418 7.61067107 9.82204264
B 11.82045215 8.06687110 9.11012723
B 11.83948684 9.63428877 9.65290574
B 11.05521618 9.14476809 8.05240294
B 10.21844002 7.87567771 8.72709484

ISO15_1.723_M0

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U2B8

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U 8.84625680 10.27265728 7.99697225
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B 11.01985900 9.53679596 8.58218100
B 8.85048157 10.66261212 10.32555178
B 8.61916035 7.99235362 8.07402414
B 11.09241175 8.43515134 9.86553676
B 10.17965569 8.10872816 8.51404959
B 10.88871590 9.08356585 11.32814934
B 10.46977461 10.16858427 10.01401982

ISO16_1.766_M4

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U2B8

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B 8.70517013 9.74779097 11.09319567
B 8.82256449 8.28177882 8.03737132
B 9.87468339 8.76962131 10.57301620
B 8.33962620 9.17861986 9.42734717
B 7.76457734 10.61178835 10.19788801
B 7.93341351 10.74662754 8.65297725

ISO17_1.857_M0

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U2B8

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B 7.90867191 11.31413186 9.16045441
B 9.74017840 8.25404023 8.79846320
B 7.35071321 9.93477574 9.78197168
B 10.22901385 8.56788837 10.35286910
B 7.64862400 9.15226258 11.16996386
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B 8.43561462 8.53672762 9.81359196

ISO18_1.973_M4

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U 10.93251183 11.49085746 9.88187725
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B 8.92489018 10.81138358 10.81138614
B 7.78158599 9.73283246 10.56816684
B 12.12235677 9.82209080 11.03457796
B 9.01970419 9.91930816 9.33607073
B 7.93704444 8.52794354 9.60339770
B 11.81822232 9.31436318 9.59629656
B 9.16046412 8.30443922 8.67470134

ISO19_1.973_M4

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B 10.10446803 11.47967214 9.46089471
B 8.92695593 8.23930242 8.99921090
B 9.51582054 11.92398712 10.86996029
B 9.49677123 8.63477514 10.46407993
B 8.94745663 10.92239723 11.90942826
B 8.58103504 9.04863585 7.71689063
B 9.00791657 9.37849734 11.76057026

ISO20_1.996_M4

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U2B8

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B 9.61206100 9.61206100 11.42762941
B 9.98600094 8.08796902 10.43354003
B 9.23812106 11.13615298 10.43354003
B 10.41466133 11.04948866 11.52851933
B 8.80946067 8.17463334 11.52851933
B 10.01089312 8.28533503 8.84926975
B 9.21322888 10.93878697 8.84926975

ISO21_2.047_M4

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U2B8

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U 10.24997200 10.47742487 7.35494844
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B 11.03229131 11.63966843 9.31626075
B 8.40857652 9.06762166 10.22410426
B 11.83457183 10.21641080 9.17827988
B 9.46226820 11.69109761 9.28415576
B 9.32543592 8.78773664 8.92969033
B 8.58822173 10.31246635 9.11386258
B 11.01946579 8.74268051 8.95846925

ISO22_2.072_M4

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U2B8

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U 10.02317189 8.88156829 11.23895015
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B 10.59602680 8.99269082 8.80295869
B 8.26099406 11.97272842 10.01339907
B 10.88179667 10.49599776 9.61751762
B 8.11124456 10.45657283 10.59416883
B 11.80162214 9.16444465 9.88705935
B 9.65609025 11.23205462 10.45690577
B 8.00442090 9.01926872 9.86586471

ISO23_2.101_M6

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U2B8

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B 9.08944531 9.10732175 7.60108921
B 10.62349302 8.52881235 9.83709182
B 10.27580331 8.07267768 8.17512958
B 10.38757575 9.63617537 8.62012179
B 8.92011420 10.43391453 8.70319990
B 7.97180821 9.97049197 9.98726750
B 7.63270185 9.50942942 8.32475966

ISO24_2.136_M0

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U2B8

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B 10.46545884 11.34221864 11.23283403
B 9.30779811 9.15752115 8.35637054
B 8.94686284 11.66249793 11.35581517
B 7.80467232 9.56659908 8.97806477
B 11.15411611 10.40427610 10.19683721
B 10.75499298 9.22574845 9.23062694
B 8.29463462 8.01250435 9.06079001
B 9.84768587 7.86000861 9.25960217

