ID Card
Dihydrogen hexahydroxyplatinate, compound with 2-aminoethanol (1:2) (in solution)

Version 15 January 2018

Notes:

- *This ID card is used to support the substance sameness discussions in SIEFs and to describe the substance 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).*

1. Identification of the substance

Table 1. Identification of the substance

	Original (in EC inventory)
Name	Dihydrogen hexahydroxyplatinate, compound with 2-aminoethanol (1:2)
EC number	268-717-3
CAS number	68133-90-4
Description	Not available
Composition type	Mono-constituent substance

2. Synonyms and other identifiers of the substance

Table 2. Synonyms and other identifiers of the substance

IUPAC name	2-aminoethanol; hydron; platinum(4+); hexahydroxide
CAS name	
Abbreviations	
Other commercial, brand or international names	2-aminoethanol; hexahydroxyplatinum
Other identity codes	

3. Substances (with core identifiers) also falling under this substance (with justification)

None

4. Information related to molecular and structural formula of the substance

Table 3. Information related to molecular and structural formula of the substance

Molecular formula	C4H22N2O8Pt
Structural formula	$[H_2Pt^{(IV)}(OH)_6] * [NH_2\text{-}CH_2\text{-}CH_2\text{-}OH]_2$
Smiles notation	[H+].[H+].C(CO)N.C(CO)N.[OH-].[OH-].[OH-].[OH-].[OH-].[OH-].[Pt+4]
Optical activity	
Typical ratio of (stereo) isomers	
Molecular Weight / Molecular Weight range	421,31 g/mol

5. Typical composition of the substance

Table 4. Typical composition

	Name	Symbol / Formula	Min & Max concentrations (%)[§]	Typical concentration (%)[§§]
Main constituent(s)*	Dihydrogen hexahydroxyplatinate, compound with 2-aminoethanol (1:2)	C4H22N2O8Pt	95 - 99[$]	97
Additives**	2-aminoethanol	C2H7NO	1 - 5	3
Impurity(ies)[#]	Several minor (especially metallic) impurities which do not affect the classification of the substance because of their non-hazardous nature or because they do not exceed the classification cut-off limits in the substance	e.g. Ag, Au, Cu, Ir, Pb, Pd, Rh, Ru, Na	0 – 0,5	< 0,1

***** ≥ 80 % (w/w) for mono-constituent substances; ≥ 10 % (w/w) and < 80 % (w/w) for multi-constituent substances.
**** ≥ 1 % (or lower if contributing to the hazard). An additive is a substance that has been intentionally added to stabilise the substance and which cannot be removed without changing the chemical nature to which it is added.**
[#] An impurity is an unintended constituent present in a substance, as produced. It may originate from the starting materials or be the result of secondary or incomplete reactions during the production process. While impurities are present in the final substance, they were not intentionally added.
[§] Concentration ranges define the substance sameness criteria agreed by all EPMF Members in preparation of the communication with other SIEF members.
[§§] Typical concentration refers to the representative sample used for testing.
[$] Corresponds to 44-46 % Pt.

The composition given above is the theoretical composition of a pure solution of Dihydrogen hexahydroxyplatinate, compound with 2-aminoethanol (1:2). In practice, Dihydrogen hexahydroxyplatinate, compound with 2-aminoethanol (1:2) is brought on the market in an aqueous solution containing 20-50 % Dihydrogen hexahydroxyplatinate, compound with 2-aminoethanol (1:2).

2-aminoethanol is intentionally added to preserve the substance's stability (it keeps the pH high to prevent the decomposition of the substance).

6. Information on appearance, physical state and properties of the substance

Table 5. Appearance / physical state / properties of the substance in solution*

Physical state	Solution
Solvent	water
Concentration range of substance in solution	20–50 %[$]
pH (range) of the solution	> 9,5
Excess acid	Not applicable

***** For liquid substances (solvent cannot be separated from substance without changing the identity of the substance) and not for mixtures, suspensions, and other non-substance forms in which the substance is manufactured and/or imported under REACH.
[$] Corresponds to 9-23 % Pt.

