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10.1071/CH01060_AC © CSIRO 2002 Accessory Publication: Aust. J. Chem., 2002, 55(4), 271-273. data_fro1557 SHELXL-97 _audit_creation_method _chemical_name_systematic ; ? ; _chemical_name_common ? _chemical_melting_point ? _chemical_formula_moiety ? _chemical_formula_sum 'C12 H7 C13 O3' _chemical_formula_weight 305.53 loop_ _atom_type_symbol _atom_type_description _atom_type_scat_dispersion_real _atom_type_scat_dispersion_imag _atom_type_scat_source 'C' 'C' 0.0181 0.0091 'International Tables Vol C Tables 4.2.6.8 and 6.1.1.4' 'H' 'H' 0.0000 0.0000 'International Tables Vol C Tables 4.2.6.8 and 6.1.1.4' '0' '0' 0.0492 0.0322 'International Tables Vol C Tables 4.2.6.8 and 6.1.1.4' 'Cl' 'Cl' 0.3639 0.7018 'International Tables Vol C Tables 4.2.6.8 and 6.1.1.4' _symmetry_cell_setting 'monoclinic' 'P21' _symmetry_space_group_name_H-M loop_ _symmetry_equiv_pos_as_xyz 'x, y, z' '-x, y+1/2, -z'_cell_length_a 7.698(2) _cell_length_b 5.822(1)_cell_length_c 13.647(2)_cell_angle_alpha 90.00 _cell_angle_beta 92.18(1) _cell_angle_gamma 90.00 _cell_volume 611.2(2) _cell_formula_units_Z 2 223(2) _cell_measurement_temperature _cell_measurement_reflns_used 25 _cell_measurement_theta_min 40.00 _cell_measurement_theta_max 46.68 _exptl_crystal_description 'plate' 'yellow' _exptl_crystal_colour _exptl_crystal_size_max 0.40

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_refine_special_details

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Refinement of F^2 against ALL reflections. The weighted R-factor wR and goodness of fit S are based on F^2 , conventional R-factors R are based on F, with F set to zero for negative F^2 . The threshold expression of

 F^2 > 2sigma(F^2) is used only for calculating R-factors(gt) etc. and is not relevant to the choice of reflections for refinement. R-factors based on F^2 are statistically about twice as large as those based on F, and Rfactors based on ALL data will be even larger.

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                                  geom
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 _atom_site_disorder_group
C11 C 1.2617(5) -0.5448(8) 0.2654(3) 0.0315(9) Uani 1 1 d . . .
Oll O 1.1814(4) -0.3749(7) 0.2357(2) 0.0416(7) Uani 1 1 d . . .
C12 C 1.3058(6) -0.5786(9) 0.3702(3) 0.0371(9) Uani 1 1 d . . .
H12 H 1.2714 -0.4685 0.4159 0.045 Uiso 1 1 calc R . .
C13 C 1.3939(6) -0.7637(10) 0.4010(3) 0.0384(10) Uani 1 1 d . . .
H13 H 1.4213 -0.7811 0.4683 0.046 Uiso 1 1 calc R . .
C14 C 1.4489(5) -0.9407(8) 0.3324(3) 0.0337(9) Uani 1 1 d . . .
014 0 1.5281(5) -1.1119(7) 0.3603(3) 0.0503(9) Uani 1 1 d . . .
C15 C 1.4074(5) -0.9054(8) 0.2265(3) 0.0344(9) Uani 1 1 d . . .
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H15 H 1.4439 -1.0141 0.1806 0.041 Uiso 1 1 calc R . C16 C 1.3186(6) -0.7201(9) 0.1957(3) 0.0344(9) Uani 1 1 d . . . H16 H 1.2919 -0.7013 0.1284 0.041 Uiso 1 1 calc R . . C21 C 0.9286(5) 0.1103(8) 0.2785(3) 0.0296(8) Uani 1 1 d . . . 021 0 1.0105(4) -0.0397(6) 0.3397(2) 0.0408(7) Uani 1 1 d . . . H21 H 1.0602 -0.1388 0.3072 0.061 Uiso 1 1 calc R . C22 C 0.8519(5) 0.3072(7) 0.3167(3) 0.0297(9) Uani 1 1 d . Cl22 Cl 0.86887(14) 0.3575(2) 0.44117(7) 0.0420(3) Uani 1 1 d . . . C23 C 0.7671(5) 0.4645(9) 0.2565(3) 0.0322(9) Uani 1 1 d . . . H23 H 0.7160 0.5953 0.2836 0.039 Uiso 1 1 calc R . C24 C 0.7571(5) 0.4298(8) 0.1555(3) 0.0290(8) Uani 1 1 d . Cl24 Cl 0.64399(15) 0.6229(2) 0.08133(8) 0.0446(3) Uani 1 1 d . . . C25 C 0.8342(5) 0.2354(8) 0.1160(3) 0.0298(8) Uani 1 1 d . . . Cl25 Cl 0.82840(14) 0.1898(2) -0.00876(6) 0.0400(3) Uani 1 1 d . . . C26 C 0.9192(5) 0.0771(8) 0.1770(3) 0.0299(9) Uani 1 1 d . . . H26 H 0.9708 -0.0534 0.1498 0.036 Uiso 1 1 calc R . .

