

MI L-53_Cr_wi th1C02uc-NP20MPa

data_MIL-53(Cr)wi th1C02uc-NP20MPa

_audit_creation_date 2011-10-21
_audit_creation_method 'Materials Studi o'
_symmetry_space_group_name_H-M 'P1'
_symmetry_Int_Tables_number 1
_symmetry_cell_setting triclinic

loop_

_symmetry_equiv_pos_as_xyz

x, y, z

_cell_length_a 19.1520
_cell_length_b 8.5540
_cell_length_c 6.5950
_cell_angle_alpha 90.0000
_cell_angle_beta 93.7700
_cell_angle_gamma 90.0000

loop_

_atom_site_label

_atom_site_type_symbol

_atom_site_fract_x

_atom_site_fract_y

_atom_site_fract_z

_atom_site_U_iso_or_equiv

_atom_site_adp_type

_atom_site_occupancy

O1	O	0.56672	0.34495	0.94960	0.04000	Uiso	1.00
C2	C	0.72497	0.29524	0.79078	0.04000	Uiso	1.00
H3	H	0.70666	0.32052	0.63562	0.04000	Uiso	1.00
O4	O	0.08243	0.11700	0.15910	0.04000	Uiso	1.00
C5	C	0.20350	0.26879	0.62276	0.04000	Uiso	1.00
H6	H	0.16911	0.29326	0.70880	0.04000	Uiso	1.00
C7	C	0.67814	0.28274	0.91495	0.04000	Uiso	1.00
C8	C	0.60837	0.36006	0.84584	0.04000	Uiso	1.00
O9	O	0.06672	0.84495	0.94960	0.04000	Uiso	1.00
C10	C	0.22497	0.79524	0.79078	0.04000	Uiso	1.00
H11	H	0.20666	0.82052	0.63562	0.04000	Uiso	1.00
O12	O	0.58243	0.61700	0.15910	0.04000	Uiso	1.00
C13	C	0.70350	0.76879	0.62276	0.04000	Uiso	1.00
H14	H	0.66911	0.79326	0.70880	0.04000	Uiso	1.00
C15	C	0.17814	0.78274	0.91495	0.04000	Uiso	1.00
C16	C	0.10837	0.86006	0.84584	0.04000	Uiso	1.00
O17	O	0.43328	0.34495	0.55040	0.04000	Uiso	1.00
C18	C	0.27503	0.29524	0.70922	0.04000	Uiso	1.00
H19	H	0.29334	0.32052	0.86438	0.04000	Uiso	1.00
O20	O	0.91757	0.11700	0.34090	0.04000	Uiso	1.00
C21	C	0.79650	0.26879	0.87724	0.04000	Uiso	1.00
H22	H	0.83089	0.29326	0.79120	0.04000	Uiso	1.00
C23	C	0.32186	0.28274	0.58505	0.04000	Uiso	1.00
C24	C	0.39163	0.36006	0.65416	0.04000	Uiso	1.00
O25	O	0.93328	0.84495	0.55040	0.04000	Uiso	1.00
C26	C	0.77503	0.79524	0.70922	0.04000	Uiso	1.00
H27	H	0.79334	0.82052	0.86438	0.04000	Uiso	1.00
O28	O	0.41757	0.61700	0.34090	0.04000	Uiso	1.00
C29	C	0.29650	0.76879	0.87724	0.04000	Uiso	1.00
H30	H	0.33089	0.79326	0.79120	0.04000	Uiso	1.00
C31	C	0.82186	0.78274	0.58505	0.04000	Uiso	1.00
C32	C	0.89163	0.86006	0.65416	0.04000	Uiso	1.00
O33	O	0.43328	0.65505	0.05040	0.04000	Uiso	1.00
C34	C	0.27503	0.70476	0.20922	0.04000	Uiso	1.00
H35	H	0.29334	0.67948	0.36438	0.04000	Uiso	1.00
O36	O	0.91757	0.88300	0.84090	0.04000	Uiso	1.00
C37	C	0.79650	0.73121	0.37724	0.04000	Uiso	1.00
H38	H	0.83089	0.70674	0.29120	0.04000	Uiso	1.00
C39	C	0.32186	0.71726	0.08505	0.04000	Uiso	1.00
C40	C	0.39163	0.63994	0.15416	0.04000	Uiso	1.00
O41	O	0.93328	0.15505	0.05040	0.04000	Uiso	1.00
C42	C	0.77503	0.20476	0.20922	0.04000	Uiso	1.00
H43	H	0.79334	0.17948	0.36438	0.04000	Uiso	1.00
O44	O	0.41757	0.38300	0.84090	0.04000	Uiso	1.00

