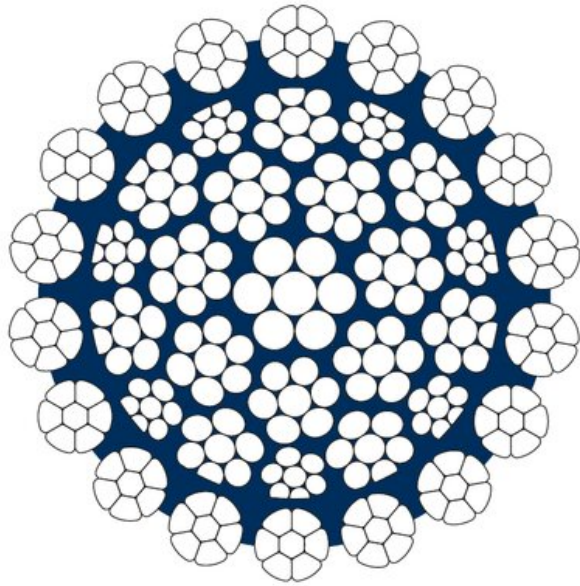


# CASAR GENERAL CRANE ROPE

## Product information



### Applications:

Has a core in a special design avoiding crossover between the strands of core and preventing internal rope destruction. Hoist rope for mobile cranes, electrical hoists and other applications, where rotation-resistant ropes are required.

### Properties:

- Rotations resistant wire rope with very high breaking force.
- Very good fatigue properties.
- Especially suitable for multiple layer spooling.

**Discard criteria:** ISO 4309 Rope Category No: 10-60mm RCN.23-3

**Rope construction:** Rotation resistant, made out of compacted outer strands and a compacted steel core.

**Marking:** According to standard

**Standard:** EN 12385-4  
AS 3569

**Fill factor:** 0.72

**RCN:** 23-3

**Tolerance Ø:** +2% to +4%

Tower crane



Offshore crane



Mobile crane



Crawler crane



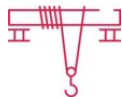
Mobile port crane



Piling crane



Overhead cranes



Part Code	Rope diameter mm	Tensile strength N/mm <sup>2</sup>	Steel area mm <sup>2</sup>	Min. breaking force kN	Finish	Rope lay	Weight kg/100m
104101006070069	10	1,960	56.2	89.6	Bright	zZ	0.49
104101005070069	10	1,960	56.2	89.6	Bright	sS	0.49
104101006270069	10	1,960	56.2	89.6	Galvanized	zZ	0.49
104101005270069	10	1,960	56.2	89.6	Galvanized	sS	0.49
104101003070069	10	1,960	56.2	89.6	Bright	zS	0.49
104101003270069	10	1,960	56.2	89.6	Galvanized	zS	0.49
104101004070069	10	1,960	56.2	89.6	Bright	sZ	0.49
104101004270069	10	1,960	56.2	89.6	Galvanized	sZ	0.49
104101006100069	10	2,160	56.2	97.4	Bright	zZ	0.49
104101005100069	10	2,160	56.2	97.4	Bright	sS	0.49
104101006300069	10	2,160	56.2	97.4	Galvanized	zZ	0.49
104101005300069	10	2,160	56.2	97.4	Galvanized	sS	0.49
104101003100069	10	2,160	56.2	97.4	Bright	zS	0.49
104101003300069	10	2,160	56.2	97.4	Galvanized	zS	0.49
104101004100069	10	2,160	56.2	97.4	Bright	sZ	0.49
104101004300069	10	2,160	56.2	97.4	Galvanized	sZ	0.49
104101106070069	11	1,960	68.7	108.8	Bright	zZ	0.6
104101105070069	11	1,960	68.7	108.8	Bright	sS	0.6
104101103070069	11	1,960	68.7	108.8	Bright	zS	0.6
104101104070069	11	1,960	68.7	108.8	Bright	sZ	0.6
104101106270069	11	1,960	68.7	108.8	Galvanized	zZ	0.6

104101105270069	11	1,960	68.7	108.8	Galvanized	sS	0.6
104101103270069	11	1,960	68.7	108.8	Galvanized	zS	0.6
104101104270069	11	1,960	68.7	108.8	Galvanized	sZ	0.6
104101106100069	11	2,160	68.7	118.4	Bright	zZ	0.6
104101105100069	11	2,160	68.7	118.4	Bright	sS	0.6
104101103100069	11	2,160	68.7	118.4	Bright	zS	0.6
104101104100069	11	2,160	68.7	118.4	Bright	sZ	0.6
104101106300069	11	2,160	68.7	118.4	Galvanized	zZ	0.6
104101105300069	11	2,160	68.7	118.4	Galvanized	sS	0.6
104101103300069	11	2,160	68.7	118.4	Galvanized	zS	0.6
104101104300069	11	2,160	68.7	118.4	Galvanized	sZ	0.6
104101206070069	12	1,960	82	130.8	Bright	zZ	0.71
104101205070069	12	1,960	82	130.8	Bright	sS	0.71
104101203070069	12	1,960	82	130.8	Bright	zS	0.71
104101204070069	12	1,960	82	130.8	Bright	sZ	0.71
104101206270069	12	1,960	82	130.8	Galvanized	zZ	0.71
104101205270069	12	1,960	82	130.8	Galvanized	sS	0.71
104101203270069	12	1,960	82	130.8	Galvanized	zS	0.71
104101204270069	12	1,960	82	130.8	Galvanized	sZ	0.71
104101206100069	12	2,160	82	139.9	Bright	zZ	0.71
104101205100069	12	2,160	82	139.9	Bright	sS	0.71
104101203100069	12	2,160	82	139.9	Bright	zS	0.71
104101204100069	12	2,160	82	139.9	Bright	sZ	0.71

