



INSTITUTE FOR TESTING AND CERTIFICATION
třída Tomáše Bati 299, Louky, 763 02 Zlín

ANNUAL INSPECTION REPORT

No.: 343504677 / 2015

**Applicant: WŁODAR TRADE WIESŁAW WŁODARCZYK
SPÓŁKA JAWNA**

Address: Ul. Gminna 42, 42-200 Częstochowa, Poland


Product: Masonry cement MC 22.5 X according to EN 413-1

Certificate No: 1023 - CPR - 0324 P

**Certification carried out by: Petr Karlík, NB 1023
Jaroslav Urban, NB 1023**

Date of issue: 30th January 2015




RNDr. Radomír Čevelík
representative of the NB



INSTITUTE FOR TESTING AND CERTIFICATION

Notified Body 1023
763 02 Zlín, Czech Republic

State Authorised Body No. 224 * Notified Body No. 1023 * Accredited Testing Laboratory * Products' and QMS Certification Body * Inspection Body

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Introduction

Cements as construction products shall be assessed on the basis of relevant clauses of the Construction Products Regulation (CPR) - REGULATION (EU) No 305/2011 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC.

1. Product specification

One type of the cement was subsequently certified by the Notified Body No. 1023 for the manufacturer WŁODAR TRADE WIESŁAW WŁODARCZYK SPÓŁKA JAWNA, Poland:

Masonry cement MC 22.5 X according to EN 413-1

The cement is manufactured in the factory WŁODAR TRADE WIESŁAW WŁODARCZYK SPÓŁKA JAWNA, Ul. Gminna 42, 42-200 Częstochowa, Poland

The Notified Body 1023 – Institut pro testovani a certifikaci, a. s. Zlín, Czech Republic issued on 24.5. 2011 the certificate No. 1023 - CPD - 0324 F confirming that the Factory Production Control (FPC) of above mentioned products fulfilled all provisions concerning the management and the attestation of FPC, as they are stated in the Annex ZA of the harmonized technical standard EN 413-1. The certificate was modified according to CPR 305/2011 No. 1023 - CPR - 0324 F, issued on 31st October 2013 with the last annual inspection report was issued under No. 343504022/2013.

2. Assessment and Verification of Constancy of Performance (AVCP)

2.1 Harmonized technical specification and the AVCP system

For the AVCP of masonry cement the harmonized standard EN 413-1 „Masonry cement – Part 1: Composition, specifications and conformity criteria“ has been adopted.

For these products the AVCP system 1+ is laid down, which corresponds to Annex V, Section 1.1 of the CPR REGULATION (EU) No 305/2011. In this system, the initial type testing shall be performed and arranged by a manufacturer, in compliance with the Annex ZA of the above mentioned standard („Clauses of this European Standard addressing the provisions of the EU Construction Products Regulation“).

If this system is prescribed, all the initial type testing assurance is an obligation of the Notified Body. The manufacturer shall carry out factory production control and further testing of samples taken at the factory in accordance with the prescribed test plan. Notified Body issues the certificate of constancy of performance of the product on the basis of determination of the product-type on the basis of type testing (including sampling), type calculation, tabulated values or descriptive documentation of the product; initial inspection of the manufacturing plant and of factory production control as well as its continuous



surveillance, assessment and evaluation of factory production control and audit-testing of samples taken before placing the product on the market.

The attestation of conformity to the specifications in EN 413-1 is based on clause 7 of EN 413-1 and on evaluation of conformity, which shall be in accordance with EN 197-2.

One of the tasks, specified for a Notified Body in the described attestation of conformity system, is to evaluate results of audit samples testing – see EN 197-2, cl. 5.4, especially 5.4.5. Notified Body performs FPC – Factory production control every year, findings of the audit is also main part of the annual inspection report.

2.2 Essential characteristics of the product

The compliance of the **MC 22.5 X** masonry cement properties with the essential requirements is, in accordance with the corresponding clauses of the ZA Annex to EN 413-1, assessed by evaluation of the following properties:

- 1) Early compressive strength at 7 days according to EN 196-1 “Methods of testing cement - Part 1: Determination of strength”;
- 2) Standard compressive strength (at 28 days) according to EN 196-1;
- 3) Initial setting time in accordance with EN 413-2 “Masonry cement – Part 2: Test methods”;cl. 4.3. Method B
- 4) Final setting time in accordance with EN 413-2 “Masonry cement – Part 2: Test methods”;cl. 4.3. Method B
- 5) Soundness according to EN 196-3; cl. 7
- 6) Sieve residue according to EN 196-6
- 7) Water retention according to EN 413-2, cl.6
- 8) Sulfate content (as SO₃) in accordance with EN 196-2 “Methods of testing cement - Part 2: Chemical analysis of cement”;
- 9) Chloride content according to EN 196-2;
- 10) Composition (see Table I in EN 413-1) according to CEN/TR 196-4:2007 “Methods of testing cement - Part 4: Quantitative determination of constituents” or by a special procedure accepted by the manufacturer;