ISO25_2.137_M0

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U2B8

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U 10.29780862 8.93676487 8.00828439
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B 8.87611618 11.65097851 10.10932725
B 7.89000854 10.43624199 10.27404561
B 11.57358085 8.14069584 9.83909124
B 12.25934927 9.50260912 9.52575585
B 10.13820092 11.47073137 9.07778503
B 8.70375880 10.61375574 8.81076124
B 8.36592742 9.10459667 9.46060464

ISO26_2.147_M6

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U2B8

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U 10.68891715 9.74992803 7.91416534
B 9.89750210 9.01535328 10.55887592
B 9.67334199 10.71379145 10.05413374
B 8.37924557 9.35694737 10.13840712
B 8.50504621 10.56593944 8.90527701
B 11.13686325 10.08407071 10.26555132
B 11.25793213 8.46502577 9.85500260
B 7.45951023 9.21010138 8.86148520
B 8.29099328 9.57880680 7.54998929

ISO27_2.195_M4

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B 10.16300463 9.92657294 8.44175800
B 9.95732585 11.09402698 9.55569271
B 8.81367497 11.49860345 10.55736276
B 9.53057359 10.00608003 10.89592484
B 7.90219928 10.21950839 11.04444435
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ISO28_2.195_M4

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B 11.42816108 9.97251090 9.15386056

B 8.00034455 7.96859448 8.22464988

B 9.33331930 8.51888302 7.59754086

B 9.33484106 7.88298157 9.25888419

B 10.81578547 8.52567392 9.06191642

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ISO29_2.212_M4

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U2B8

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U 9.60945880 11.84123433 9.02736937

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B 6.94613649 9.26378615 9.33056499

B 10.72509062 9.58923686 9.02840047

B 8.11708761 8.49221373 10.01286067

B 9.56250379 9.16635389 10.02246877

B 8.14693949 10.17374047 10.05825124

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B 7.98575601 11.38692395 7.48315450

ISO30_2.214_M4

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U2B8

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B 10.04067196 8.82056415 11.47014667

B 11.27085046 9.79804385 11.07533018

B 8.88042732 10.84680319 9.54614581

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ISO31_2.232_M4

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B 11.51655609 10.35566195 8.53881210
B 8.48943599 8.38635562 9.84762619
B 9.51035836 8.44312387 11.23562944
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B 10.74174431 9.53976857 11.09681838

ISO32_2.232_M4

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B 11.93123132 9.69868222 9.29906587
B 10.68648751 9.53992220 8.24641068
B 8.17596839 9.01507215 9.73940566
B 8.30129219 7.45859659 10.35938724
B 11.67763520 8.23842354 8.57104453
B 9.11597622 9.28654476 8.46901058
B 8.68346376 7.65707923 8.80723741

ISO33_2.236_M8

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U2B8

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B 9.13680897 7.71897370 11.12327036
B 10.07647263 7.71897370 9.51570454
B 7.69096525 9.61339481 9.90453204

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ISO34_2.256_M6

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B 11.47708783 10.85599898 10.83364437
B 10.17411321 11.26766125 9.86383501
B 8.71807609 9.99403800 10.48313543
B 9.37210703 8.87667100 11.49262654
B 11.70484184 10.85017482 9.27773327
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ISO35_2.257_M6

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U2B8

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B 8.74497266 10.08184672 8.07605906
B 8.72529592 7.59978026 9.51278778
B 7.48437998 8.17652645 10.34350100
B 7.79934326 9.06455415 8.99962966
B 10.30187048 7.69140849 9.56051112
B 9.76539520 8.90196014 8.53347922
B 8.04341430 10.77678236 9.31253838

ISO36_2.272_M4

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U2B8

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B 10.10488703 8.27705209 10.86353834
B 8.65785144 8.49582634 10.25598640
B 10.92736804 9.68095047 10.38421014

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B 8.82500446 9.94409234 8.79571776
B 11.59104691 8.19482253 10.26578125
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ISO37_2.281_M6

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U2B8

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B 9.29485508 9.37893269 8.31961076
B 8.37057440 7.74981733 8.25257306
B 7.41486552 8.15202418 9.45293122
B 9.16230204 8.12896642 9.80320346
B 9.59585098 10.64956596 9.30015787
B 8.22982170 9.82739290 9.65419171

ISO38_2.289_M0

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U2B8

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B 8.95880358 12.36658401 8.19938093
B 9.63333382 8.40571799 9.73449467
B 8.95880358 8.40571799 8.19938093
B 10.15446472 11.19728740 8.58978979
B 8.43767268 11.19728740 9.34408581
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ISO39_2.296_M2

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U2B8

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B 8.94629183 7.75451688 8.68669260