7. Analytical data

Annex VI of REACH requires the registrant to describe the analytical methods and/or to provide the bibliographical references for the methods used for identification of the substance and, where appropriate, for the identification of impurities and additives. This information should be sufficient to allow the methods to be reproduced.

Table 6. Analytical methods for identification of the substance

Parameter / Method	Recommended for substance identification and sameness check	Applicable	Not applicable or not recommended
Elemental analysis			
ICP (ICP-MS or ICP-OES)	X		
Atomic absorption spectroscopy (AAS)			
Glow discharge mass spectrometry (GDMS)			
Molecular analysis			
Infrared (IR) spectroscopy			
Raman spectroscopy	X		
Mineralogical analysis			
X-Ray Fluorescence (XRF)		X	
X-Ray Diffraction (XRD)	X		
Morphology and particle sizing			
Electron microscopy (SEM, TEM, REM)* [#]			
Laser diffraction* [#]			
Particle size by other means (e.g. sieve analysis)[#]			
Surface area by N-BET* [#]			
Other			

* Analytical techniques particularly (but not exclusively) relevant for nanomaterials.
[#] The choice of the technique for particle size depends on the size of the material as manufactured/imported/placed on the market/used.

8. Lead Registrant

European Precious Metals Federation aisbl
E: info@epmf.be W: www.epmf.be

BASF (Italy) volunteers to be the Lead Registrant for Dihydrogen hexahydroxyplatinate, compound with 2-aminoethanol (1:2). The EPMF will provide support to the Lead Registrant as laid down in the EPMF Agreement.

9. REACH Strategy

The table below presents the overall Registration Strategy for Dihydrogen hexahydroxyplatinate, compound with 2-aminoethanol (1:2) based on the information available to the EPMF by the date given above on the document.
The Registration Dossier will be prepared for the highest substance status (information requirements associated to a substance or Article 10 Registration being higher than an intermediate handled under strictly controlled conditions or Article 17 or 18 one) and associated tonnage band.
The recap below therefore reflects the scope of work of the EPMF for Dihydrogen hexahydroxyplatinate, compound with 2-aminoethanol (1:2) and sets the minimum and maximum set of information that will be gathered and/or produced when preparing the Registration Dossier for Dihydrogen hexahydroxyplatinate, compound with 2-aminoethanol (1:2) as described in this ID Card.
If higher information requirements are necessary, these can be included in the Registration dossier (if EPMF is made aware of these additional requirements in-time) as an update to the already submitted dossier.

Table 7. REACH strategy for the substance (basis for REACH Registration preparation)

Item	Description
REACH category	Mono-constituent substance
Highest status	Substance
Highest tonnage band	10 – 100 t/a
Information requirements	Available / Existing + Annex VII + Annex VIII
Existing classification*	Eye Damage 1 (H318) Skin corr 1B-and-1C Aquatic acute 1 (H400) Aquatic chronic 1 (H410) Aquatic M-factor 1 Chronic M-factor 1
Registration deadline	2018

***** For the pure form, as per latest CLP notification exercise (December 2010 & March 2012). A different classification containing additional precautionary endpoints will be submitted by some EPMF members.

10. Scope of the Registration Dossier

The uses included in this Registration Dossier are listed on the EPMF website.

11. Analytical reference information

Below the results of Raman analysis of a reference sample used for testing.

Apparatus: Raman WITec Alpha 300R
Nd:YAG Laser Compass 315-50 (532 nm)
Sample preparation: For measurement the neat test item (stored in a glass vial) was positioned in a holder of the macro sampling set.
After maximizing the signal intensity of the test item's Raman bands, a Raman spectrum was recorded.
Test parameters: Spectral range: 98.86 cm-1 - 3649.78 rel. cm-1;

Resolution: < 6 cm-1 (not linear)
Excitation wavelength: 532.260 nm
Grating: T1: 600grids/mm BLZ=500 nm;
No. of accumulations: 60
Integration time: 1.00002s;
Lens: Renishaw Macro Sampling Set, (90° adaptor, lens f = 30mm NA = 0.17)
Measurement at room temperature.