loop_

_atom_site_aniso_label _atom_site_aniso_U_11 _atom_site_aniso_U_22 _atom_site_aniso_U_33 _atom_site_aniso_U_23 _atom_site_aniso_U_13 _atom_site_aniso_U_12 C11 0.0329(17) 0.028(2) 0.034(2) 0.0001(18) 0.0002(15) -0.0040(16) 011 0.0493(16) 0.0338(16) 0.0414(16) 0.0043(16) -0.0003(13) 0.0068(16) $\texttt{C12} \ \texttt{0.048(2)} \ \texttt{0.034(2)} \ \texttt{0.0296(19)} \ \texttt{-0.0053(18)} \ \texttt{0.0054(16)} \ \texttt{-0.0015(19)}$ C13 0.049(2) 0.041(3) 0.0251(18) 0.0030(19) -0.0006(16) -0.002(2)C14 0.0359(18) 0.032(2) 0.033(2) 0.0035(17) -0.0017(16) 0.0005(17) 014 0.0602(19) 0.041(2) 0.0490(18) 0.0100(18) -0.0062(15) 0.0134(18) C15 0.0396(19) 0.035(2) 0.0289(19) -0.0030(19) 0.0029(15) 0.0003(18) C16 0.0429(19) 0.033(2) 0.0275(18) 0.0013(18) 0.0021(15) 0.0010(18) $\texttt{C21} \ \texttt{0.0365(17)} \ \texttt{0.0296(19)} \ \texttt{0.0224(16)} \ \texttt{-0.0008(17)} \ \texttt{-0.0026(13)} \ \texttt{-0.0039(18)}$ 021 0.0567(18) 0.0373(17) 0.0276(13) 0.0013(14) -0.0075(12) 0.0070(15) C22 0.0331(16) 0.032(2) 0.0235(16) 0.0036(16) 0.0016(14) -0.0003(16) $\texttt{C122 } 0.0569(6) \ 0.0481(6) \ 0.0210(4) \ -0.0048(5) \ 0.0018(4) \ 0.0016(5)$ C23 0.0321(17) 0.035(2) 0.0293(18) -0.0080(18) 0.0009(14) -0.0056(17) C24 0.0293(15) 0.030(2) 0.0269(17) 0.0060(17) -0.0039(13) 0.0013(15)Cl24 0.0542(6) 0.0425(6) 0.0364(5) 0.0070(5) -0.0083(4) 0.0095(5) C25 0.0341(16) 0.033(2) 0.0224(16) 0.0001(17) -0.0035(14) -0.0068(17) $\texttt{C125} \ 0.0538(6) \ 0.0454(6) \ 0.0203(4) \ -0.0029(4) \ -0.0046(4) \ -0.0040(5)$ $C26 \ 0.0344(17) \ 0.029(2) \ 0.0254(18) \ -0.0062(17) \ -0.0044(14) \ -0.0008(16)$