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C45	C	0.29650	0.23121	0.37724	0.04000	Ui so	1.00
H46	H	0.33089	0.20674	0.29120	0.04000	Ui so	1.00
C47	C	0.82186	0.21726	0.08505	0.04000	Ui so	1.00
C48	C	0.89163	0.13994	0.15416	0.04000	Ui so	1.00
O49	O	0.56672	0.65505	0.44960	0.04000	Ui so	1.00
C50	C	0.72497	0.70476	0.29078	0.04000	Ui so	1.00
H51	H	0.70666	0.67948	0.13562	0.04000	Ui so	1.00
O52	O	0.08243	0.88300	0.65910	0.04000	Ui so	1.00
C53	C	0.20350	0.73121	0.12276	0.04000	Ui so	1.00
H54	H	0.16911	0.70674	0.20880	0.04000	Ui so	1.00
C55	C	0.67814	0.71726	0.41495	0.04000	Ui so	1.00
C56	C	0.60837	0.63994	0.34584	0.04000	Ui so	1.00
O57	O	0.06672	0.15505	0.44960	0.04000	Ui so	1.00
C58	C	0.22497	0.20476	0.29078	0.04000	Ui so	1.00
H59	H	0.20666	0.17948	0.13562	0.04000	Ui so	1.00
O60	O	0.58243	0.38300	0.65910	0.04000	Ui so	1.00
C61	C	0.70350	0.23121	0.12276	0.04000	Ui so	1.00
H62	H	0.66911	0.20674	0.20880	0.04000	Ui so	1.00
C63	C	0.17814	0.21726	0.41495	0.04000	Ui so	1.00
C64	C	0.10837	0.13994	0.34584	0.04000	Ui so	1.00
Cr65	Cr	0.50000	0.50000	1.00000	0.04000	Ui so	1.00
Cr66	Cr	0.00000	1.00000	1.00000	0.04000	Ui so	1.00
Cr67	Cr	0.50000	0.50000	0.50000	0.04000	Ui so	1.00
Cr68	Cr	0.00000	1.00000	0.50000	0.04000	Ui so	1.00
O69	O	0.50000	0.63174	0.75000	0.04000	Ui so	1.00
O70	O	0.00000	0.13174	0.75000	0.04000	Ui so	1.00
O71	O	0.50000	0.36826	0.25000	0.04000	Ui so	1.00
O72	O	0.00000	0.86826	0.25000	0.04000	Ui so	1.00
H73	H	0.00000	0.22865	0.75000	0.04000	Ui so	1.00
H74	H	0.50000	0.72865	0.75000	0.04000	Ui so	1.00
H75	H	0.00000	0.77135	0.25000	0.04000	Ui so	1.00
H76	H	0.50000	0.27135	0.25000	0.04000	Ui so	1.00
C77	C	1.57466	2.97403	2.78110	0.04000	Ui so	1.00
O78	O	1.51549	2.98993	2.74654	0.04000	Ui so	1.00
O79	O	1.63375	2.96027	2.81923	0.04000	Ui so	1.00