104101206300069	12	2,160	82	139.9	Galvanized	zZ	0.71
104101205300069	12	2,160	82	139.9	Galvanized	sS	0.71
104101203300069	12	2,160	82	139.9	Galvanized	zS	0.71
104101204300069	12	2,160	82	139.9	Galvanized	sZ	0.71
104101276070069	12.7	1,960	90.8	146.4	Bright	zZ	0.79
104101275070069	12.7	1,960	90.8	146.4	Bright	sS	0.79
104101273070069	12.7	1,960	90.8	146.4	Bright	zS	0.79
104101274070069	12.7	1,960	90.8	146.4	Bright	sZ	0.79
104101276270069	12.7	1,960	90.8	146.4	Galvanized	zZ	0.79
104101275270069	12.7	1,960	90.8	146.4	Galvanized	sS	0.79
104101273270069	12.7	1,960	90.8	146.4	Galvanized	zS	0.79
104101274270069	12.7	1,960	90.8	146.4	Galvanized	sZ	0.79
104101276100069	12.7	2,160	90.8	161.4	Bright	zZ	0.79
104101275100069	12.7	2,160	90.8	161.4	Bright	sS	0.79
104101273100069	12.7	2,160	90.8	161.4	Bright	zS	0.79
104101274100069	12.7	2,160	90.8	161.4	Bright	sZ	0.79
104101276300069	12.7	2,160	90.8	161.4	Galvanized	zZ	0.79
104101275300069	12.7	2,160	90.8	161.4	Galvanized	sS	0.79
104101273300069	12.7	2,160	90.8	161.4	Galvanized	zS	0.79
104101274300069	12.7	2,160	90.8	161.4	Galvanized	sZ	0.79
104101306070069	13	1,960	95.2	152.7	Bright	zZ	0.83
104101305070069	13	1,960	95.2	152.7	Bright	sS	0.83
104101303070069	13	1,960	95.2	152.7	Bright	zS	0.83

104101304070069	13	1,960	95.2	152.7	Bright	sZ	0.83
104101306270069	13	1,960	95.2	152.7	Galvanized	zZ	0.83
104101305270069	13	1,960	95.2	152.7	Galvanized	sS	0.83
104101303270069	13	1,960	95.2	152.7	Galvanized	zS	0.83
104101304270069	13	1,960	95.2	152.7	Galvanized	sZ	0.83
104101306100069	13	2,160	95.2	165.4	Bright	zZ	0.83
104101305100069	13	2,160	95.2	165.4	Bright	sS	0.83
104101303100069	13	2,160	95.2	165.4	Bright	zS	0.83
104101304100069	13	2,160	95.2	165.4	Bright	sZ	0.83
104101306300069	13	2,160	95.2	165.4	Galvanized	zZ	0.83
104101305300069	13	2,160	95.2	165.4	Galvanized	sS	0.83
104101303300069	13	2,160	95.2	165.4	Galvanized	zS	0.83
104101304300069	13	2,160	95.2	165.4	Galvanized	sZ	0.83
104101406070069	14	1,960	110.4	179.1	Bright	zZ	0.96
104101405070069	14	1,960	110.4	179.1	Bright	sS	0.96
104101403070069	14	1,960	110.4	179.1	Bright	zS	0.96
104101404070069	14	1,960	110.4	179.1	Bright	sZ	0.96
104101406270069	14	1,960	110.4	179.1	Galvanized	zZ	0.96
104101405270069	14	1,960	110.4	179.1	Galvanized	sS	0.96
104101403270069	14	1,960	110.4	179.1	Galvanized	zS	0.96
104101404270069	14	1,960	110.4	179.1	Galvanized	sZ	0.96
104101406100069	14	2,160	110.4	190.9	Bright	zZ	0.96
104101405100069	14	2,160	110.4	190.9	Bright	sS	0.96

