

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
$\chi_1$	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
$\chi_2$	1	-1	-1	1	1	1	-1	-1	-1	1	1	1	-1	-1	1	-1
$\chi_3$	1	-1	1	1	1	-1	-1	1	1	1	1	-1	1	1	1	1
$\chi_4$	1	1	-1	1	1	-1	1	-1	-1	1	1	-1	-1	-1	1	-1
$\chi_5$	1	$-E(4)$	-1	-1	1	$E(4)$	$E(4)$	1	-1	-1	1	$-E(4)$	1	-1	-1	1
$\chi_6$	1	$E(4)$	-1	-1	1	$-E(4)$	$-E(4)$	1	-1	-1	1	$E(4)$	1	-1	-1	1
$\chi_7$	1	$-E(4)$	1	-1	1	$-E(4)$	$E(4)$	-1	1	-1	1	$E(4)$	-1	1	-1	-1
$\chi_8$	1	$E(4)$	1	-1	1	$E(4)$	$-E(4)$	-1	1	-1	1	$-E(4)$	-1	1	-1	-1
$\chi_9$	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	$E(5)^2 + E(5)^3$	$-E(5) - E(5)^4$	$-E(5) - E(5)^4$	$E(5) + E(5)^4$
$\chi_{10}$	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	$E(5) + E(5)^4$	$-E(5)^2 - E(5)^3$	$-E(5)^2 - E(5)^3$	$E(5)^2 + E(5)^3$
$\chi_{11}$	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	$-E(5)^2 - E(5)^3$	$-E(5) - E(5)^4$	$E(5) + E(5)^4$	$-E(5) - E(5)^4$
$\chi_{12}$	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	$-E(5) - E(5)^4$	$-E(5)^2 - E(5)^3$	$E(5)^2 + E(5)^3$	$-E(5)^2 - E(5)^3$
$\chi_{13}$	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	$-E(5)^2 + E(5)^3$	$E(5) + E(5)^4$	$-E(5) - E(5)^4$	$-E(5) - E(5)^4$
$\chi_{14}$	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	$-E(5) - E(5)^4$	$E(5)^2 + E(5)^3$	$-E(5)^2 - E(5)^3$	$-E(5)^2 - E(5)^3$
$\chi_{15}$	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	$E(5)^2 + E(5)^3$	$E(5) + E(5)^4$	$E(5) + E(5)^4$	$E(5) + E(5)^4$
$\chi_{16}$	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  $p = 2$ :

Normalisers $N_i$	$N_1$			$N_2$			$N_3$			$N_4$			$N_5$			$N_6$	$N_7$	$N_8$
$p$ -subgroups of $G$ up to conjugacy in $G$	$P_1$			$P_2$			$P_3$			$P_4$			$P_5$			$P_6$	$P_7$	$P_8$
Representatives $n_j \in N_i$	1a	5a	5b	1a	5a	5b	1a	5a	5b	1a	5a	5b	1a	5a	5b	1a	1a	1a
$1 \cdot \chi_1 + 1 \cdot \chi_2 + 1 \cdot \chi_3 + 1 \cdot \chi_4 + 1 \cdot \chi_5 + 1 \cdot \chi_6 + 1 \cdot \chi_7 + 1 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	8	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 1 \cdot \chi_9 + 0 \cdot \chi_{10} + 1 \cdot \chi_{11} + 0 \cdot \chi_{12} + 1 \cdot \chi_{13} + 0 \cdot \chi_{14} + 1 \cdot \chi_{15} + 0 \cdot \chi_{16}$	8	$4 * E(5)^2 + 4 * E(5)^3$	$4 * E(5) + 4 * E(5)^4$	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 1 \cdot \chi_{10} + 0 \cdot \chi_{11} + 1 \cdot \chi_{12} + 0 \cdot \chi_{13} + 1 \cdot \chi_{14} + 0 \cdot \chi_{15} + 1 \cdot \chi_{16}$	8	$4 * E(5) + 4 * E(5)^4$	$4 * E(5)^2 + 4 * E(5)^3$	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