B 9.34462208 10.93009430 9.19305047
B 7.71748142 8.72755621 9.08340815
B 10.95461130 10.60507529 9.39981455
B 8.98120998 9.42389157 8.17680328
B 7.91822116 10.25902178 9.34450355

ISO40_2.296_M2

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U2B8

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U 8.84658638 10.73709976 10.45531697
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B 10.70848313 8.06867277 10.32867301
B 9.03389664 8.23410016 10.90992505
B 7.93719821 8.38679387 9.77796930
B 9.60321637 10.05075108 8.28755965
B 9.61169493 8.54816115 9.17685262
B 10.25763652 9.07176746 11.64527578

ISO41_2.297_M4

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U2B8

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B 9.14861727 11.47629506 9.21503186
B 10.06440497 8.37075504 7.84590322
B 10.56501940 10.81623964 8.91599793
B 10.72265348 9.16372777 9.30155190
B 7.79445132 10.74024691 9.36941616
B 9.06923136 9.71931286 8.57755888

ISO42_2.310_M4

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U2B8

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B 7.83612845 9.93430690 8.84480180
B 10.99841390 9.13658489 9.62323853
B 8.76365170 11.22928842 9.25146382
B 9.90155972 8.03142868 7.20162435
B 10.10274078 10.47058616 9.92431910
B 9.88262361 9.08313176 10.87600752

ISO43_2.311_M0

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U2B8

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B 8.66521452 10.14260178 8.46688348
B 9.08655221 8.66964564 10.86251228
B 10.53996798 7.88045696 10.52419137
B 8.33514090 8.88682057 9.41493074
B 11.49450811 9.22378163 10.38644665
B 10.46723450 9.15483546 11.64827902
B 9.99867586 10.90400055 8.17456542

ISO44_2.311_M4

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U2B8

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B 8.48603811 10.02324055 8.62795441
B 9.81448033 10.59984291 10.98851669
B 8.37424623 10.57194312 10.13317639
B 9.92957894 9.26087028 11.97663673
B 7.77584535 8.98204084 9.79678180
B 9.92020809 10.79627169 9.32443363

ISO45_2.345_M6

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U2B8

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B 9.08177672 8.77557029 7.80160834
B 9.55186277 7.63158917 9.04420725
B 11.43957886 10.16325915 10.21949446
B 9.90747730 10.44513391 10.61171212
B 10.67827771 8.63186362 8.12217961
B 11.87776263 8.87192050 9.33715623
B 10.25239445 8.90483134 10.05332115

ISO46_2.346_M6

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U2B8

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B 10.19753433 9.42113133 7.89819507
B 11.63887732 9.40649393 8.84301312
B 11.22663276 10.82053417 8.16194154
B 9.88594302 9.45930213 11.05809948
B 11.24005907 8.95962672 10.35284888
B 10.35195169 10.29626304 9.68465806

ISO47_2.357_M2

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U2B8

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B 8.75032267 9.40854100 11.30035900
B 9.23286647 7.96933174 10.69620038
B 9.38345331 10.88166230 10.89721768
B 8.28362572 12.02147771 10.27719683
B 7.62549936 10.56964753 10.71572538
B 9.92408708 9.18270421 9.77313699

ISO48_2.386_M4

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U2B8

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B 9.47285170 7.42142737 10.02441255
B 9.58807236 8.83138185 7.44883110
B 11.77572101 9.35190655 9.74943293
B 10.15843648 7.83628888 8.60695374
B 10.71714595 8.40814104 10.47837019
B 11.11051117 9.17507394 8.05264320

ISO49_2.386_M4

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U2B8

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U 8.69731880 10.00704230 9.57769215
B 9.91874868 8.91900929 7.77366223
B 9.33799045 7.53861535 8.82656933
B 11.24400875 9.13817899 8.86941483
B 10.26041405 7.84599545 10.09043290
B 11.47478883 8.90170352 10.46382376
B 10.07818128 9.06896814 11.26032308
B 10.57591122 10.41959901 8.11457330
B 8.36269626 8.38275683 7.95492758

ISO50_2.389_M0

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U2B8

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U 10.18145772 12.04933720 10.48289851
B 8.91399099 10.61002301 8.76448127
B 10.39264916 10.26628438 11.89331813
B 8.08669366 11.38020622 9.86871766
B 10.47140091 8.43322809 9.51437774
B 9.03316722 7.65275750 9.37765207
B 10.99252556 9.60838254 10.58792971
B 10.48404595 10.06446605 9.04653940
B 9.28875044 9.00310494 8.47790481