104101403100069	14	2,160	110.4	190.9	Bright	zS	0.96
104101404100069	14	2,160	110.4	190.9	Bright	sZ	0.96
104101406300069	14	2,160	110.4	190.9	Galvanized	zZ	0.96
104101405300069	14	2,160	110.4	190.9	Galvanized	sS	0.96
104101403300069	14	2,160	110.4	190.9	Galvanized	zS	0.96
104101404300069	14	2,160	110.4	190.9	Galvanized	sZ	0.96
104101506070069	15	1,960	126.3	204	Bright	zZ	1.1
104101505070069	15	1,960	126.3	204	Bright	sS	1.1
104101503070069	15	1,960	126.3	204	Bright	zS	1.1
104101504070069	15	1,960	126.3	204	Bright	sZ	1.1
104101506270069	15	1,960	126.3	204	Galvanized	zZ	1.1
104101505270069	15	1,960	126.3	204	Galvanized	sS	1.1
104101503270069	15	1,960	126.3	204	Galvanized	zS	1.1
104101504270069	15	1,960	126.3	204	Galvanized	sZ	1.1
104101506100069	15	2,160	126.3	219.5	Bright	zZ	1.1
104101505100069	15	2,160	126.3	219.5	Bright	sS	1.1
104101503100069	15	2,160	126.3	219.5	Bright	zS	1.1
104101504100069	15	2,160	126.3	219.5	Bright	sZ	1.1
104101506300069	15	2,160	126.3	219.5	Galvanized	zZ	1.1
104101505300069	15	2,160	126.3	219.5	Galvanized	sS	1.1
104101503300069	15	2,160	126.3	219.5	Galvanized	zS	1.1
104101504300069	15	2,160	126.3	219.5	Galvanized	sZ	1.1
104101606070069	16	1,960	145.6	230.6	Bright	zZ	1.27

104101605070069	16	1,960	145.6	230.6	Bright	sS	1.27
104101603070069	16	1,960	145.6	230.6	Bright	zS	1.27
104101604070069	16	1,960	145.6	230.6	Bright	sZ	1.27
104101606270069	16	1,960	145.6	230.6	Galvanized	zZ	1.27
104101605270069	16	1,960	145.6	230.6	Galvanized	sS	1.27
104101603270069	16	1,960	145.6	230.6	Galvanized	zS	1.27
104101604270069	16	1,960	145.6	230.6	Galvanized	sZ	1.27
104101606100069	16	2,160	145.6	249.1	Bright	zZ	1.27
104101605100069	16	2,160	145.6	249.1	Bright	sS	1.27
104101603100069	16	2,160	145.6	249.1	Bright	zS	1.27
104101604100069	16	2,160	145.6	249.1	Bright	sZ	1.27
104101606300069	16	2,160	145.6	249.1	Galvanized	zZ	1.27
104101605300069	16	2,160	145.6	249.1	Galvanized	sS	1.27
104101603300069	16	2,160	145.6	249.1	Galvanized	zS	1.27
104101604300069	16	2,160	145.6	249.1	Galvanized	sZ	1.27
104101706070069	17	1,960	163.3	257.9	Bright	zZ	1.42
104101705070069	17	1,960	163.3	257.9	Bright	sS	1.42
104101703070069	17	1,960	163.3	257.9	Bright	zS	1.42
104101704070069	17	1,960	163.3	257.9	Bright	sZ	1.42
104101706270069	17	1,960	163.3	257.9	Galvanized	zZ	1.42
104101705270069	17	1,960	163.3	257.9	Galvanized	sS	1.42
104101703270069	17	1,960	163.3	257.9	Galvanized	zS	1.42
104101704270069	17	1,960	163.3	257.9	Galvanized	sZ	1.42

104101706100069	17	2,160	163.3	280.6	Bright	zZ	1.42
104101705100069	17	2,160	163.3	280.6	Bright	sS	1.42
104101703100069	17	2,160	163.3	280.6	Bright	zS	1.42
104101704100069	17	2,160	163.3	280.6	Bright	sZ	1.42
104101706300069	17	2,160	163.3	280.6	Galvanized	zZ	1.42
104101705300069	17	2,160	163.3	280.6	Galvanized	sS	1.42
104101703300069	17	2,160	163.3	280.6	Galvanized	zS	1.42
104101704300069	17	2,160	163.3	280.6	Galvanized	sZ	1.42
104101806070069	18	1,960	183.7	293.9	Bright	zZ	1.6
104101805070069	18	1,960	183.7	293.9	Bright	sS	1.6
104101803070069	18	1,960	183.7	293.9	Bright	zS	1.6
104101804070069	18	1,960	183.7	293.9	Bright	sZ	1.6
104101806270069	18	1,960	183.7	293.9	Galvanized	zZ	1.6
104101805270069	18	1,960	183.7	293.9	Galvanized	sS	1.6
104101803270069	18	1,960	183.7	293.9	Galvanized	zS	1.6
104101804270069	18	1,960	183.7	293.9	Galvanized	sZ	1.6
104101806100069	18	2,160	183.7	317.5	Bright	zZ	1.6
104101805100069	18	2,160	183.7	317.5	Bright	sS	1.6
104101803100069	18	2,160	183.7	317.5	Bright	zS	1.6
104101804100069	18	2,160	183.7	317.5	Bright	sZ	1.6
104101806300069	18	2,160	183.7	317.5	Galvanized	zZ	1.6
104101805300069	18	2,160	183.7	317.5	Galvanized	sS	1.6
104101803300069	18	2,160	183.7	317.5	Galvanized	zS	1.6