_geom_special_details
;

All esds (except the esd in the dihedral angle between two l.s. planes) are estimated using the full covariance matrix. The cell esds are taken into account individually in the estimation of esds in distances, angles and torsion angles; correlations between esds in cell parameters are only used when they are defined by crystal symmetry. An approximate (isotropic) treatment of cell esds is used for estimating esds involving l.s. planes. ;

loop_

_geom_bond_atom_site_label_1 _geom_bond_atom_site_label_2

	eom_k	oond_	dis	tanc	e	
_ge	eom_k	oond_	sit	e_sy	mmetr	
_ge	eom_k	oond_	pub	1_f1	ag	
C11	011	1.22	7(6)	?	
C11	C12	1.47	1(6)	?	
C11	C16	1 47	3(6)	? ?	
C1 2	C12	1 22	217) •	• •	
		1 16) ·	:	
CI3	C14	1.40	5(7) •	·	
C14	014	1.22	1(6).	?	
C14	C15	1.48	4(6).	?	
C15	C16	1.33	6(6) .	?	
C21	021	1.34	8 (5) .	?	
C21	C26	1.39	7(5) .	?	
C21	C22	1.39	9(6).	?	
C22	C23	1.37	8(6)	?	
C22	C122	2 1 7	24(4)	· ?	
C23	C24	1 30	2(5	· ·	• •	
C23		1 20) ·	:	
C24	C25	1.39	0(0) •	· ·	
C24	C124	± 1.7	26(4).	.2	
C25	C26	1.38	9(6).	?	
C25	C125	5 1.7	22(4).	?	
loop	<u></u>					
_ge	eom_a	angle	_ato	om_s	site_]	.abel_1
_ge	eom_a	angle	_at	om_s	ite_]	.abel_2
	eom a	angle	at	om s	site]	.abel 3
a		anale	_			
 af	-om a	angle	si	te s	vmmet	rv 1
	20m =	nalo	_oi	+	vy mine t	r_{1}
_90	20111_6	ang re		ເຮ_ຂ	упшес	-ry_J
_9	$\sim m$	n n a l a		hl f	120	
~ 1 1	eom_a	angle	_pul	bl_f	lag	0
011	eom_a C11	C12	_pul 121	bl_f .6(4	lag)	?
011	eom_a C11 C11	ngle C12 C16	_pul 121 120	bl_f .6(4 .3(4	lag 1)	?
011 011 C12	eom_a C11 C11 C11 C11	ngle C12 C16 C16	pul 121 120 118	bl_f .6(4 .3(4 .1(4	lag))	???????????????????????????????????????
011 011 C12 C13	eom_a C11 C11 C11 C11 C12	angle C12 C16 C16 C16 C11	_pul 121 120 118 120	bl_f .6(4 .3(4 .1(4 .7(4	lag)))	? ? ?
011 011 C12 C13 C12	eom_a C11 C11 C11 C12 C13	angle C12 C16 C16 C11 C14	_pul 121 120 118 120 121	bl_f .6(4 .3(4 .1(4 .7(4 .6(4	lag))))	· · · · · · · · · · · · · · · · · · ·
011 011 C12 C13 C12 014	eom_a C11 C11 C11 C12 C13 C14	angle C12 C16 C16 C11 C14 C13	pul 121 120 118 120 121 121	bl_f .6(4 .3(4 .1(4 .7(4 .6(4 .9(4	Elag)))))	???????????????????????????????????????
011 011 C12 C13 C12 014 014	eom_a C11 C11 C11 C12 C13 C14 C14	ngle C12 C16 C16 C11 C14 C13 C15	pul 121 120 118 120 121 121 120	bl_f .6(4 .3(4 .1(4 .7(4 .6(4 .9(4 .2(4	<pre>1 ag 1)</pre>	???????????????????????????????????????