ISO51_2.400_M2

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U2B8

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B 8.58559021 9.85332616 10.96074266
B 11.43213749 9.85332616 10.96074266
B 7.85740048 8.49809246 10.42765555
B 10.00886390 10.20977323 11.62990587
B 8.58552203 9.38906610 9.27549661
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B 10.00886390 9.35041810 8.51830725

ISO52_2.407_M0

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U2B8

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U 10.54851166 10.59528603 9.79131545
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B 9.23995586 7.66661397 11.44124988
B 8.55113719 7.34097649 10.04287184
B 8.59207599 10.94866729 8.29043750
B 8.56061854 9.09281789 10.49631982
B 9.87578216 10.42475380 7.53564899
B 10.07948239 9.01932979 11.47708128
B 10.03174123 8.24915859 9.91579023

ISO53_2.416_M4

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U2B8

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B 11.49640171 9.17688323 8.33486095
B 8.60490270 9.49623675 11.02890095
B 9.14972416 10.17841295 9.77826075
B 12.46613155 8.89898203 9.62014027
B 10.40737478 10.32422107 8.85160992
B 9.11770465 8.49181487 12.11680178
B 10.49984224 7.83591840 12.22667723

ISO54_2.423_M2

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U2B8

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U 7.96194782 7.61167332 12.00808901
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B 9.72050016 9.91844141 11.77230192
B 8.42412986 10.06132209 9.29598443
B 9.33568275 9.08008255 13.18673063
B 9.86008428 10.22876053 10.05017176
B 8.22447753 10.02012880 12.51918400
B 8.14446639 10.18978792 10.89699660
B 10.29947643 8.30027981 11.95876767

ISO55_2.433_M2

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U 10.56606362 8.22059021 7.92727364
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B 8.90990891 10.28579803 10.27581617
B 9.07366079 10.10172972 8.60029020
B 9.89924003 10.10287619 11.55714144
B 9.42697818 7.48705781 10.02223630
B 8.41385189 7.42354639 8.68902639
B 8.22430329 8.82289439 7.92805755
B 8.34660750 8.82328967 9.58902829

ISO56_2.441_M4

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U2B8

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U 8.61660475 9.09706510 8.82760778
B 8.53114773 10.14757007 12.49683477
B 8.16565882 10.34808353 10.85001515
B 10.95999562 9.60467476 9.85366670
B 10.96407053 10.36295396 11.30457868
B 9.48455252 11.13192608 11.65160357
B 9.70807433 10.72341454 10.06557426
B 10.59391681 8.13076619 9.28670977
B 10.18018186 10.14043850 12.74378351

ISO57_2.442_M0

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U2B8

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U 10.39637706 8.02489525 8.34850966
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B 11.88764211 9.50574370 9.81076933
B 9.27671805 8.68841846 10.38803039
B 9.70029823 10.40378300 8.09455935
B 10.90561995 8.50938708 10.62328268
B 8.81710433 10.27133874 9.84320320
B 11.22182016 10.40935869 8.71716024
B 10.39691374 10.07047645 10.26111982

ISO58_2.453_M4

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U2B8

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U 9.71312687 9.21799186 10.15184152
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B 8.47485878 11.61543706 10.65519438
B 10.06047017 9.15887303 7.78611239
B 7.59087047 11.56359236 9.26136550
B 7.53715822 10.29876325 10.31767187
B 10.03196817 11.75194236 10.89437081
B 7.53131276 10.01510688 8.69104605
B 8.53125776 9.20726228 7.77011230

ISO59_2.457_M6

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U2B8

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U 10.69056190 9.42903177 11.67406165
B 9.77976537 8.22150081 9.66938884
B 9.08757592 9.82817815 9.04996243
B 9.08376043 10.67950172 10.49049082
B 8.03189362 8.35009843 9.20948554
B 11.40729426 8.60229945 9.59407802
B 10.47557188 9.02494840 8.18994054
B 8.44423670 9.06483325 10.57386791
B 9.04405633 8.34751110 8.00562509

ISO60_2.457_M6

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U2B8

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B 8.01214849 9.93100443 9.97955050
B 8.61101198 9.75094417 11.60106757
B 10.04925559 10.34865059 11.94290300
B 10.03697354 8.68655142 11.22125253
B 10.21400405 7.55168760 10.00420936
B 11.03490115 9.06147498 9.74331565
B 9.65751814 10.16845659 10.17037737

ISO61_2.472_M2

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U2B8

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B 8.29258714 7.84261146 10.29410364
B 10.33891293 9.49000307 11.16524029
B 7.95357981 9.62149491 9.77227383
B 11.16363232 8.04990420 10.96937013
B 7.75226123 8.33102506 8.90817654
B 10.63968265 10.79337623 10.16318873
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ISO62_2.482_M4