104101804300069	18	2,160	183.7	317.5	Galvanized	sZ	1.6
104101906070069	19	1,960	204	329	Bright	zZ	1.78
104101905070069	19	1,960	204	329	Bright	sS	1.78
104101903070069	19	1,960	204	329	Bright	zS	1.78
104101904070069	19	1,960	204	329	Bright	sZ	1.78
104101906270069	19	1,960	204	329	Galvanized	zZ	1.78
104101905270069	19	1,960	204	329	Galvanized	sS	1.78
104101903270069	19	1,960	204	329	Galvanized	zS	1.78
104101904270069	19	1,960	204	329	Galvanized	sZ	1.78
104101906100069	19	2,160	204	352.8	Bright	zZ	1.78
104101905100069	19	2,160	204	352.8	Bright	sS	1.78
104101903100069	19	2,160	204	352.8	Bright	zS	1.78
104101904100069	19	2,160	204	352.8	Bright	sZ	1.78
104101906300069	19	2,160	204	352.8	Galvanized	zZ	1.78
104101905300069	19	2,160	204	352.8	Galvanized	sS	1.78
104101903300069	19	2,160	204	352.8	Galvanized	zS	1.78
104101904300069	19	2,160	204	352.8	Galvanized	sZ	1.78
104102006070069	20	1,960	227.5	362.2	Bright	zZ	1.98
104102005070069	20	1,960	227.5	362.2	Bright	sS	1.98
104102003070069	20	1,960	227.5	362.2	Bright	zS	1.98
104102004070069	20	1,960	227.5	362.2	Bright	sZ	1.98
104102006270069	20	1,960	227.5	362.2	Galvanized	zZ	1.98
104102005270069	20	1,960	227.5	362.2	Galvanized	sS	1.98

104102003270069	20	1,960	227.5	362.2	Galvanized	zS	1.98
104102004270069	20	1,960	227.5	362.2	Galvanized	sZ	1.98
104102006100069	20	2,160	227.5	391.7	Bright	zZ	1.98
104102005100069	20	2,160	227.5	391.7	Bright	sS	1.98
104102003100069	20	2,160	227.5	391.7	Bright	zS	1.98
104102004100069	20	2,160	227.5	391.7	Bright	sZ	1.98
104102006300069	20	2,160	227.5	391.7	Galvanized	zZ	1.98
104102005300069	20	2,160	227.5	391.7	Galvanized	sS	1.98
104102003300069	20	2,160	227.5	391.7	Galvanized	zS	1.98
104102004300069	20	2,160	227.5	391.7	Galvanized	sZ	1.98
104102106070069	21	1,960	249	396.1	Bright	zZ	2.17
104102105070069	21	1,960	249	396.1	Bright	sS	2.17
104102103070069	21	1,960	249	396.1	Bright	zS	2.17
104102104070069	21	1,960	249	396.1	Bright	sZ	2.17
104102106270069	21	1,960	249	396.1	Galvanized	zZ	2.17
104102105270069	21	1,960	249	396.1	Galvanized	sS	2.17
104102103270069	21	1,960	249	396.1	Galvanized	zS	2.17
104102104270069	21	1,960	249	396.1	Galvanized	sZ	2.17
104102106100069	21	2,160	249	430.9	Bright	zZ	2.17
104102105100069	21	2,160	249	430.9	Bright	sS	2.17
104102103100069	21	2,160	249	430.9	Bright	zS	2.17
104102104100069	21	2,160	249	430.9	Bright	sZ	2.17
104102106300069	21	2,160	249	430.9	Galvanized	zZ	2.17

104102105300069	21	2,160	249	430.9	Galvanized	sS	2.17
104102103300069	21	2,160	249	430.9	Galvanized	zS	2.17
104102104300069	21	2,160	249	430.9	Galvanized	sZ	2.17
104102206070069	22	1,960	273.9	441.4	Bright	zZ	2.38
104102205070069	22	1,960	273.9	441.4	Bright	sS	2.38
104102203070069	22	1,960	273.9	441.4	Bright	zS	2.38
104102204070069	22	1,960	273.9	441.4	Bright	sZ	2.38
104102206270069	22	1,960	273.9	441.4	Galvanized	zZ	2.38
104102205270069	22	1,960	273.9	441.4	Galvanized	sS	2.38
104102203270069	22	1,960	273.9	441.4	Galvanized	zS	2.38
104102204270069	22	1,960	273.9	441.4	Galvanized	sZ	2.38
104102206100069	22	2,160	273.9	472	Bright	zZ	2.38
104102205100069	22	2,160	273.9	472	Bright	sS	2.38
104102203100069	22	2,160	273.9	472	Bright	zS	2.38
104102204100069	22	2,160	273.9	472	Bright	sZ	2.38
104102206300069	22	2,160	273.9	472	Galvanized	zZ	2.38
104102205300069	22	2,160	273.9	472	Galvanized	sS	2.38
104102203300069	22	2,160	273.9	472	Galvanized	zS	2.38
104102204300069	22	2,160	273.9	472	Galvanized	sZ	2.38
104102306070069	23	1,960	299.6	471.8	Bright	zZ	2.61
104102305070069	23	1,960	299.6	471.8	Bright	sS	2.61
104102303070069	23	1,960	299.6	471.8	Bright	zS	2.61
104102304070069	23	1,960	299.6	471.8	Bright	sZ	2.61