011 011 C12 C13 C12 014 014 C13	om_a C11 C11 C12 C12 C13 C14 C14 C14	ngle C12 C16 C16 C11 C14 C13 C15 C15	pul 121 120 118 120 121 121 120 117	bl_f .6(4 .3(4 .1(4 .7(4 .6(4 .9(4 .2(4 .9(4	<pre>Elag E) E)</pre>	
011 011 C12 C13 C12 014 014 C13 C16	com_a C11 C11 C12 C13 C14 C14 C14 C14 C15	angle C12 C16 C16 C11 C14 C13 C15 C15 C14	pul 121 120 118 120 121 121 120 117 120	bl_f .6(4 .3(4 .1(4 .7(4 .6(4 .9(4 .2(4 .9(4	<pre>1ag 1)</pre>	
011 011 C12 C13 C12 014 014 C13 C16 C15	com_a C11 C11 C12 C13 C14 C14 C14 C14 C15 C16	angle C12 C16 C11 C14 C13 C15 C15 C14 C11	pul 121 120 118 120 121 121 120 117 120 121	bl_f .6(4 .3(4 .1(4 .7(4 .6(4 .9(4 .2(4 .9(4 .9(4	Elag 1	
011 011 C12 C13 C12 014 014 C13 C16 C15	com_a C11 C11 C12 C13 C14 C14 C14 C14 C15 C16 C21	angle C12 C16 C11 C14 C13 C15 C15 C14 C11	pul 121 120 118 120 121 121 120 117 120 121	bl_f .6(4 .3(4 .1(4 .7(4 .9(4 .9(4 .9(4 .9(4 .2(4 .2(4	ilag i) .	
011 011 C12 C13 C12 014 C13 C16 C15 021	com_a C11 C11 C12 C13 C14 C14 C14 C14 C15 C16 C21	angle C12 C16 C16 C11 C14 C13 C15 C15 C15 C14 C11 C26	<pre>pul 121 120 118 120 121 121 120 117 120 121 122</pre>	bl_f .6(4 .3(4 .1(4 .7(4 .9(4 .2(4 .9(4 .2(4 .2(4 .2(4 .2(4 .2(4	ilag i) .	
011 011 C12 C13 C12 014 C13 C16 C15 021 021	com_a C11 C11 C12 C13 C14 C14 C14 C14 C14 C15 C16 C21 C21	angle C12 C16 C11 C14 C13 C15 C15 C15 C14 C11 C26 C22	pul 121 120 118 120 121 121 120 117 120 121 122 119	bl_f .6(4 .3(4 .1(4 .7(4 .9(4 .9(4 .9(4 .9(4 .9(4 .2(4 .0(4 .0(4	ilag i) .	
011 011 C12 C13 C12 014 014 C13 C16 C15 021 021 C26	C11 C11 C12 C13 C14 C14 C14 C14 C15 C16 C21 C21 C21	angle C12 C16 C11 C14 C13 C15 C15 C15 C14 C11 C26 C22 C22	pul 121 120 118 120 121 121 120 117 120 121 122 119 118	bl_f .6(4 .3(4 .1(4 .7(4 .6(4 .9(4 .9(4 .2(4 .2(4 .2(4 .2(4 .0(4 .6(3 .5(4)	ilag i) .	
011 011 C12 C13 C12 014 014 C13 C16 C15 021 021 C26 C23	C11 C11 C12 C13 C14 C14 C14 C14 C14 C15 C16 C21 C21 C21 C22	angle C12 C16 C11 C14 C13 C15 C15 C14 C11 C26 C22 C22 C22 C21	pul 121 120 118 120 121 121 120 117 120 121 122 119 118 121	bl_f .6(4 .3(4 .1(4 .7(4 .6(4 .9(4 .2(4 .2(4 .2(4 .2(4 .2(4 .0(4 .6(3 .5(4 .3(3)))))))))))))))))))))))))))))))))))	ilag i) .	
011 011 C12 C13 C12 014 C13 C16 C15 021 C26 C23 C23 C23	C11 C11 C12 C13 C14 C14 C14 C14 C14 C14 C15 C16 C21 C21 C21 C22 C22	angle C12 C16 C11 C14 C13 C15 C15 C14 C11 C26 C22 C22 C21 C122	pul 121 120 118 120 121 121 120 117 120 121 122 119 118 121	bl_ff .6(4 .3(4 .1(4 .7(4 .9(4 .9(4 .9(4 .2(4 .9(4 .2(4 .0(4 .5(4 .5(4 .3(3 9.4(ilag	· · · · · · · · · · · · · · · · · · ·
