

Employer
SAKO BRNO A.S.

Project
Modernization of WtE Plant SAKO Brno

Date
July 2024

PART III, APPENDIX E3

SPECIFICATIONS FOR EMPLOYERS CONSUMABLES



PART III, APPENDIX E3 SPECIFICATIONS FOR EMPLOYERS CONSUMABLES

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1. ACTIVATED CARBON

Specifications of activated carbon, trade name: HOK® - Medium b) HOK® - Pulverized c) HOK® - Super, other trade names: activated carbon, activated coke used by the Employer at the EfW Line K2 and K3 and stored in the existing storage silo are presented below:

NORIT® GL 50

Powdered Activated Carbon

WHY CABOT

Cabot Norit Activated Carbon is a premier activated carbon manufacturer respected for experienced people, diverse products and strong customer relationships. Cabot's history of innovation, product performance, technical expertise and customer focus ensure that you receive the right products and solutions for your specific purification needs.



NORIT GL 50 powdered activated carbon is a powdered steam activated carbon with an extra fine particle size that can be used in a large range of applications. This carbon is especially suitable for the removal of dioxins, mercury and other contaminant traces from flue gases. Its fine particle size contributes to its good adsorption kinetics.

SPECIFICATIONS

Iodine number	min. 650	-
Particle size, D ₅₀	max. 25	µm
Moisture (as packed)	max. 5	mass-%

GENERAL CHARACTERISTICS

Iodine number	750	-
Molasses number (EUR)	500	-
Apparent density, tamped	490	kg/m³
Particle size, D ₅₀	15	µm
Moisture (as packed)	2	mass-%
Critical ignition temperature	230	°C
NDI (Norit Dioxin Index)	1	-

NORIT® GL 50

Powdered Activated Carbon

NOTES

1. For important product safety, health, environmental and regulatory information, please refer to the Safety Data Sheet (SDS) which is available upon request.
2. General characteristics reflect representative values of product parameters and are not to be used as purchase specifications.
3. All analyses based on standard test methods and specifications are guaranteed values based on lot-to-lot quality control, as covered by Cabot Norit Activated Carbon's ISO 9001 certification.
4. Detailed information on NDI (Norit Dioxin Index) can be found in Technical Bulletin TB 141.

PACKAGING

This product is available in:

- Bulk bags of 2 x 450 kg net weight on a pallet, shrink wrapped
- Bulk tank cars

Product availabilities depend on the type of packaging.



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2. UREA

Specifications for urea 40% solution or granulated urea used by the Employer at the existing facility and stored in the existing storage tank are presented below:

	Urea technical, prilled	TN 54-069-01
		Page 1/1

Producer: Duslo, a.s.

Product characteristic: Urea technical, prilled is a white prilled product with surface treatment, soluble in water.

Application: Technical urea is used for manufacture plastics, urea-formaldehyde adhesives and in the textile industry

Quality parameters	Value in % w/w	Test Method
Total nitrogen (N)	min. 46,0	AM OTK ACH 712/97
Biuret	max. 0,6	AM OTK ACH 710/97
Alkalinity (free Ammonia)	max. 0,02	AM OTK ACH 703/97
Water insolubles	max. 0,003	AM OTK ACH 704/97
Ferrum (Fe)	max. 0,0002	AM OTK ACH 711/97
pH	min. 8,5	AM OTK ACH 706/97
Moisture	max. 0,5	AM OTK ACH 702/97
Particles from 0,5 to 3,5 mm:	min. 90,0	AM OTK ACH 707/97
under 0,5 mm	max. 3,0	
over 10 mm	0	


Package: In bags made of polyethylene containing 25 and 50 kg. Bags of 50 kg each are stored on irreversible and reversible (Euro) pallet measuring 1 200x 800 mm. Pallets 1 050 kg of fertilizer. 25 kg bags are on a pallet with dimensions 1200 x 1000 mm, and it is 1 200 kg of fertilizer. Furthermore, packaged in bulk bags (big bags) max. of 1 000 kg, can be dispatched with the pallet or not. Fertilizer can be despatched the bulk in wagons or cars.

Storage: the product must be stored in original undamaged and closed packs in dry, good ventilated and closed storages.

Guarantee period: 12 months from the date of production, if the storage instructions are observed.

Safety precautions: When using the product do not eat, drink or smoke, abide by the personal hygiene rules.

Date of approval:: July 2014	Issue.: 6	Replace: Issue No.: 5 from 25.05.2011	Head of Quality Assurance Department: Ing. Emília Jurisová
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	UREA SOLUTION 40%	TŠ 258-10 Page: 1/1
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Producer: DUSLO, a. s.,

Product characterization: Urea aqueous solution. Density at 0 °C is 1120 kg/m³, at 20 °C is 1 110 kg/m³
salting-out temperature is 0 °C.

Product type: transparent solution.

Parameters	Values in % w/w	Test Method
Urea content	40.0±0,5	AM OTK ACH 809/05
Formaldehyde	max. 100,0 ppm	AM OTK ACH 804/05
Biuret	max. 0.4	AM OTK ACH 803/05
pH (10% solution)	max. 10,0	AM OTK ACH 604/97
Insoluble residue	max. 0.01	AM OTK ACH 805/05

Transport and package: In tank wagons and road-tanks. Following an agreement with the customer, the fertilizer can be delivered also in other suitable packagings.