104102306270069	23	1,960	299.6	471.8	Galvanized	zZ	2.61
104102305270069	23	1,960	299.6	471.8	Galvanized	sS	2.61
104102303270069	23	1,960	299.6	471.8	Galvanized	zS	2.61
104102304270069	23	1,960	299.6	471.8	Galvanized	sZ	2.61
104102306100069	23	2,160	299.6	513.2	Bright	zZ	2.61
104102305100069	23	2,160	299.6	513.2	Bright	sS	2.61
104102303100069	23	2,160	299.6	513.2	Bright	zS	2.61
104102304100069	23	2,160	299.6	513.2	Bright	sZ	2.61
104102306300069	23	2,160	299.6	513.2	Galvanized	zZ	2.61
104102305300069	23	2,160	299.6	513.2	Galvanized	sS	2.61
104102303300069	23	2,160	299.6	513.2	Galvanized	zS	2.61
104102304300069	23	2,160	299.6	513.2	Galvanized	sZ	2.61
104102406070069	24	1,960	326.8	524.3	Bright	zZ	2.84
104102405070069	24	1,960	326.8	524.3	Bright	sS	2.84
104102403070069	24	1,960	326.8	524.3	Bright	zS	2.84
104102404070069	24	1,960	326.8	524.3	Bright	sZ	2.84
104102406270069	24	1,960	326.8	524.3	Galvanized	zZ	2.84
104102405270069	24	1,960	326.8	524.3	Galvanized	sS	2.84
104102403270069	24	1,960	326.8	524.3	Galvanized	zS	2.84
104102404270069	24	1,960	326.8	524.3	Galvanized	sZ	2.84
104102406100069	24	2,160	326.8	564.1	Bright	zZ	2.84
104102405100069	24	2,160	326.8	564.1	Bright	sS	2.84
104102403100069	24	2,160	326.8	564.1	Bright	zS	2.84

104102404100069	24	2,160	326.8	564.1	Bright	sZ	2.84
104102406300069	24	2,160	326.8	564.1	Galvanized	zZ	2.84
104102405300069	24	2,160	326.8	564.1	Galvanized	sS	2.84
104102403300069	24	2,160	326.8	564.1	Galvanized	zS	2.84
104102404300069	24	2,160	326.8	564.1	Galvanized	sZ	2.84
104102506070069	25	1,960	348.8	567.9	Bright	zZ	3.04
104102505070069	25	1,960	348.8	567.9	Bright	sS	3.04
104102503070069	25	1,960	348.8	567.9	Bright	zS	3.04
104102504070069	25	1,960	348.8	567.9	Bright	sZ	3.04
104102506270069	25	1,960	348.8	567.9	Galvanized	zZ	3.04
104102505270069	25	1,960	348.8	567.9	Galvanized	sS	3.04
104102503270069	25	1,960	348.8	567.9	Galvanized	zS	3.04
104102504270069	25	1,960	348.8	567.9	Galvanized	sZ	3.04
104102506100069	25	2,160	348.8	609.4	Bright	zZ	3.04
104102505100069	25	2,160	348.8	609.4	Bright	sS	3.04
104102503100069	25	2,160	348.8	609.4	Bright	zS	3.04
104102504100069	25	2,160	348.8	609.4	Bright	sZ	3.04
104102506300069	25	2,160	348.8	609.4	Galvanized	zZ	3.04
104102505300069	25	2,160	348.8	609.4	Galvanized	sS	3.04
104102503300069	25	2,160	348.8	609.4	Galvanized	zS	3.04
104102504300069	25	2,160	348.8	609.4	Galvanized	sZ	3.04
104102606070069	26	1,960	377.9	614.9	Bright	zZ	3.29
104102605070069	26	1,960	377.9	614.9	Bright	sS	3.29

