

ROCKITE & **KWIXSET** are a fast setting, hydraulic type cement compound of more than twice the strength of fully cured conventional concrete. When mixed with water to pourable consistency it flows and seeps into place as though it were molten lava. It takes an initial set with in 15 minutes. With in one hour it develops compression strength of 31Mpa or4500 psi. Its adhesion is due to expansion and when fully set it grips metal to concrete permanently.

Some of the Strength Test Results

Imbedded Item		iameter inches	Hole Depth m m inches		Applied Load (kN)	Applied Load (psi)	Mode of Failure
Reidbar Grade 500 12mm	19	3/4	100	4	72.2	10,479	Bolt Failure
Mild Steel Bolt 20mm	50	2	100	4	101.92	14,792	Bolt Failure

Some Benefits of Rockite

- Just add water
- Sets below freezing
- Takes stress loading in two hours
- Minimal wastage (mix Rockite as you require)
- Sets in 15 minutes
- Indefinite shelf life
- Economical

In addition to its ease of application, strength and versatility, the important feature of **ROCKITE** & **KWIXSET** are their CONTROLLED expansion (unlike iron bearing cement mixtures). Cured Rockite is a pleasing grey colour that blends with concrete. Rockite saves repair dollars because it ensures permanent results. Its sets in a jiffy, speeds the job and its application procedure is so simple that inexperienced labour can handle almost any installation.



About ROCKITE & KWIXSET

Use Rockite & Kwixset, for Anchoring:

Bolts - Rods -Post - Machines - Motors -Partitions - Appliances - Railings - Conveyers -Racks - Seats - Deformed Bar - Tilt Up Connection

Directions: How to mix the cement

Always use a clean container. Never add sand, gravel or other foreign substances to Rockite. They weaken the cement and affect the setting.

Fluid (pouring) Consistency:

Mix Rockite & Kwixset with water to a thick paste. Let the mixture stand for about one minute. Then stir thoroughly. At this point, the mixture will become more fluid. The proper consistency is more like a thick batter, just fluid



enough to pour BUT not WATERY. Keep the mix thick. This makes stronger cement. Add water very sparingly. If the mix is thin, add more Rockite promptly to thicken it. You wish to measure, the correct water addition is 4 ½ oz. per lb. or 1 ½ pints per 5lb box. When using this method, MEASURE ACCURATELY

How to Anchor; Bolts, Post, Starter Rods etc in concrete, brick and stone.

- 1. Drill the hole never less than 2 inches (50mm)
- 2. Blow out all the dust and loose particles.
- 3. Flush out hole with water. Be sure to remove excess water leaving the hole clean and uniformly damp. (the substrate can be damp when Rockite is poured into the hole)
- 4. For anchoring machinery in concrete, use the fluid consistency as above. Insure that anchor rods have nut head and washer on before placing them in the opening. Pour the Rockite into the space around the rod/bolt. Tamp bolt to settle Rockite completely around the rod/bolt.
- 5. For exterior anchoring of ornamental iron, pour the fluid consistency (as above) around the rod, tapping the rod to settle the Rockite.
- 6. For anchoring in vertical walls, use the plastic consistency (see below) Fill the holes with the plastic cement first. Then tamp the bolt or rod into place. If the cement becomes to fluid because of the tamping process and sags out of place, let it stand for a few moments and it will stiffen. Carry on with procedure.

7. Let the cement harden for at least 30 minutes. (Initial set is 15 minutes). For heavy equipment, allow one hour.

Note: DO NOT USE ROCKITE IN SWIMMING POOLS

When used outdoors, ROCKITE should be allowed to dry out thoroughly for seven days and then protected with a coat of good grade exterior paint. ROCKITE should not be used underwater or as a primary structural member. ROCKITE should not be used outdoors for anchoring in porous materials, such as brick, limestone and granite, when they are exposed to wet conditions.