011 011 C12 C13 C12 014 C13 C16 C15 021 C26 C23 C23 C21	C11 C11 C12 C13 C14 C14 C14 C14 C14 C14 C14 C15 C16 C21 C21 C22 C22 C22	angle C12 C16 C11 C14 C13 C15 C15 C14 C11 C26 C22 C22 C21 C122 C122	pull 121 120 118 120 121 121 120 117 120 121 122 119 118 121 121 122 119	bl_f(4, 3, 4, 3, 4, 3, 4, 3, 4, 4, 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4,	ilag	· · · · · · · · · · · · · · · · · · ·
011 011 C12 C13 C12 014 C13 C16 C15 021 C26 C23 C23 C21 C22	C11 C11 C12 C13 C14 C14 C14 C14 C14 C14 C15 C16 C21 C21 C22 C22 C22 C22 C23	angle C12 C16 C11 C14 C13 C15 C15 C14 C11 C26 C22 C22 C21 C122 C122 C24	pull 121 120 118 120 121 121 120 121 120 121 122 119 118 121 119 118 121 119 118	bl_f(4.3)(4.3)(4.3)(4.3)(4.3)(4.3)(4.3)(4.3)	ilag	· · · · · · · · · · · · · · · · · · ·
011 011 C12 C13 C12 014 C13 C16 C15 021 C26 C23 C21 C22 C23	C11 C11 C12 C13 C14 C14 C14 C14 C14 C14 C15 C16 C21 C21 C22 C22 C22 C22 C23 C24	angle C12 C16 C16 C11 C14 C13 C15 C15 C15 C14 C11 C26 C22 C21 C122 C122 C122 C24 C25	pull 121 120 118 120 121 121 120 121 120 121 122 119 118 121 119 118 121 119 118	bl_f(4,3)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)	ilag ilag <td>· · · · · · · · · · · · · · · · · · ·</td>	· · · · · · · · · · · · · · · · · · ·
011 011 C12 C13 C12 014 C13 C16 C15 021 C26 C23 C21 C22 C23 C23 C23	C11 C11 C12 C13 C14 C14 C14 C14 C14 C14 C15 C16 C21 C21 C22 C22 C22 C22 C22 C23 C24 C24	angle C12 C16 C16 C11 C14 C13 C15 C15 C15 C14 C11 C26 C22 C21 C122 C122 C24 C25 C124	pull 121 120 118 120 121 121 120 121 120 121 122 119 118 121 119 118 121 119 118 121 119 119 119	bl_f(4,3)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)	ilag	
011 011 C12 C13 C12 014 C13 C16 C15 021 C26 C23 C21 C22 C23 C23 C23 C25	C11 C11 C12 C13 C14 C14 C14 C14 C14 C14 C15 C16 C21 C21 C22 C22 C22 C22 C22 C22 C22 C22	angle C12 C16 C16 C11 C14 C13 C15 C15 C14 C11 C26 C22 C21 C122 C22 C22 C21 C122 C24 C25 C124 C124	pull 121 120 118 120 121 121 120 121 122 119 122 119 118 121 120 119 118 121 120 119 119 120 119 119 120 119 120 121 121 120 121 121 120 121 121 120 121 121	bl_f(.6(4 .3(4 .1(4 .7(4 .6(4 .9(4 .9(4 .2(4 .9(4 .2(4 .2(4 .0(4 .6(3 .5(4 .3(3 9.3(.1(4 .4(4 9.3(.1(4 .1(4).2)))))))))))))))))))))))))))))))))))	ilag i) .	
