The group G is isomorphic to the group labelled by $[\,40, 7\,]$ in the Small Groups library.

Ordinary character table of $G \cong C2 \times (C5 : C4)$:

	$1a$	$4a$	$2a$	$2b$	$5a$	$4b$	$4c$	$2c$	$10a$	$10b$	$5b$	$4d$	$10c$	$10d$	$10e$	$10f$
χ_1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
χ_2	1	-1	-1	1	1	1	-1	-1	-1	1	1	1	1	-1	-1	-1
χ_3	1	-1	1	1	1	-1	-1	1	1	1	1	-1	1	1	1	1
χ_4	1	1	-1	1	1	-1	1	-1	-1	1	1	-1	-1	-1	-1	-1
χ_5	1	$-E(4)$	-1	-1	1	$E(4)$	$E(4)$	1	-1	-1	1	$-E(4)$	1	-1	-1	1
χ_6	1	$E(4)$	-1	-1	1	$-E(4)$	$-E(4)$	1	-1	-1	1	$E(4)$	1	-1	-1	1
χ_7	1	$-E(4)$	1	-1	1	$-E(4)$	$E(4)$	-1	1	-1	1	$E(4)$	-1	1	1	-1
χ_8	1	$E(4)$	1	-1	1	$E(4)$	$-E(4)$	-1	1	-1	1	$-E(4)$	-1	1	1	-1
χ_9	2	0	-2	-2	$E(5)^2 + E(5)^3$	0	0	2	$-E(5)^2 - E(5)^3$	$-E(5)^2 - E(5)^3$	$E(5) + E(5)^4$	0	$E(5)^2 + E(5)^3$	$-E(5) - E(5)^4$	$-E(5) - E(5)^4$	$E(5) + E(5)^4$
χ_{10}	2	0	-2	-2	$E(5) + E(5)^4$	0	0	2	$-E(5) - E(5)^4$	$-E(5) - E(5)^4$	$E(5)^2 + E(5)^3$	0	$E(5) + E(5)^4$	$-E(5)^2 - E(5)^3$	$-E(5)^2 - E(5)^3$	$E(5)^2 + E(5)^3$
χ_{11}	2	0	-2	2	$E(5)^2 + E(5)^3$	0	0	-2	$-E(5)^2 - E(5)^3$	$E(5)^2 + E(5)^3$	$E(5) + E(5)^4$	0	$-E(5)^2 - E(5)^3$	$-E(5) - E(5)^4$	$E(5) + E(5)^4$	$-E(5) - E(5)^4$
χ_{12}	2	0	-2	2	$E(5) + E(5)^4$	0	0	-2	$-E(5) - E(5)^4$	$E(5) + E(5)^4$	$E(5)^2 + E(5)^3$	0	$-E(5) - E(5)^4$	$-E(5)^2 - E(5)^3$	$E(5)^2 + E(5)^3$	$-E(5)^2 - E(5)^3$
χ_{13}	2	0	2	-2	$E(5)^2 + E(5)^3$	0	0	-2	$E(5)^2 + E(5)^3$	$-E(5)^2 - E(5)^3$	$E(5) + E(5)^4$	0	$-E(5)^2 - E(5)^3$	$E(5) + E(5)^4$	$-E(5) - E(5)^4$	$-E(5) - E(5)^4$
χ_{14}	2	0	2	-2	$E(5) + E(5)^4$	0	0	-2	$E(5) + E(5)^4$	$-E(5) - E(5)^4$	$E(5)^2 + E(5)^3$	0	$-E(5) - E(5)^4$	$E(5)^2 + E(5)^3$	$-E(5)^2 - E(5)^3$	$-E(5)^2 - E(5)^3$
χ_{15}	2	0	2	2	$E(5)^2 + E(5)^3$	0	0	2	$E(5)^2 + E(5)^3$	$E(5)^2 + E(5)^3$	$E(5) + E(5)^4$	0	$E(5)^2 + E(5)^3$	$E(5) + E(5)^4$	$E(5) + E(5)^4$	$E(5) + E(5)^4$
χ_{16}	2	0	2	2	$E(5) + E(5)^4$	0	0	2	$E(5) + E(5)^4$	$E(5) + E(5)^4$	$E(5)^2 + E(5)^3$	0	$E(5) + E(5)^4$	$E(5)^2 + E(5)^3$	$E(5)^2 + E(5)^3$	$E(5)^2 + E(5)^3$

Trivial source character table of $G \cong C2 \times (C5 : C4)$ at $p = 5$:

Normalisers N_i																
p-subgroups of G up to conjugacy in G	P_1								P_2							
Representatives $n_j \in N_i$	$1a$	$4a$	$2a$	$2b$	$4b$	$4c$	$2c$	$4d$	$1a$	$2a$	$4a$	$2b$	$4b$	$2c$	$4c$	$4d$
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 1 \cdot \chi_{15} + 1 \cdot \chi_{16}$	5	1	5	5	1	1	5	1	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 1 \cdot \chi_{11} + 1 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	5	-1	-5	5	1	1	-5	-1	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 1 \cdot \chi_{15} + 1 \cdot \chi_{16}$	5	-1	5	5	-1	-1	5	-1	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 1 \cdot \chi_{11} + 1 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	5	1	-5	5	-1	-1	-5	1	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 1 \cdot \chi_9 + 1 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	5	$-E(4)$	-5	-5	$E(4)$	$E(4)$	5	$-E(4)$	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 1 \cdot \chi_9 + 1 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	5	$E(4)$	-5	-5	$-E(4)$	$-E(4)$	5	$E(4)$	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 1 \cdot \chi_7 + 0 \cdot \chi_8 + 1 \cdot \chi_9 + 1 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	5	$-E(4)$	5	-5	$-E(4)$	$E(4)$	-5	$E(4)$	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 1 \cdot \chi_8 + 1 \cdot \chi_9 + 1 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	5	$E(4)$	5	-5	$E(4)$	$-E(4)$	-5	$-E(4)$	0	0	0	0	0	0	0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	1	1	-1	1	-1	1	-1	-1	1	-1	1	1	-1	-1	1	-1
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	1	-1	1	1	-1	-1	1	-1	1	1	-1	1	-1	1	-1	-1
$0 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	1	-1	-1	1	1	-1	-1	1	1	-1	-1	1	1	-1	-1	1
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	1	$-E(4)$	1	-1	$-E(4)$	$E(4)$	-1	$E(4)$	1	1	$-E(4)$	-1	$-E(4)$	-1	$E(4)$	$E(4)$
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 1 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	1	$E(4)$	1	-1	$E(4)$	$-E(4)$	-1	$-E(4)$	1	1	$E(4)$	-1	$E(4)$	-1	$-E(4)$	$-E(4)$
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	1	$-E(4)$	-1	-1	$E(4)$	$-E(4)$	1	$E(4)$	1	-1	$E(4)$	-1	$-E(4)$	1	$-E(4)$	$E(4)$
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	1	$-E(4)$	-1	-1	$E(4)$	$E(4)$	1	$-E(4)$	1	-1	$-E(4)$	-1	$E(4)$	1	$E(4)$	$-E(4)$

$P_1 = Group([()]) \cong 1$

$P_2 = Group([(1, 20, 5, 28, 12)(2, 24, 8, 32, 16)(3, 26, 10, 34, 18)(4, 27, 11, 35, 19)(6, 30, 14, 37, 22)(7, 31, 15, 38, 23)(9, 33, 17, 39, 25)(13, 36, 21, 40, 29)]) \cong C5$

$N_1 = Group([(1, 2, 4, 7)(3, 6, 9, 13)(5, 32, 11, 38)(8, 35, 15, 28)(10, 37, 17, 40)(12, 24, 19, 31)(14, 39, 21, 34)(16, 27, 23, 20)(18, 30, 25, 36)(22, 33, 29, 26), (1, 3)(2, 6)(4, 9)(5, 10)(7, 13)(8, 14)(11, 17)(12, 18)(15, 21)(16, 22)(19, 25)(20, 26)(23, 29)(24, 30)(27, 33)(28, 34)(31, 36)(32, 37)(35, 39)(38, 40), (1, 4)(2, 7)(3, 9)(5, 11)(6, 13)(8, 15)(10, 17)(12, 19)(14, 21)(16, 23)(18, 25)(20, 27)(22, 29)(24, 31)(26, 33)(28, 35)(30, 36)(32, 38)(34, 39)(37, 40), (1, 5, 12, 20, 28)(2, 8, 16, 24, 32)(3, 10, 18, 26, 34)(4, 11, 19, 27, 35)(6, 14, 22, 30, 37)(7, 15, 23, 31, 38)(9, 17, 25, 33, 39)(13, 21, 29, 36, 40)]) \cong C2 \times (C5 : C4)$

$N_2 = Group([(1, 20, 5, 28, 12)(2, 24, 8, 32, 16)(3, 26, 10, 34, 18)(4, 27, 11, 35, 19)(6, 30, 14, 37, 22)(7, 31, 15, 38, 23)(9, 33, 17, 39, 25)(13, 36, 21, 40, 29), (1, 2, 4, 7)(3, 6, 9, 13)(5, 32, 11, 38)(8, 35, 15, 28)(10, 37, 17, 40)(12, 24, 19, 31)(14, 39, 21, 34)(16, 27, 23, 20)(18, 30, 25, 36)(22, 33, 29, 26), (1, 3)(2, 6)(4, 9)(5, 10)(7, 13)(8, 14)(11, 17)(12, 18)(15, 21)(16, 22)(19, 25)(20, 26)(23, 29)(24, 30)(27, 33)(28, 34)(31, 36)(32, 37)(35, 39)(38, 40)]) \cong C2 \times (C5 : C4)$