PlasticConsistency

Add only enough water to make the cement form dry lumps. Keep mixing for 60 to 90 seconds. As the powder absorbs the moisture, the cement will begin to look like ordinary putty. This is the proper consistency. If you wish to measure, the correct water addition for the plastic consistency is 3 ½ fl oz. per lb. When using this method, MEASURE ACCURATELY

How to Patch holes and cracks in concrete floors:

- Cracks should be raked out t remove any loose debris or loose particles. If a hole is to be repaired, chisel down the edges to provide a 'form' for the cement when it is poured.
- 2. If the hole is clean, simply remove lose chips and dirt.
- 3. Sprinkle the whole/crack with water. Leave the surface damp and not wet
- 4. Mix Rockite to fluid consistency for patching floors and plastic mix for walls.
- 5. Pour a little cement into the hole and scrub it into the surface with a stiff brush or broom to drive the cement into the pores. This helps the patch to adhere. Then add enough cement to match the level of the surrounding surface. The cement will self-level.
- 6. When the cement begins to thicken (about 10 minutes), smooth out any imperfections in the surface with a cement trowel.
- 7. After 30 minutes, sprinkle the patch with water. Foot traffic and light

trucking may be resumed immediately. For heavy trucking, allow one hour.

Freezing Temperature Application

The procedure described in the foregoing may be used safely at temperatures down to 25 degrees Fahrenheit. If the temperature is below 25 F, keep the Rockite in a warm place before using. When ready to apply, mix the Rockite with warm water and keep the mixture in a warm area. As soon as the mixture begins to stiffen slightly, (approximately 10 minutes after the water is added) pour the mixture quickly into place. The hardening process then creates heat and protects the Rockite from freezing. Do not add antifreeze compounds to the Rockite mixture.



Test Reports

Index OF Test Results:

- 1. Compressive test of Rockite
- 2. Comparison compressive tests with Kwixset (water proof version of Rockite) Portland Cement and Rockite
- 3. Tension test from the center of concrete slab using Reidbar Grade 500
- 4. 4 Tension tests at nominally 45mm from face edge with mild steel anchors and Reidbar grade 500.
- 5. Strain Bearing Ability

The following test results were established in laboratory conditions at **Opus International Consultants Limited**, Auckland New Zealand. Where indicated test results were established in laboratory conditions in the US

Test Results 1: Tests were conducted in the USA

Compressive test of Rockite

Set 1: Compression Strength at the end of one hour

Cube No	Area in Sq inches	Area in Sq centimeters	Lbs. Load at failure	Mpa Load at failure
1	4.00	101.6	17,270	118.99
2			16,920	116.57
3			18,440	127.05

Set 2: Compression Strength at the end of seven days

Cube No	Area in Sq inches	Area in Sq centimeters	Lbs. Load at failure	Mpa Load at failure
4	4.00	101.6	33,650	231.84
5			32,220	221.99
6			31,550	217.37

Test Result 2: Tests were conducted in the USA

Comparison compressive tests with Kwixset (water proof version of Rockite) Portland Cement and Rockite

Set 1:

	Rockite Cement		Kwixset Cement		Iron Bearing Portland Cement	
Setting Time	20-30 min	utes	15-20 minutes		4-8 hours	
Compression Strengths						
In 60 minutes	4600 psi	31.69mpa	4100 psi	28.24 mpa	0 psi	0 mpa
In 24 Hours	5000 psi	34.45mpa	8100 psi	55.80 mpa	2450 psi	16.88 mpa
In 7 days	10000 psi	68.89mpa	9300 psi	64.07 mpa	5500 psi	37.89 mpa
Linear movement	Positive expansion 0.18% controlled		Positive expansion 0.125% controlled		Expands or shrinks	
Movement With Time	Completel for all prace purposes	•	Completely stable for all practical purposes			•
Contains Rust Promoting	No		No		Yes	
Consistency	Sufficiently fluid to be self-leveling		Sufficiently fluid to be self-leveling		Must be vibrated to achieve leveling	
Weight of dry mix to	92 pounds or		110 pounds or		140 pounds	or
produce 1 cubic foot (yield)	41.73 kilo	grams	49.89 kilograms		63.50 kilogra	ams

Test Results 3: Opus Consultancy Reference No P/7B/97

Tension tests from the center of concrete slab (35Mpa) using Reidbar Grade 500

Set 1: 12mm Diameter Reidbar Grade 500 (Rb12)

Imbedde d Item (mm)	Hole Diameter (mm)	Hole Depth (mm)	Average load at failure	Average load at failure	Failure Mode
			(kN)	(psi)	
Rb12	15	100	16.7	2,423	Bond Failure
	16		20.8	3,018	Bond Failure
	19		71.8	10,420	Bar Failure

^{*} The above table indicates that as the diameter of the hole was increased. The average loading on Rockite increases due to the expansion qualities of Rockite.