104102603070069	26	1,960	377.9	614.9	Bright	zS	3.29
104102604070069	26	1,960	377.9	614.9	Bright	sZ	3.29
104102606270069	26	1,960	377.9	614.9	Galvanized	zZ	3.29
104102605270069	26	1,960	377.9	614.9	Galvanized	sS	3.29
104102603270069	26	1,960	377.9	614.9	Galvanized	zS	3.29
104102604270069	26	1,960	377.9	614.9	Galvanized	sZ	3.29
104102606100069	26	2,160	377.9	657.4	Bright	zZ	3.29
104102605100069	26	2,160	377.9	657.4	Bright	sS	3.29
104102603100069	26	2,160	377.9	657.4	Bright	zS	3.29
104102604100069	26	2,160	377.9	657.4	Bright	sZ	3.29
104102606300069	26	2,160	377.9	657.4	Galvanized	zZ	3.29
104102605300069	26	2,160	377.9	657.4	Galvanized	sS	3.29
104102603300069	26	2,160	377.9	657.4	Galvanized	zS	3.29
104102604300069	26	2,160	377.9	657.4	Galvanized	sZ	3.29
104102706070069	27	1,960	410.5	654.2	Bright	zZ	3.57
104102705070069	27	1,960	410.5	654.2	Bright	sS	3.57
104102703070069	27	1,960	410.5	654.2	Bright	zS	3.57
104102704070069	27	1,960	410.5	654.2	Bright	sZ	3.57
104102706270069	27	1,960	410.5	654.2	Galvanized	zZ	3.57
104102705270069	27	1,960	410.5	654.2	Galvanized	sS	3.57
104102703270069	27	1,960	410.5	654.2	Galvanized	zS	3.57
104102704270069	27	1,960	410.5	654.2	Galvanized	sZ	3.57
104102706100069	27	2,160	410.5	711.7	Bright	zZ	3.57

104102705100069	27	2,160	410.5	711.7	Bright	sS	3.57
104102703100069	27	2,160	410.5	711.7	Bright	zS	3.57
104102704100069	27	2,160	410.5	711.7	Bright	sZ	3.57
104102706300069	27	2,160	410.5	711.7	Galvanized	zZ	3.57
104102705300069	27	2,160	410.5	711.7	Galvanized	sS	3.57
104102703300069	27	2,160	410.5	711.7	Galvanized	zS	3.57
104102704300069	27	2,160	410.5	711.7	Galvanized	sZ	3.57
104102806070069	28	1,960	442.5	712.9	Bright	zZ	3.85
104102805070069	28	1,960	442.5	712.9	Bright	sS	3.85
104102803070069	28	1,960	442.5	712.9	Bright	zS	3.85
104102804070069	28	1,960	442.5	712.9	Bright	sZ	3.85
104102806270069	28	1,960	442.5	712.9	Galvanized	zZ	3.85
104102805270069	28	1,960	442.5	712.9	Galvanized	sS	3.85
104102803270069	28	1,960	442.5	712.9	Galvanized	zS	3.85
104102804270069	28	1,960	442.5	712.9	Galvanized	sZ	3.85
104102806100069	28	2,160	442.5	765.6	Bright	zZ	3.85
104102805100069	28	2,160	442.5	765.6	Bright	sS	3.85
104102803100069	28	2,160	442.5	765.6	Bright	zS	3.85
104102804100069	28	2,160	442.5	765.6	Bright	sZ	3.85
104102806300069	28	2,160	442.5	765.6	Galvanized	zZ	3.85
104102805300069	28	2,160	442.5	765.6	Galvanized	sS	3.85
104102803300069	28	2,160	442.5	765.6	Galvanized	zS	3.85
104102804300069	28	2,160	442.5	765.6	Galvanized	sZ	3.85

104102906070069	29	1,960	473.4	754.6	Bright	zZ	4.12
104102905070069	29	1,960	473.4	754.6	Bright	sS	4.12
104102903070069	29	1,960	473.4	754.6	Bright	zS	4.12
104102904070069	29	1,960	473.4	754.6	Bright	sZ	4.12
104102906270069	29	1,960	473.4	754.6	Galvanized	zZ	4.12
104102905270069	29	1,960	473.4	754.6	Galvanized	sS	4.12
104102903270069	29	1,960	473.4	754.6	Galvanized	zS	4.12
104102904270069	29	1,960	473.4	754.6	Galvanized	sZ	4.12
104102906100069	29	2,160	473.4	821	Bright	zZ	4.12
104102905100069	29	2,160	473.4	821	Bright	sS	4.12
104102903100069	29	2,160	473.4	821	Bright	zS	4.12
104102904100069	29	2,160	473.4	821	Bright	sZ	4.12
104102906300069	29	2,160	473.4	821	Galvanized	zZ	4.12
104102905300069	29	2,160	473.4	821	Galvanized	sS	4.12
104102903300069	29	2,160	473.4	821	Galvanized	zS	4.12
104102904300069	29	2,160	473.4	821	Galvanized	sZ	4.12
104103006070069	30	1,960	505.4	817.4	Bright	zZ	4.4
104103005070069	30	1,960	505.4	817.4	Bright	sS	4.4
104103003070069	30	1,960	505.4	817.4	Bright	zS	4.4
104103004070069	30	1,960	505.4	817.4	Bright	sZ	4.4
104103006270069	30	1,960	505.4	817.4	Galvanized	zZ	4.4
104103005270069	30	1,960	505.4	817.4	Galvanized	sS	4.4
104103003270069	30	1,960	505.4	817.4	Galvanized	zS	4.4