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B 10.05002523 8.03491728 10.24083984
B 11.35314182 9.02222349 10.24071347
B 8.97887515 10.80014630 10.18894589
B 10.05002523 8.03491728 8.48019966
B 11.35314182 9.02222349 8.48032603
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ISO63_2.511_M6

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U2B8

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B 9.48683030 9.42932700 11.88287929

B 9.65263136 7.93756523 8.39202806

B 11.00165603 8.99465631 8.50257101

B 9.46687420 9.43132377 7.86770554

B 10.41732236 7.96134028 9.86808242

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ISO64_2.516_M0

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U2B8

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B 10.24152646 10.30550913 10.97916234

B 7.97347963 9.08175013 10.13886820

B 8.53923784 8.43842884 8.67705388

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ISO65_2.516_M2

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U2B8

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B 10.09665690 10.20044229 10.37100713

B 9.60452434 7.53948541 9.30460697

B 8.63668656 9.85032761 11.23436562

B 9.20456352 8.52958130 10.59125891

B 8.77830697 11.26418509 10.60438559

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ISO66_2.518_M6

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B 8.28280320 9.61103917 10.24464457

B 9.60854043 9.12172914 8.75737885

B 8.41786806 11.20092456 10.60487995

B 8.77202353 8.02292081 9.57256326

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ISO67_2.541_M0

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U2B8

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B 8.66654097 9.55250634 8.41633388

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B 9.90694960 10.52127507 8.32070881

B 8.46662208 9.96748382 11.41525045

B 9.01315150 10.48171663 9.93327945

B 10.05130132 9.10781492 9.49715358

ISO68_2.568_M2

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U2B8

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U 9.13456398 8.82259733 9.24324665

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B 11.43382383 9.77148281 10.69188651

B 9.87728297 10.00280322 11.36742158

B 10.77423234 11.05998956 10.09836760

B 8.90628552 11.11017378 10.25913370

B 8.59784781 11.00492638 8.52555254

B 8.22289920 9.99989540 11.21692972

B 9.85276181 11.75370440 9.01274386

ISO69_2.581_M4

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U2B8

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B 9.03445302 8.79091641 9.49007031
B 10.39352847 8.22405602 10.24167606
B 8.26484108 10.14745501 9.62410811
B 10.37042494 8.36908904 8.61258718
B 9.91989377 12.39770072 9.80227118
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B 8.56066241 11.66864202 9.75762831

ISO70_2.585_M2

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U2B8

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B 10.13815323 11.38553020 9.19844758
B 9.96334302 10.07460111 8.28669162
B 8.02929646 8.56609490 10.41846703
B 8.55686225 9.25895236 8.96839029
B 7.86261091 10.11347277 10.34580674
B 9.15803432 7.80215562 9.60925760

ISO71_2.586_M2

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U2B8

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U 9.64729683 10.69856171 10.86074172
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B 11.87523694 9.72971812 10.51425569
B 9.46809985 8.44737632 9.52169659
B 8.83812999 9.61674473 8.67010222
B 11.10908417 8.87815276 11.73041940

B 9.23769370 11.11149047 8.54909937

ISO72_2.591_M4

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U2B8

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U 10.75194656 10.99871932 10.62875184

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ISO73_2.591_M4

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B 8.47125751 9.79207420 11.29065098

B 7.59709214 9.22442020 10.00246758

B 8.79135910 9.11283215 8.59957079

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ISO74_2.600_M4

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U2B8

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B 9.51716674 11.52282106 9.43739716

B 9.19044154 9.86919205 8.67988541

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ISO75_2.610_M0

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U2B8

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B 9.31213882 11.70322529 9.74106732
B 9.51187571 10.40285096 8.70723234
B 10.57431182 11.66837903 8.78274731
B 11.87739106 9.09341828 9.52858042
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ISO76_2.610_M0

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U2B8

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B 8.85542367 10.95462833 11.56752168
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B 10.37802036 8.80094753 10.32185647
B 7.98950727 9.94233220 9.07513914
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ISO77_2.612_M2

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U2B8

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B 8.45831752 7.85990652 7.58454972
B 10.46114089 9.29810855 10.77994865

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B 9.76872870 7.70984486 8.47677354

ISO78_2.626_M0

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B 11.92123317 8.84940555 9.09932509
B 10.99501440 8.57838071 10.50182403
B 9.06747460 10.34917077 9.31969918
B 9.48486625 7.23841486 8.55378048
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ISO79_2.633_M4