Set 2: 12mm Diameter Reidbar Grade 500 (Rb12)

Imbedded Item (mm)	Hole Diameter (mm)	Hole Depth (mm)	Applied load at failure(kN)	Applied load at failure(psi)	Mode of failure
Rb12	19	100	71.7	10,406	Bar Failure
Reidbar			72.2	10,478	
			71.6	10,391	

Set 3: 12mm Diameter Reidbar Grade 500 (Rb12)

Imbedded Item (mm)	Hole diameter (mm)	Hole Depth (mm)	Applied load at failure (kN)	Applied load at failure(psi	Mode of failure
Rb 12	19	50	16.5	2,394	Pulled bar out of grout
Reidbar		17.1	2,481		
			15.8	2,239	

Set 4: 16mm Diameter Reidbar Grade 500 (Rb16)

Imbedded Item (mm)	Hole Diameter (mm)	Hole Depth (mm)	Average load at failure (kN)	Average load at failure(psi)	Mode of Failure
Rb16	20	100	30.2	4,383	Failure in the Rockite
Reidbar			26.8	3,889	and damage to the concrete
			29.7	4,310	
	28		100	14,513	No failure in the Rockite at the applied load

^{*} As Rockite held firm we were unable to determine the failure point. The maximum load bearing of 100kN is the maximum for the testing equipment. This test equates to, for this size bar approximately 500Mpa

Set 5: 20mm Diameter Reidbar Grade 500 (Rb20)

Imbedded Item (mm)	Hole Diameter (mm)	Hole Depth (mm)	Average load at failure (kN)	Average load at failure (psi)	Mode of Failure
Rb20	28	100	57.3	8,316	Concrete Failure
Reidbar			56.9	8,258	
			48.2 *		

^{*} This test resulted in the concrete cracking of the slab.

Set 6: see next page

Set 6: Mild Steel Bolts (M12)

Imbedded Item (mm)	Hole Diameter (mm)	Hole Depth (mm)	Average load at failure (kN)	Average load at failure (psi)	Mode of failure
M12	30	50	36.6	5,312	Pulled bolt out of grout
Mild Steel			40.0	5,805	
Bolt			37.2	5,399	
		100	50.9	7,387	Bolt Failure
			51.8	7,518	
			51.6	7,489	

Test Results 4: Opus Consultancy Reference No 03/420/001

Tension tests at nominally 45mm from face edge with mild steel anchors and Reidbar Grade 500

Set 1: 10 mm Diameter Reid Anchors (mild Steel)

	nchor Diameter mm)	Hole Diameter (mm)	Hole Depth (mm)	Applied load at failure (kN)	Applied load at failure (psi)	Failure Mode
1	0	14	100	33.2	4,818	Bond failure with very shallow concrete cone
		16		34.8	5,050	Bar Failure
		18		34.9	5,065	

Set 2: 12mm Diameter Reid Anchors (mild steel)

Anchor Diameter (mm)	Hole Diameter (mm)	Hole Depth (mm)	Applied load at failure (kN)	Applied load at failure (psi)	Failure Mode
12	16	100	44.8	6,502	Concrete Failure
	18		41.9	6,081	
	20		48.7	7,068	Bar Failure
	16	120	48.2	6,995	Bar Failure
	18		47.6	6,908	Concrete Failure
	20		48.0	6,966	

Set 3: 16mm diameter Reid Anchors (mild steel)

Anchor Diameter (mm)	Hole Diameter (mm)	Hole Depth (mm)	Applied load at failure (kN)	Applied load at failure (psi)	Failure Mode			
16	20	110	84.6	12,191	Concrete			
	20	120	88.6	12,859	Bar Failure			
	24	100	68.9	10,000	Concrete Failure			
	24	110	88.1	12,786	Bar Failure			
	24	120	77.4	11,233	Concrete Failure			

Set 4: 12mm Diameter Reidbar Grade 500 (Rb12)

Anchor Diameter (mm)	Hole Diameter (mm)	Hole Depth (mm)	Applied load at failure (kN)	Applied load at failure (psi)	Failure Mode
RB12	16	100	68.6	9,956	Bond failure with very shallow concrete cone
	18		80.6	11,698	Bar Failure
	20		79.8	11,582	
	16	120	80.4	11,669	
	18		80.2	11,640	
	20		80.4	11,669	

Test Results 5: Strain Bearing Ability. USA Test Results

The compound shall produce a setting with an average strain bearing ability for each respective bolt and opening size, as shown in the following chart.