104103004270069	30	1,960	505.4	817.4	Galvanized	sZ	4.4
104103006100069	30	2,160	505.4	877.9	Bright	zZ	4.4
104103005100069	30	2,160	505.4	877.9	Bright	sS	4.4
104103003100069	30	2,160	505.4	877.9	Bright	zS	4.4
104103004100069	30	2,160	505.4	877.9	Bright	sZ	4.4
104103006300069	30	2,160	505.4	877.9	Galvanized	zZ	4.4
104103005300069	30	2,160	505.4	877.9	Galvanized	sS	4.4
104103003300069	30	2,160	505.4	877.9	Galvanized	zS	4.4
104103004300069	30	2,160	505.4	877.9	Galvanized	sZ	4.4
104103106070069	31	1,960	539.7	869.7	Bright	zZ	4.7
104103105070069	31	1,960	539.7	869.7	Bright	sS	4.7
104103103070069	31	1,960	539.7	869.7	Bright	zS	4.7
104103104070069	31	1,960	539.7	869.7	Bright	sZ	4.7
104103106270069	31	1,960	539.7	869.7	Galvanized	zZ	4.7
104103105270069	31	1,960	539.7	869.7	Galvanized	sS	4.7
104103103270069	31	1,960	539.7	869.7	Galvanized	zS	4.7
104103104270069	31	1,960	539.7	869.7	Galvanized	sZ	4.7
104103106100069	31	2,160	539.7	958.4	Bright	zZ	4.7
104103105100069	31	2,160	539.7	958.4	Bright	sS	4.7
104103103100069	31	2,160	539.7	958.4	Bright	zS	4.7
104103104100069	31	2,160	539.7	958.4	Bright	sZ	4.7
104103106300069	31	2,160	539.7	958.4	Galvanized	zZ	4.7
104103105300069	31	2,160	539.7	958.4	Galvanized	sS	4.7

104103103300069	31	2,160	539.7	958.4	Galvanized	zS	4.7
104103104300069	31	2,160	539.7	958.4	Galvanized	sZ	4.7
104103206070069	32	1,960	579.4	930	Bright	zZ	5.04
104103205070069	32	1,960	579.4	930	Bright	sS	5.04
104103203070069	32	1,960	579.4	930	Bright	zS	5.04
104103204070069	32	1,960	579.4	930	Bright	sZ	5.04
104103206270069	32	1,960	579.4	930	Galvanized	zZ	5.04
104103205270069	32	1,960	579.4	930	Galvanized	sS	5.04
104103203270069	32	1,960	579.4	930	Galvanized	zS	5.04
104103204270069	32	1,960	579.4	930	Galvanized	sZ	5.04
104103206100069	32	2,160	579.4	1,002.8	Bright	zZ	5.04
104103205100069	32	2,160	579.4	1,002.8	Bright	sS	5.04
104103203100069	32	2,160	579.4	1,002.8	Bright	zS	5.04
104103204100069	32	2,160	579.4	1,002.8	Bright	sZ	5.04
104103206300069	32	2,160	579.4	1,002.8	Galvanized	zZ	5.04
104103205300069	32	2,160	579.4	1,002.8	Galvanized	sS	5.04
104103203300069	32	2,160	579.4	1,002.8	Galvanized	zS	5.04
104103204300069	32	2,160	579.4	1,002.8	Galvanized	sZ	5.04
104103306070069	33	1,960	616.1	992.8	Bright	zZ	5.36
104103305070069	33	1,960	616.1	992.8	Bright	sS	5.36
104103303070069	33	1,960	616.1	992.8	Bright	zS	5.36
104103304070069	33	1,960	616.1	992.8	Bright	sZ	5.36
104103306270069	33	1,960	616.1	992.8	Galvanized	zZ	5.36

104103305270069	33	1,960	616.1	992.8	Galvanized	sS	5.36
104103303270069	33	1,960	616.1	992.8	Galvanized	zS	5.36
104103304270069	33	1,960	616.1	992.8	Galvanized	sZ	5.36
104103306100069	33	2,160	616.1	1,094.1	Bright	zZ	5.36
104103305100069	33	2,160	616.1	1,094.1	Bright	sS	5.36
104103303100069	33	2,160	616.1	1,094.1	Bright	zS	5.36
104103304100069	33	2,160	616.1	1,094.1	Bright	sZ	5.36
104103306300069	33	2,160	616.1	1,094.1	Galvanized	zZ	5.36
104103305300069	33	2,160	616.1	1,094.1	Galvanized	sS	5.36
104103303300069	33	2,160	616.1	1,094.1	Galvanized	zS	5.36
104103304300069	33	2,160	616.1	1,094.1	Galvanized	sZ	5.36
104103406070069	34	1,960	652	1,045	Bright	zZ	5.67
104103405070069	34	1,960	652	1,045	Bright	sS	5.67
104103403070069	34	1,960	652	1,045	Bright	zS	5.67
104103404070069	34	1,960	652	1,045	Bright	sZ	5.67
104103406270069	34	1,960	652	1,045	Galvanized	zZ	5.67
104103405270069	34	1,960	652	1,045	Galvanized	sS	5.67
104103403270069	34	1,960	652	1,045	Galvanized	zS	5.67
104103404270069	34	1,960	652	1,045	Galvanized	sZ	5.67
104103406100069	34	2,160	652	1,130.9	Bright	zZ	5.67
104103405100069	34	2,160	652	1,130.9	Bright	sS	5.67
104103403100069	34	2,160	652	1,130.9	Bright	zS	5.67
104103404100069	34	2,160	652	1,130.9	Bright	sZ	5.67