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U2B8

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B 9.30076550 11.65758183 7.89997735
B 7.39229340 9.93230085 8.81091998
B 7.92107148 9.21165525 10.16769151
B 8.33657332 8.49146133 8.67141581
B 9.82387442 8.15916815 8.32276157
B 9.16281192 9.94681456 8.14470426

ISO80_2.643_M4

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U2B8

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B 9.50886747 8.38942571 12.20897429

B 9.48564337 10.04378186 12.17971447
B 8.08791177 9.23708943 8.25329935
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ISO81_2.651_M2

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U2B8

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B 8.68014251 8.99544314 7.46582369
B 9.70813139 11.03525991 9.19810253
B 11.06364576 10.10208960 9.61278785
B 8.56064748 10.26750857 10.19227695
B 10.12762237 9.59039334 8.18280547
B 8.47042256 10.20658278 8.45757582

ISO82_2.656_M4

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U2B8

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B 7.96190377 9.76798479 9.05655645
B 8.57637869 8.25809672 8.62745422
B 10.08118268 10.61370346 11.02698585
B 8.69629557 10.22304185 11.72748526
B 7.58634462 9.43205740 10.92902292
B 8.64344548 10.86961152 10.17252231

ISO83_2.665_M0

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U2B8

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B 10.78111572 8.96849826 11.00772789

B 7.46852190 9.27931068 8.87667301
B 9.14764120 9.42609342 8.44974477
B 9.64610444 10.95424222 7.78631313
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ISO84_2.716_M2

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U2B8

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B 8.57442407 9.32484285 7.95993284
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B 11.25538690 8.59547114 8.51174998
B 8.88954836 11.58440994 9.56027408
B 9.49423178 8.04078261 8.16979810
B 10.48471830 7.40167733 9.19090128

ISO85_2.721_M4

10

U2B8

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B 8.80564859 8.96146073 7.97200839
B 10.23078938 9.45820568 7.46685740
B 11.29665099 8.58049370 10.27037422
B 11.18603123 9.91953502 9.02973338
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B 11.72996282 8.97877997 7.63140710

ISO86_2.752_M2

10

U2B8

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B 8.66498387 10.64429536 10.46710071
B 11.57420518 11.57745387 8.92025054
B 7.32944117 10.50329283 9.46970724
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ISO87_2.752_M2

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U2B8

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U 8.49127938 7.84531061 10.60570673
B 8.78952188 10.55390545 10.75290660
B 9.62530374 9.32354373 13.44537251
B 9.34833710 7.75162095 12.92208784
B 10.31770431 8.72554738 12.05405603
B 9.74223203 10.32070134 12.10798094
B 10.28457428 9.60507166 10.60381140
B 9.99967966 8.72871091 9.08905510
B 9.32472453 10.11672995 9.29879545

ISO88_2.769_M6

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U 10.43664575 9.39657235 11.27206648
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B 8.25416384 10.10997861 10.39669496
B 7.61530789 9.45123183 8.99031196
B 9.16785226 11.20214349 7.51741126
B 9.32604953 11.39613141 10.27157426
B 8.12124133 10.03938523 7.61028545
B 9.48340404 9.96826190 8.96642508
B 8.13003055 11.13694350 9.00430871

ISO89_2.774_M4

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B 8.56593944 10.42909709 11.07205383
B 7.83641489 9.44216150 10.02173138
B 10.21475154 7.78739477 9.23392276
B 11.70378628 8.49926547 8.87599859
B 10.40834977 8.99549930 8.00633121
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ISO90_2.800_M0

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B 8.95641893 11.62911251 10.04469472
B 10.16226180 8.23236684 10.79435003
B 10.10814074 9.29566010 9.54309678
B 10.52893864 11.05357988 9.89668726
B 8.25828588 10.01807070 9.58048494
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ISO91_2.803_M2

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B 8.81102761 10.00898333 8.37336613
B 9.08055955 10.07598331 10.22267135
B 11.01384921 7.79862571 8.36743020
B 8.46365313 8.57032233 9.41280314
B 9.66915508 7.44915369 9.23181384
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ISO92_2.803_M4

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B 9.77710226 10.14100593 8.04199570
B 9.51320057 10.86791015 11.27658008
B 9.66853266 8.40451758 12.48521773
B 9.50754855 9.94901381 12.52216909
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B 9.63284044 10.38014537 9.77398645

ISO93_2.807_M0

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B 9.85491450 8.03159957 10.30993053
B 11.68900323 9.98592306 9.20428769
B 8.94622259 8.51079662 8.99502267
B 10.73710993 10.88950058 10.32363728
B 10.92915812 9.23594588 10.55523493