Diameter of Mild Steel Bolt		Hole Dia	meter **	Hole Dep	oth	Average strain Bearing Ability ***		
mm	inches	mm inches		mm	inches	Kilogra m	Pounds	
9.52	3/8	31.4	1 1/4	76.2	3	3,900	8,600	
12.7	1/2	44.4	1 3/4	101.6	4	7,030	15,500	
19.05	3/4	63.5	2 ½	152.4	6	17,100	37,700	
25.4	1	88.9	3 ½	203.2	8	26,762	59,000	
31.75	1 1/4	107.9	4 1/4	304.8 12		42,729	94,200	

^{*} All bolts shall be equipped with a washer large enough to fit the diameter of the opening with only enough tolerance so that the washer will be free to reach and rest snugly against the head of the bolt at the bottom of the opening.

^{**} Depths shown are based opening drilled in sound concrete having a compressive strength of 24.8 Mpa/3600psi. In the case of weaker concrete, the depth shall be increased to provide a greater purchase to the concrete slab. This minimizes the danger of failure due to fracture of the concrete when subjected to extreme strains.

^{***} Data determined by tests in which the strains recorded were limited to stresses sufficient to rupture mild steel bolts of each representative diameter. In no case was the setting injured.



Quantity Calculations

Dia. Of Bolts	Dia. Of				Depth if Dri	lled opening			
orPost to be fastened	Drilled Opening	2"	3"	4"	5"	6"	8"	10"	12"
1/4"	1/2"	0.25 oz	0.40 oz	0.50 oz	0.75 oz	1.00 oz	1.25 oz	1.50 oz	1.50 oz
	3/4'	0.70 oz	1.00 oz	1.50 oz	2.00 oz	3.00 oz	3.50 oz	4.00 oz	4.00 oz
3/8"	5/8"	0.35 oz	0.50 oz	0.75 oz	1.00 oz	1.50 oz	1.70 oz	2.00 oz	2.00 oz
	3/4"	0.50 oz	0.80 oz	1.00 oz	1.75 oz	2.25 oz	2.75 oz	3.25 oz	3.25 oz
	1"	1.00 oz	1.50 oz	2.00 oz	3.00 oz	4.00 oz	5.00 oz	6.00 oz	6.00 oz
	1 1/4"	1.75 oz	2.75 oz	3.75 oz	5.50 oz	7.50 oz	8.50 oz	10.00 oz	10.00 oz
1/2"	3/4"	0.40 oz	0.60 oz	0.90 oz	1.25 oz	1.75 oz	2.00 oz	2.50 oz	2.50 oz
	1"	1.00 oz	1.50 oz	2.00 oz	3.00 oz	4.00 oz	5.00 oz	6.00 oz	6.00 oz
	1 1/4"	1.75 oz	2.50 oz	3.50 oz	6.00 oz	7.00 oz	9.00 oz	10.50 oz	10.50 oz
	1 3/4"	4.00 oz	6.00 oz	8.00 oz	12.00 oz	1.00 lb	1.25 lb	1.50 lb	1.50 lb
		OZ							
5/8"	1"	0.80 oz	1.25 oz	1.75 oz	2.50 oz		1.25 oz	5.00 oz	5.00 oz
	1 1/4"	1.50 oz	2.25 oz	3.25 oz	4.75 oz		8.00 oz	9.50 oz	9.50 oz
	1 3/4"	4.00 oz	5.75 oz	8.00 oz	11.00 oz		1.25 lb	1.40 lb	1.40 lb
	2"	4.75 oz	7.00 oz	9.50 oz	13.75 oz	1.20 oz	1.50 lb	1.70 lb	1.70 lb
	1"	0.60 oz	1.00 oz	1.25 oz	2.00 oz	2.50 oz	3.00 oz	4.00 oz	4.00 oz
3/4'	1 1/4"	1.25 oz	2.00 oz	2.50 oz	4.00 oz	5.00 oz	6.50 oz	8.00 oz	8.00 oz
	1.50	2.25 oz	3.25 oz	4.50 oz	6.50 oz	9.00 oz	11.00 oz	13.00 oz	13.00 oz
	2"	5.00 oz	7.00 oz	9.50 oz	14.00 oz	1.25 lb	1.50 lb	1.75 lb	1.75 lb
	2 1/2"	7.50 oz	11.00 oz	15.00 oz	1.40 lb	1.90 lb	2.40 lb	2.80 lb	2.80 lb
1"	1.50		2.50 oz	3.50 oz	5.00 oz		8.50 oz	10.00 oz	10.00 oz
	2"	4.00 oz	6.00 oz	8.00 oz	12.00 oz		1.25 lb	1.50 lb	1.50 lb
	2.50	7.00 oz	10.00 oz	14.00 oz	1.30 lb	1.75 lb	2.20 lb	2.60 lb	2.60 lb