011 011 C12 C13 C12 014 014 C13 C16 C21 C21 C22 C23 C23 C22 C23 C25 C26	C11 C11 C12 C13 C14 C14 C14 C14 C14 C14 C15 C16 C21 C22 C22 C22 C22 C22 C22 C22 C22 C22	angle C12 C16 C16 C11 C14 C13 C15 C15 C14 C11 C26 C22 C21 C122 C22 C22 C21 C122 C24 C25 C124 C24	pull 121 120 118 120 121 121 120 121 120 121 122 119 118 121 120 119 118 121 120 119 118 121 120 119 118 121 120 121 120 121 120 121 121 120 121 121	bl_f(4,3)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)	ilag i) . ii) . iii) . iii) . iii) . iii) . iii) . iii) .	· · · · · · · · · · · · · · · · · · ·
011 011 C12 C13 C12 014 014 C13 C15 021 C26 C23 C23 C22 C23 C25 C26 C26 C26 C26	C11 C11 C12 C13 C14 C14 C14 C14 C14 C15 C16 C21 C22 C22 C22 C22 C22 C22 C22 C22 C22	angle C12 C16 C16 C11 C14 C13 C15 C15 C14 C11 C26 C22 C21 C122 C22 C21 C122 C24 C25 C124 C124 C124 C24 C125	pull 121 120 118 120 121 121 120 121 120 121 122 119 118 121 120 119 118 121 120 119 118 121 120 119 118	bl_f(4,3)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)	ilag ilag <td>· · · · · · · · · · · · · · · · · · ·</td>	· · · · · · · · · · · · · · · · · · ·
011 011 C12 C13 C12 014 014 C13 C15 021 C26 C23 C23 C23 C23 C25 C26 C26 C26 C26 C26 C26 C26 C26	C11 C11 C12 C13 C14 C14 C14 C14 C15 C16 C21 C22 C22 C22 C22 C22 C22 C22 C22 C22	angle C12 C16 C16 C11 C14 C13 C15 C15 C14 C11 C26 C22 C22 C22 C22 C22 C22 C22 C22 C22	pull 121 120 118 120 121 121 120 121 120 121 122 119 122 119 128 121 120 119 119 120 119 120 119 120 119	bl_f(4,3)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)	1ag 1 <	· · · · · · · · · · · · · · · · · · ·
011 011 C12 C13 C12 014 C13 C16 C21 021 C26 C23 C23 C23 C23 C23 C25 C26 C26 C26 C26 C26 C26 C26 C26	Cm_a C11 C11 C12 C13 C14 C14 C14 C15 C16 C21 C21 C22 C22 C22 C22 C22 C22 C22 C22	angle C12 C16 C16 C11 C14 C13 C15 C15 C14 C11 C26 C22 C22 C22 C22 C22 C22 C22 C22 C22	pull 121 120 118 120 121 121 120 121 120 121 120 121 122 119 128 121 120 119 119 120 119 120 119 120 119 120 119 120 121 120 121 120 121 121 120 121 121	bl_f(.6(4) .3(4) .7(4) .7(4) .9(4) .9(4) .9(4) .9(4) .9(4) .9(4) .9(4) .9(4) .9(4) .3(3) .5(4) .1(4) .4(4) .9(3) .1(4) .3(3) .3(3) .3(3) .0(2) .1(2).	1ag 1 . 1 . 1 . 2 . 2 . 2 . 2 . 2 . 2 . 2 . 2 . 2 . 2 . 3 . 3 . 3 . 3 . 3 . 3 . 3 . 3 . 3 . 3 . 3 . 3 . 3 . 3 . 3 . 3 .	

loop_

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