

# Report on Cement Blind Test Results

Presented by:  
The Georgian Cement Association,



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# Our Mission

- **FAIR COMPETITION.** Advocate that all Georgian producers and marketers of cement in the Georgian market compete fairly: actual product quality must correspond to product description labeling.
- **EXPOSE CHEATING.** Sub-standard products (actual quality lower than shown on the bag) result in price gouging of the consumer.
- **DANGERS.** Consumers must understand the risks posed to them by using sub-standard cement products in construction.
- **FULL DISCLOSURE.** Government has requested GCA to inform all relevant Georgian agencies of all findings: producer names as well as all test results.

## Background: Scientifically Rigorous Testing

- Quarterly checks and blind laboratory testing of bagged cement since January 2017.
- Geoexpertise/Georgian Chamber of Commerce and Industry (GCCCI), monitors anonymous purchasing process in open market.
- For the present round of testing, Levan Samkharauli National Forensics Bureau received only numbered samples: they could not therefore know which company produced which sample.
- Each sample is tested for its full 28-day strength – the standard measure.
- GCA compares Forensics Bureau results against the quality stated on the bags and the attached summary table was then prepared.
- The latest sampling and blind test (9<sup>th</sup> round) were conducted in August – September 2020.

# Samkharauli National Forensics Bureau: Blind Test Results August-September, 2020 (9<sup>th</sup> round)

- Physical-mechanical test by Samkharauli Bureau according to the international standard, EN196-1.
- Products purchased from Tbilisi, Batumi, Rustavi, Gori, Marneuli, Agara and Kareli markets.
- Duration 14.08.20 – 21.09.20.
- 26 locally produced cement samples were tested.
- 12 cements met EN Standard requirements (46%).
- 5 samples showed critically low 28 days compressive strength (<20 MPa).
- Only names of GCA members are identified. All others by sample number but Government agencies now receive all information – since 2019.

***Note: As per attached graphs, It appears that increased quantities of sub-standard and low quality cement appear on the market at times of increased cement demand.***

# 12 out of 26 samples met EN standards

N	(Blind Test Results, August 2020, 9th round) Producer and cement type or sample number	28 days CS result, Mpa	Standard requirement for CS, Mpa	Difference to NORM, Mpa	in % of NORM
1	N032	42.20	22.5	19.70	188%
2	HC MC 22.5X	29.50	22.5	7.00	131%
3	N031	40.85	32.5	8.35	126%
4	N034	38.79	32.5	6.29	119%
5	N016	37.37	32.5	4.87	115%
6	HC CEM II B-P 32.5N	36.70	32.5	4.20	113%
7	N008	25.08	22.5	2.58	111%
8	HC CEM II 42.5R	46.08	42.5	3.58	108%
9	N030	45.62	42.5	3.12	107%
10	GBG CEM II B-P 32.5N	33.03	32.5	0.53	102%
11	N018	32.85	32.5	0.35	101%
12	N003	32.53	32.5	0.03	100%

# 14 out of 26 samples failed EN Standards

N	(Blind Test Results, August 2020, 9th round) Cement type	28 days CS result, Mpa	Standard requirement for CS, Mpa	Difference to NORM, Mpa	in % of NORM
13	N024	42.40	42.5	-0.10	99.8%
14	N007	21.78	22.5	-0.72	97%
15	N027	30.70	32.5	-1.80	94%
16	N021	29.93	32.5	-2.57	92%
17	N011	29.20	32.5	-3.30	90%
18	N033	35.67	42.5	-6.83	84%
19	N013	29.28	42.5	-13.22	69%
20	N017	21.40	32.5	-11.10	66%
21	N026	27.30	42.5	-15.20	64%
22	N004	13.43	22.5	-9.07	60%
23	N009	11.20	22.5	-11.30	50%
24	N006	11.43	32.5	-21.07	35%
25	N012	4.53	22.5	-17.97	20%
26	N005	6.13	32.5	-26.37	19%