1	3.50	15.00 oz	1.40	1.90	2.75 lb	3.75 lb	4.60 lb	5.60 lb	5.60 lb
1 1/4"	1 1/2"	1.00 oz	1.50 oz	2.00 oz	3.00 oz	4.00 oz	5.00 oz	6.00 oz	6.00 oz
	2"	3.50 oz	5.00 oz	7.00 oz	10.00 oz	13.00 oz	1.00 lb	1.20 lb	1.20 lb
	2 1/2"	6.50 oz	10.00 oz	13.00 oz	1.20 lb	1.60 lb	2.00 lb	2.40 lb	2.40 lb
	3"	10.00 oz	15.00 oz	1.25 lb	1.90 lb	2.40 lb	3.10 lb	3.80 lb	3.80 lb
	4 1/4"	1.40 lb	2.00 lb	2.75 lb	4.10 lb	5.50 lb	6.90 lb	8.20 lb	8.20 lb
1 1/2"	2"	2.25 oz	3.50 oz	4.50 oz	7.00 oz	9.40 oz	12.00 oz	14.50 oz	14.50 oz
	2 1/2"	5.50 oz	8.00 oz	11.00 oz	1.00 lb	1.40 lb	1.75 lb	2.00 lb	2.00 lb
	3"	9.00 oz	13.00 oz	1.10 oz	1.70 lb	2.25 lb	2.80 lb	3.40 lb	3.40 lb
	4"	1.20 lb	1.70 lb	2.30 lb	3.30 lb	4.60 lb	5.75 lb	7.00 lb	7.00 lb
2"	2 1/2"	3.00 oz	4.50 oz	6.10 oz	9.20 oz	12.25 oz	15.30 oz	1.20 oz	
	3"	6.50 oz	10.00 oz	13.00 oz	1.30 lb	1.60 lb	2.00 lb	2.50 lb	2.50 lb
	4"	1.00 lb	1.50 lb	2.00 lb	3.00 lb	4.00 lb	5.00 lb	6.00 lb	6.00 lb
2 1/2"	3"	3.50 oz	5.50 oz	7.00 oz	11.00 oz	14.00 oz	1.20 lb	1.40 lb	1.40 lb
	4"	13.00 oz	1.25 lb	1.70 lb	2.50 lb	3.30 lb	4.25 lb	5.00 lb	5.00 lb
3"	4"	10.00 oz	14.00 oz	1.30 lb	1.75 lb	2.40 lb	3.00 lb	3.70 lb	3.70 lb