104103406300069	34	2,160	652	1,130.9	Galvanized	zZ	5.67
104103405300069	34	2,160	652	1,130.9	Galvanized	sS	5.67
104103403300069	34	2,160	652	1,130.9	Galvanized	zS	5.67
104103404300069	34	2,160	652	1,130.9	Galvanized	sZ	5.67
104103606070069	36	1,960	735.6	1,185	Bright	zZ	6.4
104103605070069	36	1,960	735.6	1,185	Bright	sS	6.4
104103603070069	36	1,960	735.6	1,185	Bright	zS	6.4
104103604070069	36	1,960	735.6	1,185	Bright	sZ	6.4
104103606270069	36	1,960	735.6	1,185	Galvanized	zZ	6.4
104103605270069	36	1,960	735.6	1,185	Galvanized	sS	6.4
104103603270069	36	1,960	735.6	1,185	Galvanized	zS	6.4
104103604270069	36	1,960	735.6	1,185	Galvanized	sZ	6.4
104103606100069	36	2,160	735.6	1,262.3	Bright	zZ	6.4
104103605100069	36	2,160	735.6	1,262.3	Bright	sS	6.4
104103603100069	36	2,160	735.6	1,262.3	Bright	zS	6.4
104103604100069	36	2,160	735.6	1,262.3	Bright	sZ	6.4
104103606300069	36	2,160	735.6	1,262.3	Galvanized	zZ	6.4
104103605300069	36	2,160	735.6	1,262.3	Galvanized	sS	6.4
104103603300069	36	2,160	735.6	1,262.3	Galvanized	zS	6.4
104103604300069	36	2,160	735.6	1,262.3	Galvanized	sZ	6.4
104103806070069	38	1,960	815.3	1,319	Bright	zZ	7.09
104103805070069	38	1,960	815.3	1,319	Bright	sS	7.09
104103803070069	38	1,960	815.3	1,319	Bright	zS	7.09

104103804070069	38	1,960	815.3	1,319	Bright	sZ	7.09
104103806270069	38	1,960	815.3	1,319	Galvanized	zZ	7.09
104103805270069	38	1,960	815.3	1,319	Galvanized	sS	7.09
104103803270069	38	1,960	815.3	1,319	Galvanized	zS	7.09
104103804270069	38	1,960	815.3	1,319	Galvanized	sZ	7.09
104103806100069	38	2,160	815.3	1,412.2	Bright	zZ	7.09
104103805100069	38	2,160	815.3	1,412.2	Bright	sS	7.09
104103803100069	38	2,160	815.3	1,412.2	Bright	zS	7.09
104103804100069	38	2,160	815.3	1,412.2	Bright	sZ	7.09
104103806300069	38	2,160	815.3	1,412.2	Galvanized	zZ	7.09
104103805300069	38	2,160	815.3	1,412.2	Galvanized	sS	7.09
104103803300069	38	2,160	815.3	1,412.2	Galvanized	zS	7.09
104103804300069	38	2,160	815.3	1,412.2	Galvanized	sZ	7.09
104104006070069	40	1,960	909.9	1,319	Bright	zZ	7.92
104104005070069	40	1,960	909.9	1,319	Bright	sS	7.92
104104003070069	40	1,960	909.9	1,319	Bright	zS	7.92
104104004070069	40	1,960	909.9	1,319	Bright	sZ	7.92
104104006270069	40	1,960	909.9	1,319	Galvanized	zZ	7.92
104104005270069	40	1,960	909.9	1,319	Galvanized	sS	7.92
104104003270069	40	1,960	909.9	1,319	Galvanized	zS	7.92
104104004270069	40	1,960	909.9	1,319	Galvanized	sZ	7.92
104104006100069	40	2,160	909.9	1,412.2	Bright	zZ	7.92
104104005100069	40	2,160	909.9	1,412.2	Bright	sS	7.92

104104003100069	40	2,160	909.9	1,412.2	Bright	zS	7.92
104104004100069	40	2,160	909.9	1,412.2	Bright	sZ	7.92
104104006300069	40	2,160	909.9	1,412.2	Galvanized	zZ	7.92
104104005300069	40	2,160	909.9	1,412.2	Galvanized	sS	7.92
104104003300069	40	2,160	909.9	1,412.2	Galvanized	zS	7.92
104104004300069	40	2,160	909.9	1,412.2	Galvanized	sZ	7.92