# SUMMARY: MIXED RESULTS

## Percentage of samples meeting or exceeding EN Standards:

2020	<b>August-September peak</b>	<b>46%</b>
2019	October-November	<b>29%</b>
	<b>April-May peak</b>	<b>32%</b>
	January	<b>52%</b> (record, off-season)
2018	October	<b>36%</b>
	<b>June peak</b>	<b>43%</b>
	April	<b>32%</b>
2017	<b>July peak</b>	<b>15%</b>
	April (first blind test)	<b>32%</b>

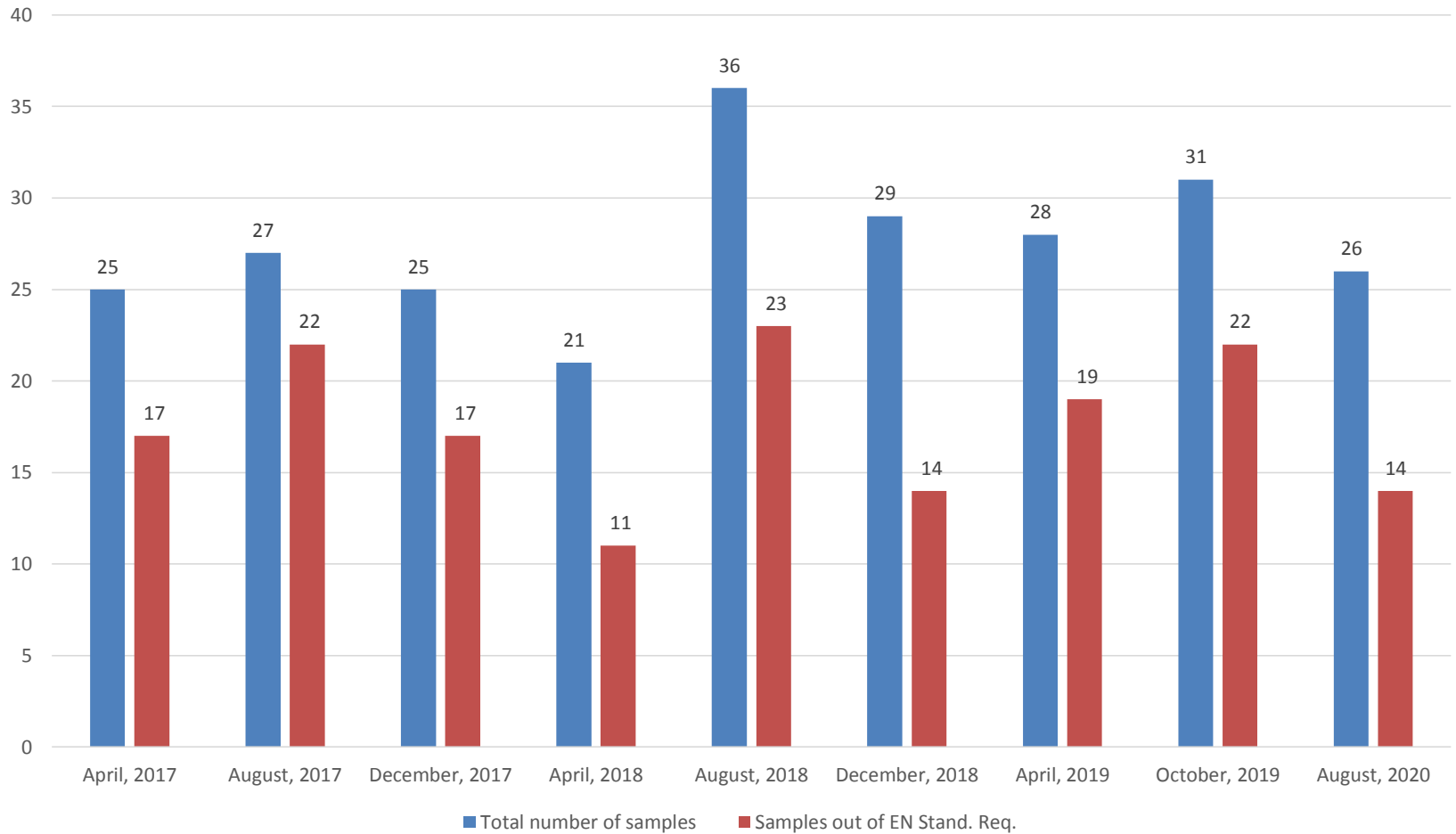
**Of 299 samples tested to date: only 37% passed.**