Storage: Product must be stored in original undamage and closed big-bags, separately from foodstuffs, drinks, feedstuffs, pesticides and their containers

Health protection during handling:

When using wear personal protective clothing for skin and face protection.

When using do not eat, drink or smoke.

Usable life: 24 months from the date of production.

Approved date: July 2014	Issue No.: 2	Supersede: Issue No. 1 from 8.2.2010	Quality Manager: Ing. Emília Jurisová
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3. QUICK LIME

Specifications for quick lime used by the Employer at the existing Facility K3 and stored in the existing storage silo are presented below:

Milled lime

CL 90-Q

DESCRIPTION

Calcium Oxide
CaO quick lime

SPECIFICITIES

Quick lime,
milled

ADVANTAGES

Extra high reactive lime,
soundness,
high CaO content

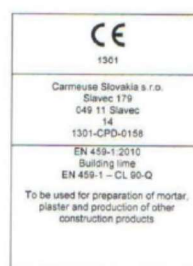
STORAGE

Storage in clean
dry silo or warehouse

PRODUCT PROPERTIES

CaO	97,0	%
MgO	0,8	%
CaO available	94,2	%
SiO ₂	0,4	%
LOI 1000°C	2,1	%
S	0,0040	%
CO ₂	1,3	%
Reactivity t60	0:12	min
Rest on 0,200mm	4,3	%

These parameters are based on long-term values.


RANGE OF USE

For neutralization processes, carbide production, PCC production, after slaking for plasters and mortars, soil neutralization, agglomeration of ores, preparation of blends of stabilizers, solidification of ashes and slags, ...

Non exhaustive list.

DISPATCH

Lime is supply by rail wagons (48-50t), by trucks (24-26 t) or conveyor belt.

QUALITY

Carmeuse Slovakia s.r.o. is in full compliance with EN ISO 9001:2015, EN ISO 14001:2015 and OHSAS.

SAFETY

Lime is an irritant, causes skin irritation, serious eye damage and may cause respiratory irritation.

Use protective equipment during handling. Warning: during slaking process is arising heat.

Safety Datasheet available on request.

REGISTRATION

CAS: 1305-78-8

EINECS: 215-138-9

PRODUCTION SITE

Carmeuse Slovakia s.r.o.

Slavec plant

UPDATE

01/01/2020

All information and figures contained herein are provided as is, for informational purposes only and without warranty of any kind.

4. HYDRATED LIME

Specifications for hydrated lime used by the Employer at the existing Facility are presented below:

SUPERCALCO, Hvdrate lime CL 90-S

PRODUCT DEFINITION

Slaked lime
Calcium hydroxide – $\text{Ca}(\text{OH})_2$

DESCRIPTION

Purely white color Minimum heavy metals content
Readily applicable to mortars and plasters without soaking in water beforehand Guaranteed volume constancy

APPLICATION SCOPE

Applicable to dry mortar and plaster mixtures, for desulphurization processes, in chemical industry for normal and sophisticated technologies

PRODUCT PROPERTIES (average values)

CaO + MgO	91,0–96,5	%
MgO content	0,2–0,8	%
$\text{Ca}(\text{OH})_2$	min.91,0	%
CO_2	0,8–3,5	%
SO_3	0,05–0,35	%
Loss on ignition	24,0–25,5	%
Bulk density	330–420	kg/m^3
soundness	suitable	
Penetration	35–45	mm
Air content	2 - 3	%
Humidity	0,4–0,9	%
Sieve residue 0,2 mm	0–0,5	%
Sieve residue 0,09 mm	3,0–7,0	%

CARMEUSE CZECH REPUBLIC s.r.o declares that the delivered product meets the requirements for placing the packaging on the market according to § 3 and § 4 of Act No. 477/2001 Coll. on Packaging and on Amendments to Certain Acts, as amended

PRODUCT REGISTRATION

EINECS 215-137-3
CAS 1305-62-0
REACH 01-2119475151-45-0000

SAFETY


Lime is an irritant. Use prescribed protective kit when handling. Safety Datasheet available on request or also available online:
www.carmeuse.eu/cz.

STORAGE

Storage in clean, dry silo or warehouse in the original unopened packaging

QUALITY

Product fully conforms to ČSN EN 459-1, Quality management system certified in conformity with ČSN EN ISO 9001:2016



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CARMEUSE CZECH REPUBLIC s.r.o.
závod Vápenka Mokrý
Mokrý 359, 664 04 Mokrý
13
1020-CPD-060018987

EN 459-1:2010
Bílé vápno
EN 459-1 – CL 90-S

Příprava pojiva pro malty pro zdění, malty pro vnitřní a vnější omítky a pro jiné stavební výrobky a v inženýrských stavbách

Vlastnosti hašeného vápna podle úrovně a tříd jsou vyjádřeny v normativním označení hašeného vápna

PRODUCTION SITE

CARMEUSE CZECH REPUBLIC s.r.o.
Lime Plant Mokrý

DISPATCH

Bulk in tank trucks and by rail Uacs (Raj). Bagged in paper sacks, 20 kg each.

UPDATE

20/01/2020

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