Rhenium Work Group teleconference
Support material

Monday 7 July 2008, 4:00 p.m. CET

First exploratory meeting

First exploratory meeting of the Rhenium Work Group Brussels, 11th of February 2008

- **Attendees**
  - KGHM Ecoren
  - Ames Goldsmith
  - Lipmann Walton & Co.
  - Powmet
  - KGHM Polska Miedz
  - SEKOM
  - Powmet
  - Climax Molybdenum
- **Apologies:**

Johnson Matthey

W.C. Heraeus

- **Objectives**

To better know those companies having a potential interest in Rhenium,

To agree on a way forward until the latest version of the Consortium Agreement is made available for signature,

To clarify any question on the organisation of the Precious Metals Consortium.

- **Agreed actions**

To replace the use of "perrhenate" by "rhenate",

For each interested company to send its inventory of Rhenium substances and intermediates + any available technical specification (tables 1, 2 and 3 of Agreement dated 6th of May 2008),

For each interested company to appoint a Representative to be on the Rhenium Work Group,

For Re WG to produce one substance profile/descriptor per Rhenium material,

For TAP to continue discussions with CRO and have Rhenium coupled with PGMs in CRO appointment.

REACH vocabulary and legal definitions

REACH Vocabulary (1)

- **Substance:** a chemical element and its compounds in the natural state or obtained by any manufacturing process, including any additive necessary to preserve its stability and any impurity deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition:
  - Mono-constituent substance: main constituent is present ≥ 80% w/w.
  - Multi-constituent substance: more than one main constituent is present ≥ 10% w/w and < 80% w/w.
  - UVCB: substances of **u**nknown or **v**ariable composition, **c**omplex reaction products or **b**iological materials (large number of constituents and variability of composition is large and/or poorly predictable).

REACH Vocabulary (2)

- Preparation: a mixture or solution composed of two or more substances.
  - Difference between preparation and multi-constituent substance: the components of the preparation do not react, they just blend.
- Article: an object, which during production is given a special shape, surface or design which determines its function to a greater degree than does its chemical composition.
- Intermediate: a substance that is manufactured for and consumed in or used for chemical processing in order to be transformed into another substance (synthesis).

REACH Vocabulary (3)

- Non Isolated Intermediate: an intermediate that during synthesis is not intentionally removed (except for sampling) from the equipment in which the synthesis takes place. Such equipment includes the reaction vessel, its ancillary equipment, and any equipment through which the substance passes during continuous flow or batch process as well as the pipe work for transfer from one vessel to another for the purpose of the next reaction step but it excludes the tanks or other vessels in which the substance is stored after the manufacture.
- On Site Isolated Intermediate: an intermediate not meeting the criteria for the non isolated intermediate and where the manufacture and the synthesis of another substance from that intermediate take place on the same site operated by one or more legal entities.
- Transported Isolated Intermediate: an intermediate not meeting the criteria for a non isolated intermediate and transported between, or supplied to, other sites.

Rhenium indicative list

Confirm entries
Confirm tonnage bands

Confirmed inventory

Name	CAS number	EC number
Rhenium	7440-15-5	231-124-5
Perrhenic acid	13768-11-1	237-380-4
Ammonium perrhenate (APR)	13598-65-7	237-075-6
Sodium rhenate*	13472-33-8	236-742-9
Dirhenium heptaoxide	1314-68-7	215-241-9
Rhenium-containing scrap*	None	None

- **Four substances and two transported isolated intermediates (*).**
- **All in 1-10 tonnes/year → no CSR required (but maybe for APR)!**

How to calculate your applicable tonnage band? (1)

Article 3(30) of the REACH Regulation:

- *"Per year" means per calendar year, unless stated otherwise, for phase-in substances that have been imported or manufactured for at least three consecutive years.*
- *Quantities per year shall be calculated on the basis of the average production or import volumes for the three preceding calendar years.*

To be combined with commercial strategies:

- Some companies might want to work with **several legal entities** to decrease the individual volumes and associated information requirements → might lead to higher administrative burden and multiplied Registration costs.
- Some companies might want to decrease or **stop manufacturing or importing** in order to be able to register in lower tonnage band or not at all → Restrictive!
- As a precaution, some companies might want to **register in higher tonnage band than the current actual one** in case business improves and/or they intend to import from additional non-EU suppliers.
- As a precaution, some companies might want to register substances and intermediates they do **not yet manufacture or import in volumes of more than one tonne per year** in order to provide transparent REACH-compliance to their customers.
- Some companies might want to combine all the above with the consideration that registrations below 10 tonnes per year do not necessarily need to contain a Chemical Safety Report (Chemical Safety Assessment, exposure scenario, etc…), therefore reducing the costs.