ISO94_2.810_M6

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B 8.95744395 10.70760912 10.82141139
B 7.78368168 9.44365391 10.62916598
B 8.87151160 9.43638011 11.87469788
B 10.25297035 9.33944869 10.93448648
B 9.05863545 8.09248799 10.89907154
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ISO95_2.825_M6

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B 10.88973833 9.54257171 11.45657697
B 10.21084415 11.07197482 11.50414970
B 9.44809023 9.86339079 12.33965987
B 10.87832192 8.50129833 10.22330416
B 9.86349680 11.94790481 10.21996524
B 7.97958654 8.12024427 10.99415308
B 9.67691753 8.31402760 11.41251682

ISO96_2.829_M4

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B 10.46767157 9.92379120 7.50527076
B 7.85501542 9.93743494 10.77782903
B 8.11275649 9.95888289 9.19643372
B 10.55265770 10.54414357 9.15676223
B 11.62804234 9.44790648 8.48357133
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ISO97_2.829_M4

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B 10.33431391 8.66818557 10.55984675
B 8.94287528 9.07368339 11.33312672
B 9.79812489 10.91741265 11.62030996
B 9.30079520 10.27066190 10.03507490
B 11.03947973 10.35129241 10.81046451
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B 11.87583095 9.21834670 10.04646370

ISO98_2.843_M0

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U2B8

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B 7.47794303 10.74622494 10.40845175
B 10.26402168 7.86988141 10.98443613
B 11.02481821 9.24692129 10.97143363
B 8.80677060 11.03131497 8.06282882
B 7.78024687 11.70950665 9.09755950
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B 7.77267844 10.05580958 8.90668080

ISO99_2.855_M6

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U2B8

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B 9.11517075 8.20798510 7.90572799
B 8.08671204 9.80320719 9.81768137
B 7.82004456 8.94043830 8.49202282
B 9.46409836 10.73901360 10.03769576
B 10.39002665 8.03968839 9.29211078
B 10.70190539 8.79942878 7.81207691
B 9.49127122 9.69014580 8.73730198

ISO100_2.856_M6

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B 8.73286101 9.80464018 11.77183346
B 8.72644206 10.34297446 10.00423404
B 9.32585154 8.63032738 10.64533453
B 10.29635968 9.30588801 9.45614290
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B 7.66364651 9.14696900 10.77357041

ISO101_2.859_M4

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U2B8

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B 9.52727379 9.96243573 10.69711405
B 9.24072335 8.64142148 9.75207306
B 10.29254841 7.69873887 8.72178335
B 8.05612601 9.31529848 8.49528412
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ISO102_2.863_M0

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B 7.93906256 11.30431731 9.34470589
B 8.94874876 8.37295132 11.66805240
B 9.25730354 11.08073757 10.29904243
B 10.02851827 9.08727650 8.24852033
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B 10.76720063 8.26429916 9.35363533

ISO103_2.868_M2

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U2B8

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B 11.08761599 9.49808302 8.02269040
B 9.04245029 10.30930580 9.92644917
B 9.74709699 9.27721825 8.84537225
B 11.57398876 9.26664613 9.67894966
B 12.22698226 10.45760205 8.68186794
B 11.69516918 12.01179631 9.31824516

ISO104_2.883_M6

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B 9.01593869 7.94501472 9.18474049
B 8.50916797 9.00564523 10.45337783
B 7.72067629 10.75588534 8.18918028
B 10.01474635 9.41316383 9.42086129
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B 8.23462823 9.31598307 8.73845684

ISO105_2.895_M4

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B 9.83100336 9.82468411 7.99797085
B 8.38675488 8.99170018 7.75514781
B 8.14121409 8.35401750 10.63842569
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ISO106_2.906_M4

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U2B8

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B 9.07830811 11.64648519 9.08644310
B 7.86458775 9.03996862 10.10266177
B 9.09139204 8.32223046 10.93500968
B 11.29579589 9.89087710 9.99969212
B 8.76889764 7.86666863 9.38249481
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ISO107_2.907_M0

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U2B8

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B 10.22438090 9.49914889 9.86745555
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B 9.41378446 8.24624529 8.87793791
B 9.66862724 9.83815620 11.38951424
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ISO108_2.910_M2

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B 9.17746201 10.37488930 7.56585199
B 8.31998839 9.31399449 9.89647609
B 9.41451340 8.87029009 8.52955701
B 9.33909302 8.05810307 10.03232893
B 12.27173372 9.74537926 8.46183926

