GROUP 5.1 Residues from copper-iron-lead-nickel matte leaching

Version 22 January 2010

(**N.B.:** The content of this ID Card may be adjusted as the Refiners Project develops)

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1. Identification of the group

Table 1. Identification of the group

	Proposed by PMC Refiners Work Group	Original (in EC inventory)
Name	Residues, copper-iron-lead-nickel matte, sulfuric acid-insol.	Residues, copper-iron-lead-nickel matte, sulfuric acid-insol.
EC number	310-050-8	310-050-8
CAS number	102110-49-6	102110-49-6
Description	Dry or wet insoluble residues resulting from leaching processes applied on primary and secondary feeds resulting from copper and nickel refining streams. Residues from copper-iron-lead-nickel matte leaching mainly contain precious (particularly platinum group metals) and base metal sulfides.	None

N.B.: The description proposed above will be further detailed by PMC for Registration purposes.

2. Synonyms (and/or commercial names)

None

3. Substances that are similar or can be considered as the same

None

4. Usual composition

Table 2. Usual composition

Type	Name of the element	Symbol	Species present	Most recent classification of species	Source of classification	Usual concentration range (%)
Precious metals	Silver	Ag	Metallic	None	GHS/CLP	0-10
	Gold	Au	Metallic	None	GHS/CLP	0-5

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Type	Name of the element	Symbol	Species present	Most recent classification of species	Source of classification	Usual concentration range (%)
	Platinum Group Metals	PGM	Metallic	None	GHS/CLP	0-70
Other constituents	Aluminium	Al	Al2O3;	None	GHS/CLP	0-2
	Biotite		K(Mg,Fe)3Al,Fe)Si3O10(OH,F)2			0-5
	Antimony	Sb	NiSbSn alloy (metallic)			0-5
	Arsenic	As	As2O3	Carc. Cat. 1; R45; T+; R28; C; R34; N; R50-53	GHS/CLP	0-5
	Barium	Ba	BaO	None	GHS/CLP	0-5
	Bismuth	Bi		None	GHS/CLP	0-5
	Calcium	Ca	CaO	None	GHS/CLP	0-15
	Chromium	Cr	Cr2O3, FeCr2O4	None	GHS/CLP	0-3
	Cobalt	Co	CoCu alloy (metallic)	R42/43 - R53	GHS/CLP	0-10
	Copper oxide		Cu2O	Xn; R22; N; R50-53	GHS/CLP	0-5
	Copper sulfate		CuSO4	Xn; R22 - Xi; R36/38 - N; R50-53	GHS/CLP	15-30
	Copper sulfides		CuS, Cu9S5	None	GHS/CLP	0-80
	Chalcopyrite		CuFeS2	None	GHS/CLP	0-20
	Lead sulfide		PbS	Repr. Cat. 1; R61 - Repr. Cat. 3; R62 - Xn; R20/22 - R33 - N; R50-53	GHS/CLP	0-20
	Iron oxide		Fe3O4	None	GHS/CLP	10-15
	Jarosite or Hematite	Fe	(equivalent to 0-20% Fe)	None	GHS/CLP	0-60
	Goethite		FeO(OH)	None	GHS/CLP	2-5
	Pentlandite		(FeNi)9S8	Ni compound classification	GHS/CLP	1-2
			Fe3S5O21	None	GHS/CLP	10-20
	Iron sulphides		FeS, FeS2	None	GHS/CLP	2-12
	Magnesium	Mg	MgO	None	GHS/CLP	0-3
	Manganese	Mn	MnO	Xn; R20/22	GHS/CLP	0-5
	Nickel sulfate		NiSO4	Carc. Cat. 1; R49 - Muta. Cat. 3; R68 - Repr. Cat. 2; R61 - T; R48/23 - Xn; R20/22 - Xi; R38 - R42/43 - N; R50-53	GHS/CLP	0-20
	Nickel ferrite		NiFe2O4	None	GHS/CLP	10-20
	Selenium	Se	Copper selenide	T; R23/25 - R33 - N; R50-53	GHS/CLP	0-20
	Silicon	Si	SiO2	None	GHS/CLP	0-20

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Type	Name of the element	Symbol	Species present	Most recent classification of species	Source of classification	Usual concentration range (%)
	Tellurium	Te	Metal Telluride	None	GHS/CLP	0-20
	Tin	Sn	NiSbSn alloy (metallic)	None	GHS/CLP	0-5

The composition given above represents the usual elemental content available to the Members of the Consortium by 7 of December 2009. This usual content represents the majority of the Matte Leaching Residue that is placed on the EEA market.

Concentration ranges outside the ones given above do not exclude sameness and are usually referred to as unusual or exceptional situations. Each potential registrant is responsible for performing its own elemental analysis (PMC will specify preferred method in due course).

5. Classification (*additive - based on composition provided in table 2 above*)

To be completed

6. Basic physico-chemical characteristics and properties

Table 3. List of physico-chemical characteristics of the substance to facilitate sameness confirmation

Characteristic	Description/value	Comment
Physical state	Solid	
Physical form	Powder	
Usual particle size range(s)	> 92,4% less than 20 µm	
Colour	Dark brown	
Odour	Characteristic of sulfur-containing compounds	
Substance type	Inorganic	
Water solubility	Cu 22 mg/l; Ni 2,3 mg/l; S 17 mg/l (*) Cu 16 mg/l; Ni 1,8 mg/l; S 13 mg/l (**)	Obtained by Column Elution Method (pH 4,5-5,0) and * flow rate 25 ml/h ** flow rate 12,5 ml/h
Relative density (g/cm^3) **or specific gravity**	3,8 g/cm^3	
Specific surface area (m^2/g)	5,04 m^2/g	

7. Lead Registrant

Umicore volunteers to be the Lead Registrant for this intermediate.

8. REACH Strategy

Table 4. REACH strategy for the group (basis for REACH Registration preparation)

Subject	Description	Comment
SIEF	As pre-registered	
REACH category	UVCB	
Intermediate status	Transported	At least one Member of the PMC has declared this material as transported > 1000 t/a. This will be considered as the reference to
Tonnage band	> 1000	

		produce the Dossier as other forms (on-site and/or below 1000 t/a are covered by the requirements of transported > 1000 t/a).
Information requirements	Available + Annex VII	
(Likely) Classification	Carc. Cat. 1, Mut. cat. 3, Repr. Cat. 2 and R50-53	Depends on confirmation of composition/species.
Resulting registration deadline	2010	
Other		

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