The property of water-soluble hexavalent chromium (chromate) content according to EN 196-10 “Methods of testing cement - Part 10: Determination of the water-soluble chromium (VI) content of cement” was not tested, because the limit of the content is monitored during production of certified Portland cement, which is the constituent material for MC 12.5 X production..

Note: The water-soluble hexavalent chromium content is not mentioned as an obligatory one in EN 413-1, however, in the clause ZA.1 the following statement can be found: “There may be requirements on dangerous substances applicable to the products falling within the scope of EN 413-1 (e.g. transposed European legislation and national laws, regulations and



administrative provisions). In order to meet the provisions of the EU Construction Products Regulation, these requirements need also to be complied with, when and where they apply." The above mentioned statement was fulfilled with the Council Directive 2003/53/EC of the European Parliament of 18th June 2003 amending for the 26th time Council Directive 76/769/EEC relating to restrictions on the marketing and use of certain dangerous substances and preparations), according to which: "(1) Cement and cement-containing preparations may not be used or placed on the market, if they contain, when hydrated, more than 0,0002 % soluble chromium VI of the total dry weight of the cement".

2.3 Place, time and way of sampling of the first audit sample

The audit samples were taken in the manufacturer's site, WŁODAR TRADE WIESŁAW WŁODARCZYK SPÓŁKA JAWNA, Ul. Gminna 42, 42-200 Częstochowa, Poland on 5th November 2015 MC 22,5 X. Sampling was performed in accordance with EN 196-7, in the presence of the WŁODAR TRADE WIESŁAW WŁODARCZYK SPÓŁKA JAWNA, Ul. Gminna 42, 42-200 Częstochowa, Poland. representative, Mr. Michał Czajkowski. Sampling No. 343504677 took place with Mr. Petr Karlík and Mr. Jaroslav Urban, Institut pro testování a certifikaci, a. s., Zlín (ITC) as the representative of NB 1023.

25 kg in one container was transported by car to ITC laboratory.

2.4 Place and date of the audit tests

The audit tests were performed on behalf of the Notified Body (NB) 1023 in the laboratory of ITC (Institute for testing and certification), Zlín, Czech Republic. The samples taken on 5.11.2014 were tested in the following independent laboratories:

- Institut pro testování a certifikaci Inc. (ITC), accredited laboratory No. 1004, tř. T. Bati 299, 764 21, Zlín, Czech Republic (November 2014 – December 2014) – tests 1-9)
- Výzkumný ústav stavebních hmot, Inc., Hněvkovského 30/65, 617 00, Brno, Czech Republic (December 2014 – January 2015 – test 10)

2.5 Audit samples testing results

Test results are presented in following table:

Table 1 – tested properties 1-9

No.:	Aspect	Unit	Test result	Requirement	Evaluation
1	Early compressive strength at 7 days	MPa	27,7 ± 0,3	≥ 10,0	Conformity
2	Standard compressive strength (at 28 days)	MPa	39,3 ± 0,4	≥ 22,5 ≤ 42,5	Conformity
3	Initial setting time	h., min.	4 hours 30min.	≥ 1 hour	Conformity



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4	Final setting time	h., min.	5 hours 30min.	≤ 15 hours	Conformity
5	Soundness	mm	0,7 ± 0,2	≤ 10,0	Conformity
6	Sieve residue	% wt.	12,1 ± 0,1	≤ 15,0	Conformity
7	Water retention	% wt.	86 ± 1	≥ 75,0	Conformity
8	Sulfate content	% wt.	2,48 ± 0,01	≤ 3,5	Conformity
9	Chloride content	% wt.	0,04 ± 0,01	≤ 0,10	Conformity

2.6 The assessment of products results

Notified Body 1023 found that the properties of the audit cement sample evaluated during the testing meets the requirements of the Construction Products Regulation as specified in EN 413-1.

The water-soluble hexavalent chromium content is monitored by producer of raw cement CEM I 42,5 R that results are transmit to the producer of the certified cement MC 22,5 X. Nevertheless, with respect to the Council Directive 1907/2006/EC of the European Parliament of 18th December 2006 amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC relating to restrictions on the marketing and use of certain dangerous substances and preparations (see Note in the cl. 2.2), controlled closed and totally automated processes in which cement and cement-containing preparations are handled solely by machines and in which there is no possibility of contact with the skin must be used for dispatching of the cement.