ISO109_2.911_M6

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B 8.91072025 10.46403305 10.40102900
B 10.41058117 9.80744019 10.47325237
B 8.26562504 11.21646150 9.12398194
B 8.42223177 10.46464503 7.75210154
B 9.01649588 8.91996308 7.84036493
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ISO110_2.911_M6

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B 9.27800172 8.98486486 7.52344423
B 10.34756418 7.90284272 9.99264794
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ISO111_2.928_M4

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U2B8

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B 11.02265622 8.76271498 10.69249980
B 11.20683850 8.30499573 9.19164474
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B 9.22519546 11.57517735 8.76066453

ISO112_2.944_M0

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U2B8

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B 10.28107807 9.26140644 8.03621949
B 9.30604294 8.27131087 8.76923827
B 10.17415693 10.80543061 8.53481761
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B 9.41410331 8.59400037 12.48036089

ISO113_2.944_M0

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B 9.38354308 8.63483035 12.60411174
B 10.67821422 10.89924730 8.84753679
B 9.25290346 11.59376672 8.91697594
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ISO114_2.945_M4

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B 8.53510441 11.95803277 8.28367272
B 8.94074593 7.97126466 10.85028014
B 8.17450120 9.34309719 10.86319223
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ISO115_2.950_M4

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U2B8

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B 10.22165641 8.21678111 8.10434168
B 10.50528404 7.71133602 9.56125483
B 11.02035568 9.45583810 9.99171598
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ISO116_2.962_M2

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U2B8

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B 8.96715637 8.09252888 9.10631787
B 7.83893239 9.26917062 11.52510790
B 8.92309835 8.22514085 10.78444318
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ISO117_2.971_M4

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U2B8

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B 12.94573086 10.23024445 11.04737979
B 11.36801299 10.14582010 10.50404427
B 9.62511224 10.65508960 10.56744218
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B 10.96286285 11.73613691 11.14840552

ISO118_2.982_M4

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U2B8

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B 8.45931637 10.44933995 7.96322593
B 10.03382336 10.83583740 8.60700530
B 7.97446139 8.83735755 8.30711215
B 9.02431122 7.59717739 8.25350864

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ISO119_2.985_M4

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U2B8

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B 11.40330337 8.25428242 9.81997315
B 10.13346242 8.91283297 10.53189403
B 9.94009222 8.15867506 8.98384841
B 9.29212808 10.31662928 10.53035157
B 8.70752511 9.05306917 9.50459080
B 9.06518937 11.79635164 9.90683367
B 8.05915865 10.55805153 9.26988182

ISO120_2.989_M4

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U2B8

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B 9.28752229 9.02422432 11.24103828
B 9.17779297 8.70282098 9.62764945
B 8.43018196 10.58953328 8.87473140
B 7.93665192 8.99530958 8.37930573
B 9.17724191 8.03263526 7.99169461
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ISO121_2.992_M4

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U2B8

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B 11.36347567 8.49258597 9.94640013

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ISO122_3.001_M0

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U2B8

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B 10.03822543 11.30526429 10.23062693
B 8.90816470 10.16308813 10.39521517
B 9.53663464 8.72594215 10.09419385
B 10.62567184 7.86215498 10.90589546
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ISO123_3.007_M2

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B 9.31642178 9.69321023 11.64851496
B 10.11450628 11.18164606 11.17921585
B 8.82635959 11.50568757 12.00828164
B 8.45167315 10.25333704 8.87166920
B 9.19627423 9.25707007 7.95994864

ISO124_3.011_M0

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U2B8

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B 10.77471202 9.05827680 9.88628848
B 10.47742206 10.41817790 10.79786679

B 8.11471181 9.07314244 9.42024460
B 7.71199249 10.64531353 9.32185931
B 7.90409213 10.00926099 10.92174592
B 8.95013069 11.41342437 10.33926233

ISO125_3.025_M4

10

U2B8

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B 7.82297944 8.87936300 8.86346812
B 8.91871337 7.73137651 8.65822763
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B 9.51432279 8.04589517 11.72043389
B 10.61824929 9.15634915 11.53893297
B 10.50253062 10.31885958 10.42495917
B 8.80267713 10.64873805 9.98007656
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B 9.83750034 11.07712814 8.35343909

B 11.42643324 10.76736895 8.55467122

B 8.18932598 9.22380081 10.17505679

B 9.62747367 8.34051265 10.06286775

B 8.84546226 9.79437601 8.68013850

B 10.48698979 9.59740553 7.93055493
