



DRY SILICEOUS SAND

Date of issue: 01 Sept 1995

Modification: 07

Date of validity: 21.1.2013

1. PURPOSE OF USE

It is used as a basic raw material for preparation of moulding green sand and mixture for production of cores according to the cold box procedure and CO₂.

2. GENERAL QUALITY REQUIREMENTS

Conformity with the manufacturer's catalogue and certificate.

3. PROPERTIES OF MATERIAL

The sand should not contain any clay and other impurity (above 0.5%) that lower the melting point of siliceous sand below 1710 °C. The mean value of grain should be dependent upon the purpose of use, while the SiO₂ content in siliceous sand should be > 98 %.

4. PACKAGING, PACKING AND TRANSPORT

The sand should be delivered in bulk tanks.

5. WARRANTY OF QUALITY

Warranty of quality is a certificate on sand testing that requires the verification of quality regarding the:

- Granulation
- Loss on ignition
- In case of mining or supplier change, the chemical analysis is required as well

6. MANNER OF ACCEPTANCE

Dry or dry sieved siliceous sand will be accepted by the acceptance control of LIVAR.

7. CONTROL PROCEDURE

Upon acceptance, inspection regarding Atest. If required, an inspection of sieve analysis is conducted.

In case of any doubt in the correctness of statements in the certificate, the quality verification is conducted at an external institution.

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8. MANNER OF MEASUREMENT

QUALITY CHARACTERISTICS, VALUE, MANNER OF MEASUREMENT

NAME: WET SILICEOUS SAND

QUALITY CHARACTERISTICS	VALUE	MANNER OF VERIFICATION
Granulation:		
Mean value (MV)	0.20-0.22mm	Sieve analysis, certificate (Livar lab.)
Fineness number (AFS-No)	50-70	Sieve analysis, certificate (Livar lab.)
Equality degree (ED)	Min. 55	Sieve analysis, certificate (Livar lab.)
Quantity of over-grain above 0.71mm	Max. 2.5%	Sieve analysis, certificate (Livar lab.)
Quantity of sub-grain under 0.09mm	Max. 3%	Sieve analysis, certificate (Livar lab.)
Loss on ignition:	Max. 0.20%	Ignition at 900 °C min. 90 minutes or until constant mass (Livar lab.)
Washed off:	Max. 0.5%	Lab. analysis (lab. supplier)
Fire-resistance (SK) of sand:	Above 31	Lab. analysis (lab. supplier)
SiO ₂ content:	Above 98%	Lab. analysis (lab. supplier)

NAME: DRY SILICEOUS SAND

QUALITY CHARACTERISTICS	VALUE	MANNER OF VERIFICATION
Granulation:		
Mean value (MV)	0.20-0.26mm	Sieve analysis, certificate (Livar lab.)
Fineness number (AFS-No)	50-70	Sieve analysis, certificate (Livar lab.)
Equality degree (ED)	Min. 55	Sieve analysis, certificate (Livar lab.)
Quantity of over-grain above 0.71mm	Max. 1%	Sieve analysis, certificate (Livar lab.)
Quantity of sub-grain under 0.09mm	Max. 1%	Sieve analysis, certificate (Livar lab.)
Loss on ignition:	Max. 0.2%	Ignition at 900 °C min. 90 minutes or until constant mass (Livar lab.)
Washed off:	Max. 0.5%	Lab. analysis (lab. supplier)
Fire-resistance (SK) of sand:	Above 31	Lab. analysis (lab. supplier)
SiO ₂ content:	Above 98%	Lab. analysis (lab. supplier)

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NAME: DRY SIEVED SILICEOUS SAND

QUALITY CHARACTERISTICS	VALUE	MANNER OF VERIFICATION
Granulation:		
Mean value (MV)	0.21-0.24mm	Sieve analysis, certificate (Livar lab.)
Fineness number (AFS-No)	53-60	Sieve analysis, certificate (Livar lab.)
Equality degree (ED)	Min. 75	Sieve analysis, certificate (Livar lab.)
Quantity of over-grain above 0.5 mm	Max. 0.0%	Sieve analysis, certificate (Livar lab.)
Quantity of sub-grain under 0.09mm	Max. 0.0%	Sieve analysis, certificate (Livar lab.)
Loss on ignition:	Max. 0.2%	Ignition at 900 °C min. 90 minutes or until constant mass (Livar lab.)
Washed off:	Max. 0.5%	Lab. analysis (lab. supplier)
Fire-resistance (SK) of sand:	Above 31	Lab. analysis (lab. supplier)
SiO ₂ content:	Above 98%	Lab. analysis (lab. supplier)

NAME: DRY SIEVED SILICEOUS SAND

QUALITY CHARACTERISTICS	VALUE	MANNER OF VERIFICATION
Granulation:		
Mean value (MV)	0.23-0.27mm	Sieve analysis, certificate (Livar lab.)
Fineness number (AFS-No)	50-60	Sieve analysis, certificate (Livar lab.)
Equality degree (ED)	Min. 75	Sieve analysis, certificate (Livar lab.)
Quantity of over-grain above 0.5 mm	Max. 0.0%	Sieve analysis, certificate (Livar lab.)
Quantity of sub-grain under 0.09mm	Max. 0.0%	Sieve analysis, certificate (Livar lab.)
Loss on ignition:	Max. 0.2%	Ignition at 900 °C min. 90 minutes or until constant mass (Livar lab.)
Washed off:	Max. 0.5%	Lab. analysis (lab. supplier)
Fire-resistance (SK) of sand:	Above 31	Lab. analysis (lab. supplier)
SiO ₂ content:	Above 98%	Lab. analysis (lab. supplier)