$1 \cdot \chi_1 + 1 \cdot \chi_2 + 1 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	4	4	4	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 1 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 1 \cdot \chi_{15} + 0 \cdot \chi_{16}$	4	$2 * E(5)^2 + 2 * E(5)^3$	$2 * E(5) + 2 * E(5)^4$	4	$2 * E(5)^2 + 2 * E(5)^3$	$2 * E(5) + 2 * E(5)^4$	0	0	0	0	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 1 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 1 \cdot \chi_{16}$	4	$2 * E(5) + 2 * E(5)^4$	$2 * E(5)^2 + 2 * E(5)^3$	4	$2 * E(5) + 2 * E(5)^4$	$2 * E(5)^2 + 2 * E(5)^3$	0	0	0	0	0	0	0	0	0	0	0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 1 \cdot \chi_7 + 1 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	4	4	4	0	0	0	4	4	4	0	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 1 \cdot \chi_{13} + 0 \cdot \chi_{14} + 1 \cdot \chi_{15} + 0 \cdot \chi_{16}$	4	$2 * E(5)^2 + 2 * E(5)^3$	$2 * E(5) + 2 * E(5)^4$	0	0	0	4	$2 * E(5)^2 + 2 * E(5)^3$	$2 * E(5) + 2 * E(5)^4$	0	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 1 \cdot \chi_{14} + 0 \cdot \chi_{15} + 1 \cdot \chi_{16}$	4	$2 * E(5) + 2 * E(5)^4$	$2 * E(5)^2 + 2 * E(5)^3$	0	0	0	4	$2 * E(5) + 2 * E(5)^4$	$2 * E(5)^2 + 2 * E(5)^3$	0	0	0	0	0	0	0	0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	4	4	4	0	0	0	4	4	4	0	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 1 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 1 \cdot \chi_{15} + 0 \cdot \chi_{16}$	4	$2 * E(5)^2 + 2 * E(5)^3$	$2 * E(5) + 2 * E(5)^4$	0	0	0	4	$2 * E(5)^2 + 2 * E(5)^3$	$2 * E(5) + 2 * E(5)^4$	0	0	0	0	0	0	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 1 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 1 \cdot \chi_{16}$	4	$2 * E(5) + 2 * E(5)^4$	$2 * E(5)^2 + 2 * E(5)^3$	0	0	0	4	$2 * E(5) + 2 * E(5)^4$	$2 * E(5)^2 + 2 * E(5)^3$	0	0	0	0	0	0	0	0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 1 \cdot \chi_{16}$	2	$E(5) + E(5)^4$	$E(5)^2 + E(5)^3$	2	$E(5) + E(5)^4$	$E(5)^2 + E(5)^3$	2	$E(5) + E(5)^4$	$E(5)^2 + E(5)^3$	2	$E(5) + E(5)^4$	$E(5)^2 + E(5)^3$	2	$E(5) + E(5)^4$	$E(5)^2 + E(5)^3$	0	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 1 \cdot \chi_{15} + 0 \cdot \chi_{16}$	2	$E(5)^2 + E(5)^3$	$E(5) + E(5)^4$	2	$E(5)^2 + E(5)^3$	$E(5) + E(5)^4$	2	$E(5)^2 + E(5)^3$	$E(5) + E(5)^4$	2	$E(5)^2 + E(5)^3$	$E(5) + E(5)^4$	2	$E(5)^2 + E(5)^3$	$E(5) + E(5)^4$	0	0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	2	2	2	2	2	2	0	0	0	0	0	0	0	0	0	2	0	0
