

## Dry sludge from the water treatment plant

### a) Heavy metals analysis

<i>Parameters</i>	<i>Unit</i>	<i>Value</i>
As	mg/kg	3,8
Cd	mg/kg	3,6
Co	mg/kg	7,4
Cr	mg/kg	162
Cu	mg/kg	274
Hg	mg/kg <sub>dry</sub>	2,58
Mn	mg/kg	654
Ni	mg/kg	79,8
Pb	mg/kg	93,6
Sb	mg/kg	4,4
Tl	mg/kg	≤ 1,0
V	mg/kg	36,9
Zn	mg/kg	1 210

### b) Expected ash analysis – XRF analysis

<i>Parameters</i>	<i>Unit</i>	<i>Value</i>
Al <sub>2</sub> O <sub>3</sub>	hm. %	16,0
CaO	hm. %	14,0
Fe <sub>2</sub> O <sub>3</sub>	hm. %	13,9
K <sub>2</sub> O	hm. %	1,64
MgO	hm. %	2,64
MnO	hm. %	0,0830
Na <sub>2</sub> O	hm. %	0,756
P <sub>2</sub> O <sub>5</sub>	hm. %	18,2
SO <sub>3</sub>	hm. %	2,68
SiO <sub>2</sub>	hm. %	28,5
TiO <sub>2</sub>	hm. %	0,780
Suma	hm. %	99,2

### b) Thermoplastic characteristics of ash regarding ČSN ISO 540

<i>Parameters</i>	<i>Unit</i>	<i>Value</i>
Deformation temperature (sintering)	°C	1 095
Softening temperature	°C	1 135
Melting temperature	°C	1 190
Flow temperature	°C	1 230

### c) Physical parameters

<i>Parameter</i>	<i>Label</i>	<i>Unit</i>	<i>Value</i>
Internal pour angle	φ	°	41
Internal pour angle effective	φ <sub>e</sub>	°	49
Bulk density	ρ <sub>s</sub>	kg/m <sup>3</sup>	306
Particle size 10 %	d <sub>10</sub>	mm	2,0
Particle size 50 %	d <sub>50</sub>	mm	2,9
Particle size 90 %	d <sub>90</sub>	mm	4,2
Classification regarding Geldart	-	-	D