Number of vertices $n = 14$.
Adjacencies of Graph

1. vertex 1 adjacent to 2 7 8

2. vertex 2 adjacent to 1 3 9

3. vertex 3 adjacent to 2 4 10

4. vertex 4 adjacent to 3 5 11

5. vertex 5 adjacent to 4 6 12

6. vertex 6 adjacent to 5 7 13

7. vertex 7 adjacent to 1 6 14

8. vertex 8 adjacent to 1 9 14

9. vertex 9 adjacent to 2 8 10

10. vertex 10 adjacent to 3 9 11

11. vertex 11 adjacent to 4 10 12

12. vertex 12 adjacent to 5 11 13

13. vertex 13 adjacent to 6 12 14

14. vertex 14 adjacent to 7 8 13

Size of automorphism group of the graph=28
  Full group: $|Aut(polytope)| = 229376$
  Restricted group: $|Aut(G) \times switch| = 229376$
  Number of orbits for the full group : 6
  List of orbits of facets for the full group: Total number of orbits = 6 Total
number of facets = 7394

1. Inequality 1 with incidence 4096 and stabilizer of size 4096. Orbit size
   is 56 nature: 4-cycle inequality, C=[5, 6, 13, 12] F=[5, 6]

(1,2) : 0	(1,7) : 0	(1,8) : 0	(2,3) : 0	(2,9) : 0	(3,4) : 0
(3,10) : 0	(4,5) : 0	(4,11) : 0	(5,6) : -1	(5,12) : 1	(6,7) : 0
(6,13) : 1	(7,14) : 0	(8,9) : 0	(8,14) : 0	(9,10) : 0	(10,11) : 0
(11,12) : 0	(12,13) : 1	(13,14) : 0			

2. Inequality 2 with incidence 4096 and stabilizer of size 16384. Orbit size is 14 nature: edge inequality e=[1, 8]

(1,2) : 0	(1,7) : 0	(1,8) : 1	(2,3) : 0	(2,9) : 0	(3,4) : 0
(3,10) : 0	(4,5) : 0	(4,11) : 0	(5,6) : 0	(5,12) : 0	(6,7) : 0
(6,13) : 0	(7,14) : 0	(8,9) : 0	(8,14) : 0	(9,10) : 0	(10,11) : 0
(11,12) : 0	(12,13) : 0	(13,14) : 0			

3. Inequality 3 with incidence 4096 and stabilizer of size 8192. Orbit size is 28 nature: edge inequality e=[10, 11]

(1,2) : 0	(1,7) : 0	(1,8) : 0	(2,3) : 0	(2,9) : 0	(3,4) : 0
(3,10) : 0	(4,5) : 0	(4,11) : 0	(5,6) : 0	(5,12) : 0	(6,7) : 0
(6,13) : 0	(7,14) : 0	(8,9) : 0	(8,14) : 0	(9,10) : 0	(10,11) : 1
(11,12) : 0	(12,13) : 0	(13,14) : 0			

4. Inequality 4 with incidence 896 and stabilizer of size 1792. Orbit size is 128 nature: 7-cycle inequality, C=[11, 12, 13, 14, 8, 9, 10] F=[11, 12]

(1,2) : 0	(1,7) : 0	(1,8) : 0	(2,3) : 0	(2,9) : 0	(3,4) : 0
(3,10) : 0	(4,5) : 0	(4,11) : 0	(5,6) : 0	(5,12) : 0	(6,7) : 0
(6,13) : 0	(7,14) : 0	(8,9) : 1	(8,14) : 1	(9,10) : 1	(10,11) : 1
(11,12) : -1	(12,13) : 1	(13,14) : 1			

5. Inequality 5 with incidence 288 and stabilizer of size 64. Orbit size is 3584 nature: 9-cycle inequality, C=[5, 6, 13, 14, 8, 9, 10, 11, 4] F=[5, 6]

(1,2) : 0	(1,7) : 0	(1,8) : 0	(2,3) : 0	(2,9) : 0	(3,4) : 0
(3,10) : 0	(4,5) : 1	(4,11) : 1	(5,6) : -1	(5,12) : 0	(6,7) : 0
(6,13) : 1	(7,14) : 0	(8,9) : 1	(8,14) : 1	(9,10) : 1	(10,11) : 1
(11,12) : 0	(12,13) : 0	(13,14) : 1			

6. Inequality 6 with incidence 288 and stabilizer of size 64. Orbit size is 3584 nature: 9-cycle inequality, C=[5, 6, 13, 14, 8, 9, 10, 3, 4] F=[5, 6]

(1,2) : 0	(1,7) : 0	(1,8) : 0	(2,3) : 0	(2,9) : 0	(3,4) : 1
(3,10) : 1	(4,5) : 1	(4,11) : 0	(5,6) : -1	(5,12) : 0	(6,7) : 0
(6,13) : 1	(7,14) : 0	(8,9) : 1	(8,14) : 1	(9,10) : 1	(10,11) : 0
(11,12) : 0	(12,13) : 0	(13,14) : 1			