$1 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16}$	2	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	2	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	1	1

- $P_1 = Group([(1)]) \cong 1$
- $P_2 = Group([(1, 4)(2, 7)(3, 9)(5, 11)(6, 13)(8, 15)(10, 17)(12, 19)(14, 21)(16, 23)(18, 25)(20, 27)(22, 29)(24, 31)(26, 33)(28, 35)(30, 36)(32, 38)(34, 39)(37, 40)]) \cong C2$
- $P_3 = Group([(1, 3)(2, 6)(4, 9)(5, 10)(7, 13)(8, 14)(11, 17)(12, 18)(15, 21)(16, 22)(19, 25)(20, 26)(23, 29)(24, 30)(27, 33)(28, 34)(31, 36)(32, 37)(35, 39)(38, 40)]) \cong C2$
- $P_4 = Group([(1, 9)(2, 13)(3, 4)(5, 17)(6, 7)(8, 21)(10, 11)(12, 25)(14, 15)(16, 29)(18, 19)(20, 33)(22, 23)(24, 36)(26, 27)(28, 39)(30, 31)(32, 40)(34, 35)(37, 38)]) \cong C2$
- $P_5 = Group([(1, 4)(2, 7)(3, 9)(5, 11)(6, 13)(8, 15)(10, 17)(12, 19)(14, 21)(16, 23)(18, 25)(20, 27)(22, 29)(24, 31)(26, 33)(28, 35)(30, 36)(32, 38)(34, 39)(37, 40), (1, 3)(2, 6)(4, 9)(5, 10)(7, 13)(8, 14)(11, 17)(12, 18)(15, 21)(16, 22)(19, 25)(20, 26)(23, 29)(24, 30)(27, 33)(28, 34)(31, 36)(32, 37)(35, 39)(38, 40)]) \cong C2 \times C2$
- $P_6 = Group([(1, 4)(2, 7)(3, 9)(5, 11)(6, 13)(8, 15)(10, 17)(12, 19)(14, 21)(16, 23)(18, 25)(20, 27)(22, 29)(24, 31)(26, 33)(28, 35)(30, 36)(32, 38)(34, 39)(37, 40), (1, 2, 4, 7)(3, 6, 9, 13)(5, 32, 11, 38)(8, 35, 15, 28)(10, 37, 17, 40)(12, 24, 19, 31)(14, 39, 21, 34)(16, 27, 23, 20)(18, 30, 25, 36)(22, 33, 29, 26)]) \cong C4$
- $P_7 = Group([(1, 4)(2, 7)(3, 9)(5, 11)(6, 13)(8, 15)(10, 17)(12, 19)(14, 21)(16, 23)(18, 25)(20, 27)(22, 29)(24, 31)(26, 33)(28, 35)(30, 36)(32, 38)(34, 39)(37, 40), (1, 6, 4, 13)(2, 9, 7, 3)(5, 37, 11, 40)(8, 39, 15, 34)(10, 32, 17, 38)(12, 30, 19, 36)(14, 35, 21, 28)(16, 33, 23, 26)(18, 24, 25, 31)(20, 22, 27, 29)]) \cong C4$
- $P_8 = Group([(1, 4)(2, 7)(3, 9)(5, 11)(6, 13)(8, 15)(10, 17)(12, 19)(14, 21)(16, 23)(18, 25)(20, 27)(22, 29)(24, 31)(26, 33)(28, 35)(30, 36)(32, 38)(34, 39)(37, 40), (1, 3)(2, 6)(4, 9)(5, 10)(7, 13)(8, 14)(11, 17)(12, 18)(15, 21)(16, 22)(19, 25)(20, 26)(23, 29)(24, 30)(27, 33)(28, 34)(31, 36)(32, 37)(35, 39)(38, 40), (1, 2, 4, 7)(3, 6, 9, 13)(5, 32, 11, 38)(8, 35, 15, 28)(10, 37, 17, 40)(12, 24, 19, 31)(14, 39, 21, 34)(16, 27, 23, 20)(18, 30, 25, 36)(22, 33, 29, 26)]) \cong C4 \times C2$

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