



# ID Card

## Electrolyte from gold electrolysis

Version 26 November 2012

Please note that discussions on the ID Cards are currently ongoing.  
Should you need further information / detail, please contact [info@epmf.be](mailto:info@epmf.be)  
The content of this ID Card may be adjusted as the Refinables Project develops.

**Notes:**

- This ID card is used to support the substance sameness discussions in SIEFs and to describe the substance/group to the best of the SIEF members' knowledge.
- It also aims at grouping communications relevant to the request of available data or information, the approval of the proposed Lead Registrant and the registration strategy with the SIEF.
- It is the responsibility of each individual registrant to identify their substance and to report company-specific identity in their Registration Dossier (section 1 of IUCLID).

**DISCLAIMER**

The proper identification and characterisation of a substance or intermediate is the responsibility of each registering legal entity. All data and information contained in this document shall be treated by the receiving party (i) in full confidence with the adequate respect of any confidential and/or proprietary nature of such information and (ii) only in the framework of the purpose of agreeing on substance sameness, Lead Registrant and overall REACH Strategy for the concerned Substance under REACH (the 'Purpose'). The receiving party (and any representative) shall not be allowed to use or circulate any or all parts of this document for any other purpose than the Purpose, without the prior written consent of the European Precious Metals Federation (EPMF). The content provided in this document is given for the Purpose and as such, no guarantee or warranty whatsoever (expressed or implied) is given as to its accuracy, completeness, merchantability or fitness for any particular purpose which the receiving party may have. In any case, any use by the receiving party would be made at its sole risk and liability.

### 1. Identification of the group

**Table 1.** Identification of the group

	<b>Proposed by EPMF Refiners Work Group</b>	<b>Pre-registered as</b>
<b>Name</b>	Electrolyte, gold electrolysis	Slimes and Sludges, precious metal refining
<b>EC number</b>	EC 933-944-5	308-516-0
<b>CAS number</b>		98072-61-8
<b>Description</b>	Fresh or spent aqueous gold trichloride solution used in and resulting from the electrolytic refining of gold. This electrolyte is constituted of gold trichloride, chlorhidric acid, and it may contain some other metallic and non-metallic ions in varying concentrations, which will vary depending on the nature and composition of the primary or secondary raw material from which gold is recovered.	None

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



## 2. Synonyms (and/or commercial names)

- Reaction mass of gold trichloride/tetrachlorauric acid, platinum tetrachloride and chlorhydric acid (multiconstituent substance, gold electrolyte)
- Impure gold trichloride

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

None

## 4. Typical composition

Table 2. Typical composition

Type	Name of the element	Symbol	Species present (one line per species)	Typical concentration range
Precious metals	Gold	Au	AuCl <sub>4</sub>	0-33
	Iridium	Ir		0-2,5
	Palladium	Pd		0-2,5
	Platinum	Pt		1-29
	Rhodium	Rh		0-2,5
	Ruthenium	Ru		0-2,5
Other Metals	Copper	Cu		0-2
Other constituents	Chlorine	Cl	HCl	0-17,5
	Water	H <sub>2</sub> O	Water	0-43

**N.B.:** Classification drivers are indicated in red (see also Table 4).

The composition given above represents the typical compound content available to the Members of the EPMF by 9 February 2012. This typical content represents the majority of the Gold Electrolyte that is manufactured and/or imported on the EEA market.

In a UVCB substance, the number of constituents is relatively large and/or; the composition is, to a significant part, unknown and/or; the variability of composition is relatively large or poorly predictable. Hence, concentration ranges outside the ones given above do not exclude sameness and are usually referred to as atypical or exceptional situations. Each potential registrant is responsible for performing its own elemental analysis (EPMF will specify preferred method in due course).



## 5. Lead Registrant

Aurubis AG (Germany) volunteers to be the Lead Registrant for this intermediate. The European Precious Metals Federation (EPMF) will provide support to the Lead Registrant as laid down in the EPMF Agreement.

## 6. REACH Strategy

**Table 3.** REACH strategy for the group (basis for REACH Registration preparation)

Subject	Description	Comment
SIEF	New/sub-SIEF	A new EC number has been generated for this material during pre-registration as multi-constituent substance (913-584-5). Although following identification and sameness discussions this material was agreed to be a UVCB (see below) the new EC number allocated to the multi-constituent substance will be used for the registration dossier submission.
REACH category	UVCB	Can contain more than 80% of gold trichloride ((EC n°: 236-623-1; CAS n°: 13453-07-1) and be considered as “impure” gold trichloride (cf. EPMF proposed strategy for impure compounds).
Intermediate status	On-site	No Member of the EPMF has declared this material to be transported. At least one Member of the PM has declared this material on-site > 100 t/a. This will be considered as the reference to produce the Dossier.
Tonnage band	100-1000	
Information requirements	Available	This is completed by testing and a scientifically sound and robust classification technique. Several classifications may be proposed on the basis of e.g.: different impurity profiles.
Existing classification	See Table 4	
Registration deadline	2013	

Classifications for Electrolyte from gold electrolysis are proposed in below table as grouped classifications based on composition profile. Compositions or triggers associated to each classification provide a non-exhaustive list of those constituents which can be present in the Refinable.

**Table 4.** Classification for the group

	Classification CLP	Classification DSD	Composition / classification drivers
1	ENV Ac 1, Env Ch 1, Skin corr 1A, Resp/Skin sens. 1, Eye dam. 1, Ac. Tox. oral+inh 4	Xi; R41 R42/43 R50-53	Pb < 0,3%; HCl > 5%; PtCl4 > 1%  100 / ( (PtCl4%)/100 + (CuSO4%)/500 ) between 300 – 2000 mg/kg  100 / HCl% / 700 between 2500 – 20000 mg/kg  (%Pd compoundsx10 + %CuSO4x10 + %Au compounds + %PtCl4 + Ru% + Rh%) >= 25% *

\* Note that Diammonium hexachloroplatinate, platinum dioxide, dihydrogen hexahydroxyplatinate platinum dinitrate, dipotassium tetrachloroplatinate, tetraammineplatinum dichloride, palladium (black), palladium dichloride, palladium dioxide, Rhodium (black), dicarbonyl(pentane-2,4-dionato-O,O')rhodium, diammonium sodium(nitritoN)rhodate, Ruthenium (black), Tris(nitrate-O)nitrosylruthenium, Ruthenium (IV) oxide are not classified for environment

**N.B.1:** No CMR profile