**An alarming 63% of samples failed.**

- As much as 350,000 tons of sub-standard cement may reach the market.
- As many as 130,000 families may be cheated as to price and quality.

# Cements out of EN 197-1 standard requirements

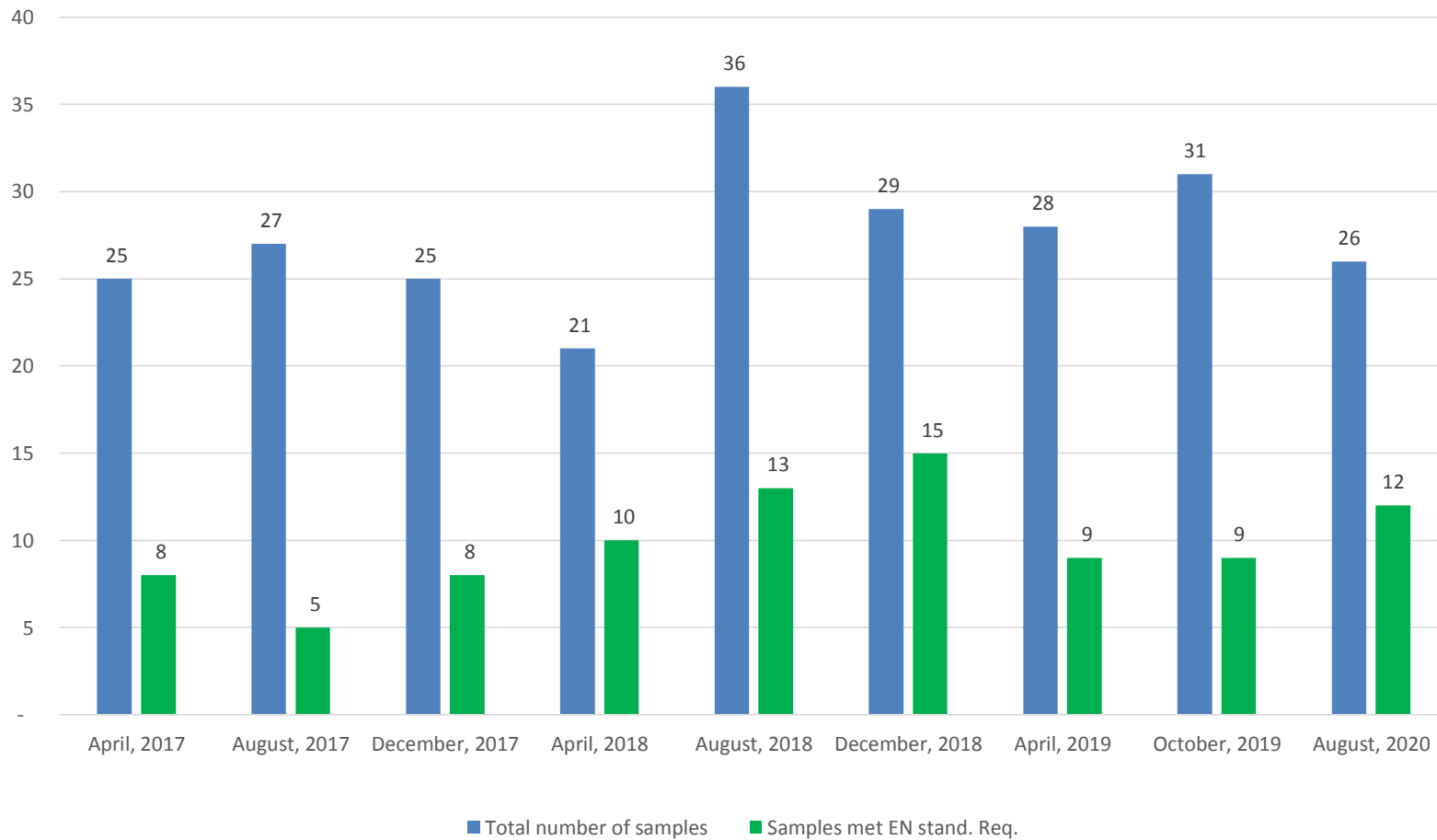
Cements out of Standard Requirements



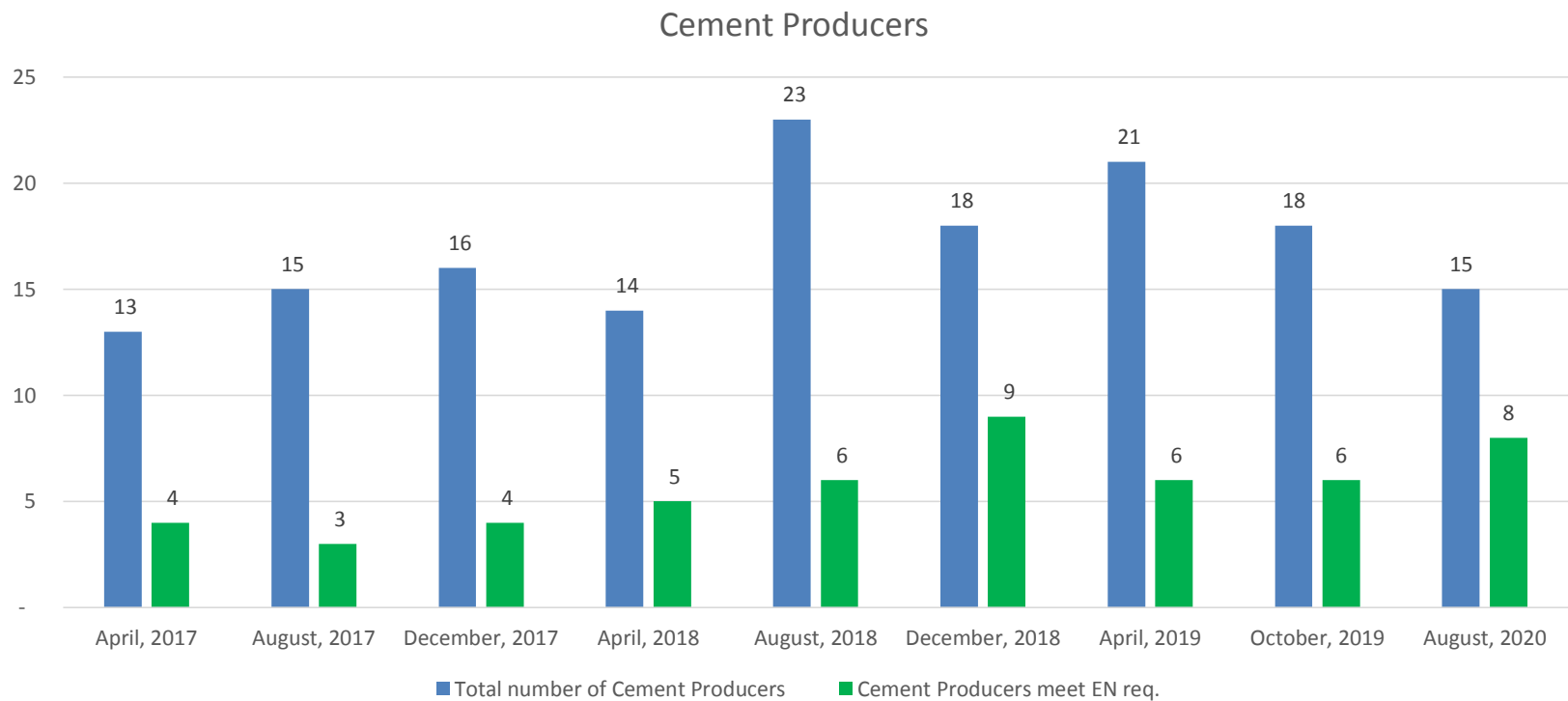


# GCA Blind tests / Samples met EN197-1 requirements

Samples met EN Standard requirements



# Number of Cement Producers



- According to the last quality check, 8 out of the 15 local cement producers sampled have products that meet to EN standard requirements.
- ***100% of all cements that failed to reach required norms were produced out of imported clinker.***

## The GCA recommends the following:

- **Consumers:** trust only reputable and experienced producers and do not base your purchasing decision solely on a lower price. Avoid any products where no factory contact information is provided.
- **Developers and Builders:** pay careful attention as to who the producer is and consistently test purchased products.
- **Governmental Agencies:** need to enhance market monitoring via appropriate bodies:
  - *Technical and Construction Supervision Agency*
  - *Financial Police*
  - *General Prosecutors office*
  - *Revenue Service officers*
- **NGOs:** should play a key role in raising awareness of and adoption of international standards in the Georgian market.
- **Media:** have an important role in educating the public, the construction sector and the government as regards quality and safety of cement products.