loop_

_geom_bond_atom_site_label_1

_geom_bond_atom_site_label_2

_geom_bond_distance

_geom_bond_site_symmetry_2

_ccdc_geom_bond_type

01	C8	1.092	.	S
01	Cr65	1.886	.	S
C2	H3	1.082	.	S
C2	C7	1.258	.	S
C2	C21	1.466	.	S
O4	C64	1.312	.	S
O4	Cr66	2.092	1_544	S
C5	H6	0.921	.	S
C5	C63	1.490	.	S
C5	C18	1.466	.	S
C7	C8	1.533	.	S
C7	C61	1.490	1_556	S
C8	O60	1.312	.	S
O9	C16	1.092	.	S
O9	Cr66	1.886	.	S
C10	H11	1.082	.	S
C10	C15	1.258	.	S
C10	C29	1.466	.	S
O12	C56	1.312	.	S
O12	Cr65	2.092	1_554	S
C13	H14	0.921	.	S
C13	C55	1.490	.	S
C13	C26	1.466	.	S
C15	C16	1.533	.	S
C15	C53	1.490	1_556	S
C16	O52	1.312	.	S
O17	C24	1.092	.	S

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017	Cr67	1.886	.	S
C18	H19	1.082	.	S
C18	C23	1.258	.	S
020	C48	1.312	.	S
020	Cr68	2.092	1_645	S
C21	H22	0.921	.	S
C21	C47	1.490	1_556	S
C23	C45	1.490	.	S
C23	C24	1.533	.	S
C24	O44	1.312	.	S
025	C32	1.092	.	S
025	Cr68	1.886	1_655	S
C26	H27	1.082	.	S
C26	C31	1.258	.	S
028	C40	1.312	.	S
028	Cr67	2.092	.	S
C29	H30	0.921	.	S
C29	C39	1.490	1_556	S
C31	C37	1.490	.	S
C31	C32	1.533	.	S
C32	O36	1.312	.	S
033	C40	1.092	.	S
033	Cr65	1.886	1_554	S
C34	H35	1.082	.	S
C34	C39	1.258	.	S
C34	C53	1.466	.	S
036	Cr66	2.092	1_655	S
C37	H38	0.921	.	S
C37	C50	1.466	.	S
C39	C40	1.533	.	S
C39	C29	1.490	1_554	S
041	C48	1.092	.	S
041	Cr66	1.886	1_644	S
C42	H43	1.082	.	S
C42	C47	1.258	.	S
C42	C61	1.466	.	S
044	Cr65	2.092	.	S
C45	H46	0.921	.	S
C45	C58	1.466	.	S
C47	C48	1.533	.	S
C47	C21	1.490	1_554	S
049	C56	1.092	.	S
049	Cr67	1.886	.	S
C50	H51	1.082	.	S
C50	C55	1.258	.	S
052	Cr68	2.092	.	S
C53	H54	0.921	.	S
C53	C15	1.490	1_554	S
C55	C56	1.533	.	S
057	C64	1.092	.	S
057	Cr68	1.886	1_545	S
C58	H59	1.082	.	S
C58	C63	1.258	.	S
060	Cr67	2.092	.	S
C61	H62	0.921	.	S
C61	C7	1.490	1_554	S
C63	C64	1.533	.	S
Cr65	O69	1.997	.	S
Cr65	O12	2.092	1_556	S
Cr65	O33	1.886	1_556	S
Cr65	O71	1.997	1_556	S
Cr66	O4	2.092	1_566	S
Cr66	O36	2.092	1_455	S
Cr66	O41	1.886	1_466	S
Cr66	O72	1.997	1_556	S
Cr66	O70	1.997	1_565	S
Cr67	O71	1.997	.	S
Cr67	O69	1.997	.	S

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Cr68	072	1.997	.	S
Cr68	020	2.092	1_465	S
Cr68	025	1.886	1_455	S
Cr68	057	1.886	1_565	S
Cr68	070	1.997	1_565	S
069	H74	0.829	.	S
070	H73	0.829	.	S
070	Cr66	1.997	1_545	S
070	Cr68	1.997	1_545	S
071	H76	0.829	.	S
071	Cr65	1.997	1_554	S
072	H75	0.829	.	S
072	Cr66	1.997	1_554	S
C77	079	1.149	.	S
C77	078	1.149	.	S