Metric Quantity Calculations

	Dia. Of Drilled		Depth if Drilled opening												
	Opening	50mm 75mm		100mm 150mm		m	200mm		250mm		300m	m			
6mm	12mm	7	gm	11.4	gm	14.3	gm	21.4	gm	28.5	gm	1.25	gm	42.8	gm
	20mm	20	gm	28.5	gm	42.8	gm	57.1	gm	85.6	gm	3.50	gm	114.2	gm
10mm	16mm 18mm	10 14	gm gm	14.3 22.8	gm	21.4 28.5	gm	28.5 49.9	gm	42.8 64.2	gm	1.70 2.75	gm	57.1 92.8	gm
1011111					gm		gm		gm		gm		gm		gm
	25mm	29	gm	42.8	gm	57.1	gm	85.6	gm	114.2	gm	5.00	gm	171.2	gm
	32mm	50	gm	78.5	gm	107.0	gm	157.0	gm	214.1	gm	8.50	gm	285.4	gm
12mm	18mm 25mm 32mm 45mm	11 29 50 114	gm gm gm gm	17.1 42.8 71.4 171.2	gm gm gm	25.7 57.1 99.9 228.3	gm gm gm gm	35.7 85.6 171.2 342.5	gm gm gm gm	49.9 114.2 199.8 456.6	gm gm gm	2.00 5.00 9.00 1.25	gm gm gm gm	71.4 171.2 299.7 684.9	gm gm gm
16mm	25mm 32mm 45mm 50mm	23 43 114 136	gm gm gm gm	35.7 64.2 164.1 199.8	gm gm gm gm	49.9 92.8 228.3 271.1	gm gm gm	71.4 135.6 313.9 392.4	gm gm gm	99.9 185.5 456.6 547.9	gm gm gm	1.25 8.00 1.25 1.50	gm gm gm gm	142.7 271.1 639.2 776.2	gm gm gm
20mm	25mm														

		17	gm	28.5	gm	35.7	gm	57.1	gm	71.4	gm	3.00	gm	114.2	gm
	32mm	36	gm	57.1	gm	71.4	gm	114.2	gm	142.7	gm	6.50	gm	228.3	gm
20mm	38mm	64	gm	92.8	gm	128.4	gm	185.5	gm	256.9	gm	11.00	gm	371.0	gm
	50mm	143	gm	199.8	gm	271.1	gm	399.6	gm	570.7	gm	1.50	gm	799.0	gm
	65mm	214	gm	313.9	gm	428.1	gm	639.2	gm	867.5	gm	2.40	gm	1,278.5	gm
	38mm	50	gm	71.4	gm	99.9	gm	142.7	gm	199.8	gm	8.50	gm	285.4	gm
25mm	50mm	114	gm	171.2	gm	228.3	gm	342.5	gm	456.6	gm	1.25	gm	684.9	gm
	65mm	200	gm	285.4	gm	399.6	gm	593.6	gm	799.0	gm	2.20	gm	1,187.1	gm
	87mm	428	gm	639.2	gm	867.5	gm	1,255.6	gm	1,712.2	gm	4.60	gm	2,556.9	gm
	38mm	29	gm	42.8	gm	57.1	gm	85.6	gm	114.2	gm	5.00	gm	171.2	gm
32mm	50mm	100	gm	142.7	gm	199.8	gm	285.4	gm	371.0	gm	1.00	gm	547.9	gm
	65mm	186	gm	285.4	gm	371.0	gm	547.9	gm	730.5	gm	2.00	gm	1,095.8	gm
	75mm	285	gm	428.1	gm	570.7	gm	867.5	gm	1,095.8	gm	3.10	gm	1,735.0	gm
	107mm	639	gm	913.2	gm	1,255.6	gm	1,872.0	gm	2,511.2	gm	6.90	gm	3,744.0	gm
	50mm	64	gm	99.9	gm	128.4	gm	199.8	gm	268.3	gm	12.00	gm	413.8	gm
38mm	65mm	157	gm	228.3	gm	313.9	gm	456.6	gm	639.2	gm	1.75	gm	913.2	gm
	75mm	257	gm	371.0	gm	502.2	gm	776.2	gm	1,027.3	gm	2.80	gm	1,552.4	gm
	100mm	548	gm	776.2	gm	1,050.2	gm	1,506.7	gm	2,100.3	gm	5.75	gm	3,196.1	gm
	65mm	86	gm	128.4	gm	174.1	gm	262.6	gm	349.6	gm	15.30	gm	547.9	gm
50mm	75mm	186	gm	285.4	gm	371.0	gm	593.6	gm	730.5	gm	2.00	gm	1,141.5	gm
	100mm	2	gm	684.9	gm	913.2	gm	1,369.8	gm	1,826.4	gm	5.00	gm	2,739.5	gm
65mm	75mm	100	gm	157.0	gm	199.8	gm	313.9	gm	399.6	gm	1.20	gm	639.2	gm
	100mm	371	gm	570.7	gm	776.2	gm	1,141.5	gm	1,506.7	gm	4.25	gm	2,283.0	gm
75mm	100mm														
. 0	. 50111111	285	gm	399.6	gm	593.6	gm	799.0	gm	1,095.8	gm	3.00	gm	1,689.4	gm