## What the Georgia government must do:

- Georgia needs a strong tool to fight against dumping prices from neighboring countries in the future. In the era of sanctions, we should be prepared for challenges like Turkey, Iran or other countries with the currency devaluation problems.
- The Government of Georgia has already approved anti-dumping legislation that went through the last parliament session. The bill will most probably come into force during June 2021.
  - The law's effect will only take place if harm is done to the domestic industry as a result of truly unfair competition internationally.
- 15<sup>th</sup> of January 2019 Georgia government approved the regulation for Georgian *Technical and Construction Supervision Agency*. GCA hopes that this agency will become very active in creating safe and competitive environment on the market.
- Support local production in order to safeguard local jobs and keep the Georgian cement industry competitive.

**Let's build a better future together ...**

**We will gladly answer any of your questions.**

# Addendum I: Detailed Background

- The GCA has been conducting quarterly independent blind laboratory testing of bagged cement sold on the open market since its formation in January 2017 in order to detect cheating as to product quality.
- Geoexpertise, a daughter company of Georgian Chamber of Commerce and Industry (GCCCI), monitors purchasing process about 25-30 bagged cements anonymously from different dealers and preparation of numbered 5kg sample bags for laboratory testing.
- Levan Samkharauli National Forensics Bureau & Georgian Technical University (GTU) receives the numbered samples without knowing which company produced which one.
- Each of the cement samples (representing 15-20 manufacturers) is tested for its 28-day strength – the standard measure.
- The GCA then checks the Bureau & GTU results against the quality stated on the bags and prepares a summary table.
- The latest sampling and blind test were conducted in August - September 2020.

# Addendum II: Geoexpertise Sampling

GCA and Geoexpertise (GEO) signed an agreement on March 23, 2017 to provide arms-length and transparent sample purchasing and distribution services.

GEO:

- Performs and documents the anonymous purchase process of about 25-30 locally produced bagged cements in the open markets of different cities.
- Monitors the storing of bags according to the conditions defined by the European Norms (EN 196).
- Monitors the sampling process by preparing five 5-kilo samples from each bag.
- Seals and assigns a number code to each sample so laboratories do not know which sample was produced by whom.
- Monitors the delivery of the numbered sample bags to Samkharauli Bureau or GTU's accredited neutral laboratory for testing.
- Delivers additional sample bags to GCA, for comparison testing in other accredited laboratories.
- Retains one additional sample bag in case retesting is necessary.
- Provides the GCA with a report regarding the process, documentation and labeling/coding of the cement samples.