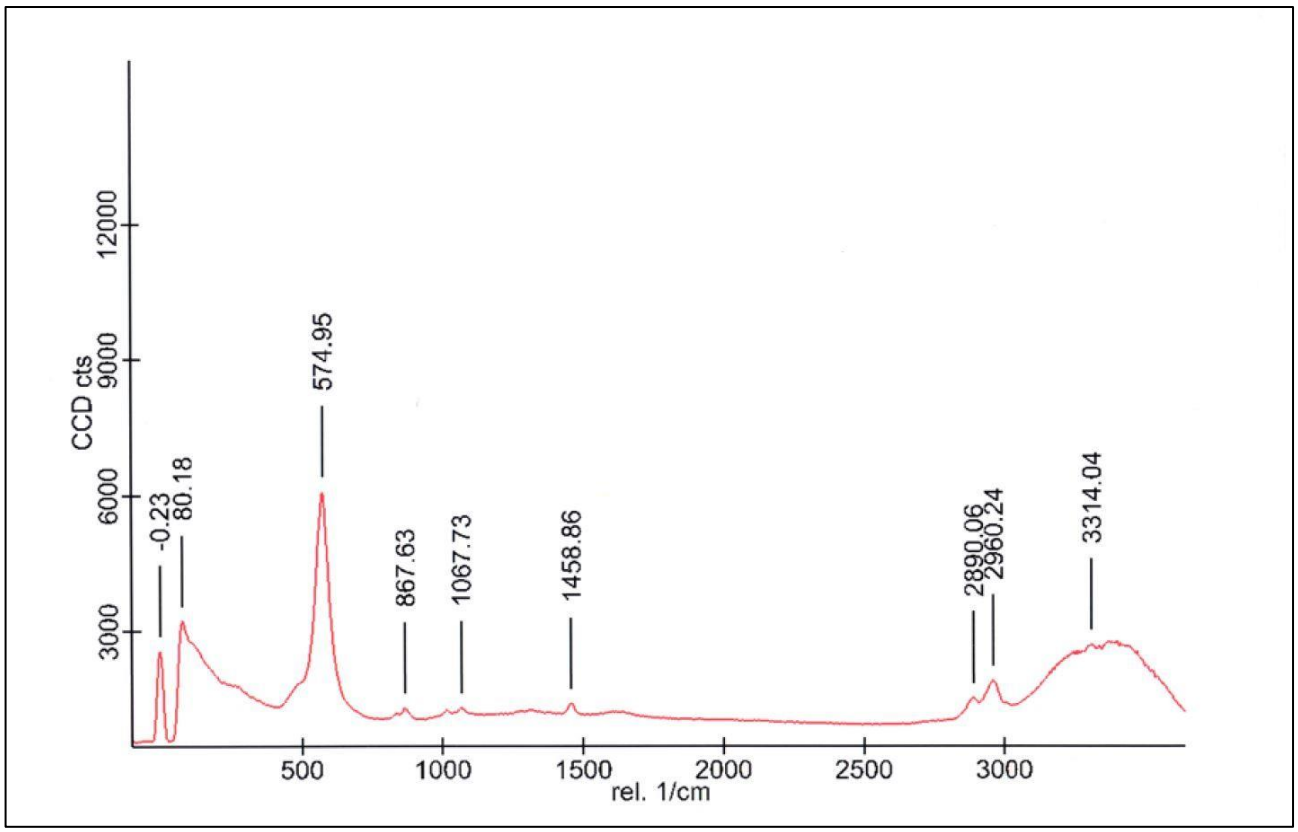

Figure 1. Raman spectrum of Dihydrogen hexahydroxyplatinate, compound with 2-aminoethanol (1:2)

European Precious Metals Federation aisbl
E: info@epmf.be W: www.epmf.be