3. Surveillance inspection of factory production control (FPC)

3.1 Date and locality of the assessment

The assessment of FPC was performed on 5th November 2015 by the representatives of the NB 1023 in the production site, Ul. Gminna 42, 42-200 Częstochowa, Poland.



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On behalf of the manufacturer Mr. Michal Czajkowski, a representative of the manufacturer for quality, took part in the whole assessment procedure.

The representatives of the NB 1023 involved in the initial assessment were:

- Petr Karlík, Institut pro testování a certifikaci, a. s., Zlín, Czech Republic,
- Jaroslav Urban, Institut pro testování a certifikaci, a. s., Zlín, Czech Republic,

3.2 Scope of the assessment

A compliance of the following segments of the factory production control with the requirements of EN 413-1 and EN 197-2 was audited:

- Organisation structure – Management representative
- Internal audits
- Management review
- Personnel involved in factory production control
- Employees' training
- Document control
- Corrective actions
- Management of non-conformities
- Cement constituents, their storage and usage for the production
- Process control
- Products transportation during the production
- Production equipment
- Production area
- Sampling
- Measuring and test equipment, test procedures and conditions, quality records, calibration, verification
- Autocontrol records
- Storage
- Packaging and delivery

3.3 Submitted documentation

During the assessment the following documentation of the factory production control was presented:

- a) Quality Policy
- b) Works' Quality Manual
- c) Organization Structure and Responsibilities
- d) Internal Audits Plan and Records
- e) Flow Chart of the Process



- f) Production procedures
 - g) Quality Plans
 - h) Sampling Procedures
 - i) List of Measuring and Test Equipment
 - j) Quality Records (Reports and Books)
 - k) Calibration Manuals and Records
 - l) Autocontrol Records
 - m) Purchase Specifications
 - n) Corrective Actions Forms
 - o) Safety Data Sheet
 - p) Personnel Training Sheets
 - q) Records concerning the Assessment of Suppliers
- Most of the documentation was written in the Polish language.

3.4 Findings

In the process of the assessment the following findings were detected:

- The Works' Quality Manual is constituted as an integrated document for Quality Management System, Environmental Management System and Occupational Health and Safety Management System.
- The management quality representative is the Quality Control and Management Manager, Mr. Wojciech Pacierpnik. His authority and duties in activities connected with a quality management during cements production are sufficiently described in related documents.
- Training records were checked up – a plan of training is put together for every year, including list of topics, tutors, concerned employees, time schedule and supposed dates (a month). Records about realized trainings are retained and stored in a special training department and also in the department, where a trained member is employed. Special stress is laid on newly engaged workers.
- Document control – the Quality Control and Management Manager is a responsible person. Documentation is accessible in an electronic form just by responsible, predetermined intranet participants. In case of a document change these persons are automatically given a notice by e-mail.
- During the initial inspection, a flowchart of the process with the designation of relations among individual processes and sampling points was presented.
- The equipment used for the cement manufacture is suitable for continuous mass production of cement. The process control is performed automatically.
- There are specifications for purchasing in a sufficient range. A suppliers' assessment is made regularly, in a prescribed manner, in a detailed way.
- The final product consists of Portland cement, fly ash and special additives.



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- The Portland cement CEM I 42,5 R was certified by IBDIM, No. 1487-CPD-027-02 and CEM I 52,5 R, No. 1487-CPD-027-03. The producer of the cement is Góraždže Cement S.A, Chorula, ul. Cementova 1, OPOLE.
- The fly ash was certified by NB 1488, No. 1488-CPR-0086/W. The holder of the certificate is Greenbet Polska S.A., ul. Wiejska 10, Rybnik and the producer is Tauron Wytwarzanie – Spółka akcyjna, Elektrownia Jaworzno.
- Every component (cement, fly ash, some additives) for production process is stored in an individual silo. They are properly marked with a name and type.
- The production place consists of mixing centre, silos of raw material and storage area. The main components – cement and fly ash are mixed with prescribed ratio with additives and immediately bagged.
- The production is not continuous. The mixing center produces other products. Therefore the frequency of testing was decreased to twice per year in depending on all days of production of masonry cement. Statistical evaluation was decreased to once per year.
- The mixing centre is also used by other company, but with the same workers. The mix is carefully cleaned before mixing different product.
- All components are dosed automatically and weighted with calibrated equipment
- A management of eventual non-conforming products is ready for use and described in sufficient details.
- Principles of the function in the event of a necessity to adopt a corrective action within the whole process are accepted. According to the statement of the manufacturer's representative there are no clients' complaints for masonry cement type. The workers in the production control department are well acquainted with a procedure included in the Quality Manual.
- Sampling is performed in predetermined frequencies and in sampling points identified in advance in the regulations.
- Control, measuring and test equipment is available in sufficient range and on a proper level. There is a list of the equipment used for these purposes.
- Calibration is performed according to the plan; a list of equipment liable to an obligatory calibration with the last and the subsequent date is kept. The equipment is comprehensively labeled with designating of a date of the last calibration and a date of the next one. Unsatisfactory or damaged equipment is identified in a suitable manner.
- Tests are performed in compliance with a testing plan; results are recorded to registration sheets (books) in a well-arranged way and in a sufficient extent. Quality records are, in accordance with the relevant provision of the Quality Manual, keeping for a prescribed period.
- Cements could be dispatched in various ways – mostly in bags, but also as bulk cement. During bags filling a mass of every one of them is checked, with a help of the calibrated weighing equipment.
- There are means for securing that no cement without properties validated in a prescribed manner is dispatched. A sample of every lot is archived for 3 months because of an



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event of necessity to solve discrepancies with a client. As long as a complaint is recognized, all the amount of dispatched cement is exchanged for new cement. Marking on bags is developing, in case of issuing certificates by NB 1023 it shall have to be changed – see Annex ZA to the standard EN 413-1:2011, clause ZA.3 (identification number of the Notified Body and the certificate number).

3.4.1 Major system non-conformities

Missing

3.4.2 Small non-conformities (to be removed in the start of the production)

- Number of small non-conformities: 1
 - Rate of small non-conformities in %: 4
- R = small non-conformity (remark): Works quality Manual is not current. The auditor has found incorrectness of organisation scheme, marking cement and old and non-valid information. NB recommends up-date the Work Quality Manual according to current situation as soon as possible.
- correct to: next audit samplings (It will be controlled in the production place.)

4. Information about a scope of the surveillance and of the audit tests performed with randomly taken samples

The cement will undergo annual surveillance and audit samples tests in accordance with following scheme:

- Twice times per twelve months audit sampling and consecutive tests in the same scope as during the initial type testing (with the exclusion of the composition) – see cl. 2.5. of the present Annual Inspection Report.
- Once per year an inspection made by NB 1023 in the factory including surveillance and assessment of the FPC operated by the manufacturer.

5. Conclusions

Notified Body 1023 found that the properties of the audit cement sample evaluated during the audit testing met the requirements of the Construction Products Regulation, specified in EN 413-1, Annex ZA..

It was confirmed, that the factory production control was efficient and met all the relevant requirements of the standards EN 197, Part 2 and EN 413-1.

Notified Body 1023 declares that the issued certificate No. 1023 - CPR - 0324 P remain

valid.



6. List of the documents used for Final Report elaborating

- EN 413-1 „Masonry cement – Part 1: Composition, specifications and conformity criteria“
- EN 197-2 „Cement – Part 2: Conformity evaluation“
- ENV 196-4:1993 “Methods of testing cement. Part 4: Quantitative determination of constituents”
- EN 196-1 “Methods of testing cement - Part 1: Determination of strength“;
- EN 196-3 “Methods of testing cement - Part 3: Determination of setting time and soundness“;
- EN 196-7 “Methods of testing cement; Methods of taking and preparing samples of cement”
- EN 413-2 “Masonry cement – Part 2: Test methods”
- Sampling report No: 343504677 on 5th November 2014
- Works' Integrated Quality Manual, Wlodar Trade
- Notes from a certification audit, NB 1023, Częstochowa 5th November 2014
- Autocontrol records, Częstochowa,
- Statistical evaluation issued by KOMBUD
- Test report, reference No. 343504677/01, issued by ITC (Institute for Testing and Certification), a.s. in Zlín, Czech Republic, on 17th December 2014
- Test report, reference No. 343504677/02, issued by ITC (Institute for Testing and Certification), a.s. in Zlín, Czech Republic, on 25th November 2014
- Test Report No. 13/2015 issued by VÚSTAH (Výzkumný ústav stavebních hmot – Building Materials Research Institute) a.s. in Brno, Czech Republic, on 30th January 2015.
- Construction Products Regulation (CPR) - REGULATION (EU) No 305/2011 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC
- COMMISSION DELEGATED REGULATION (EU) No 568/2014 of 18 February 2014 amending Annex V to Regulation (EU) No 305/2011 of the European Parliament and of the Council as regards the assessment and verification of constancy of performance of construction products