How to calculate the applicable tonnage band? (2)

Technical Guidance Document on Registration:

- In the event a legal entity is manufacturing or importing a material under all or some of the following forms:
  - As a substance on its own,
  - As a component of one or several preparations and/or alloys, ⇨ **Sum up to registered tonnage**
  - Contained in an imported article with intended release,
  - As an intermediate, ⇨ **Make reference in Registration Dossier**
  - To be used in PPORD applications. ⇨ **Notify separately to Agency**

The final tonnage to be registered (and its associated information requirements) can be limited to the volume of the substance itself + the quantity of substance contained in each preparation and/or alloy, as long as:

- The tonnage of the substance in the imported articles with intended release is below one tonne per year (otherwise it must be included as use in Registration Dossier).
- The use as intermediate (and the tonnage corresponding to the intermediate) is included in the Registration Dossier,
- A notification is made to the Agency for the use in PPORD.

Questions for clarification/discussion

Generic questions (1)

- Should we add Potassium perrhenate (K.ReO4) EC number 233-953-8, CAS number 10466-65-6 to the Rhenium indicative list?
  - Only substances which will be registered by Members can be included in the list. This list will be used by consultants to prepare the Registration.
- What are the pros and contras of the substance and intermediate routes?
  - The "advantage" of having an intermediate under REACH is that you "only" need to compile *any existing available information* on that intermediate to produce the Registration Dossier. A substance Registration Dossier is tonnage band-based and may require testing and higher costs.

Generic questions (2)

- What are the conditions to qualify APR, for example, as an intermediate (or both intermediate and substance)?
  - An intermediate is a substance (not a preparation) which:
    1. Must be chemically transformed into something else,
    2. Must be handled under strictly controlled conditions (minimum/no exposure).
  - Substances that enter preparations or articles are not chemically modified and cannot be considered as intermediates under REACH.
  - If APR fulfils conditions 1. and 2. above, it can be considered as an intermediate.
  - Although some materials are most often substances only or intermediates only, what can be a substance for one company can be an intermediate for the other.
  - A company can produce the same material to be used as a substance and as an intermediate. In this case, the registration of the substance would cover the registration of the intermediate and only the tonnage produced/imported as substance needs to be accounted for.

Questions on nickel scrap (1)

- Since Ni is present in the nickel scrap between 10 and 80% and all other constituents are below 10%, is nickel scrap a nickel substance?
  1. If the constituents in the scrap have reacted together, nickel scrap may be a multi-constituent substance with Nickel as predominant constituent.
  2. If the components of the scrap are just mixed/blended together, nickel scrap may be a preparation with Nickel as a predominant component.
  3. However, nickel scrap can also be regarded as waste, from which the Ni, Re, and other metallic contents are recovered.
     - If this is the case, Article 2(7)d apply and there is no need to register.
     - However, before you can be sure all conditions of Article 2(7)d apply, it is recommended to pre-register.
  - I we go down the REACH route (versus the waste route), we should:
     - Clarify whether it is a substance or a preparation (baring in mind that an intermediate cannot be a preparation)
     - Distinguish the main constituents/components (which require registration) from its impurities (which do not), and
     - Ensure all main constituents/components above one tonne per year are registered by someone.

Questions on nickel scrap (2)

- Is the Re-consortium the appropriate home for Nickel scrap?
  - If the majority of the content of the Nickel scrap is Ni, the Nickel consortia are better placed to prepare the Registration Dossier.
  - However, after initial consultation, it seems as the Nickel consortia would follow the preparations route and would only prepare the registration for the Ni part of the full content. The registration information on the remaining components would need to be obtained from other consortia (e.g.: the PM and Re Consortium would prepare the registration for the Re part).

The situation with nickel alloy

- Two viewpoints:
  - Importers with main interest in recovering rhenium in a recycling process:
    - Would like to consider it as Transported Isolated Intermediate,
    - Could consider it as a waste, fall under the waste legislation and benefit from registration exemption under Article 2(7)d of REACH.
  - Downstream users with objective of using finished alloy as such:
    - Would consider Ni alloy as a preparation.
- The same material cannot be a substance/intermediate and a preparation at the same time:
  - Different opinions would invite the Agency to investigate this case…

Secretariat's questions on nickel alloy

1. Nickel alloy = Re-containing scrap?
2. Is the Ni alloy purchased by importers for recovery and by downstream users for use the same Ni alloy?
3. Or is the first a "used/disposed" Ni alloy and the second a "new/fresh" Ni alloy?
   - If the answers to 1 and 2 are yes = importers and downstream users need to agree on one unique REACH category: substance/intermediate or preparation.
   - If the answers to 1 and 3 are yes = importers and downstream users can be speaking of different materials and it is up to the importers to agree on a category (in line with provisions of RIP 3.10 (Guidance on Identification of materials).

- Which one of the constituents/components of Ni alloy are main constituents/components and which are impurities (not intentionally added to the alloy)?

  Ni Cr Co Mo Re W
  Al Ti Ta Hf Nb

  - Those who are main constituents/components need to be registered if imported/manufactured in volumes of one tonne per year or more.
  - Impurities do not need to be registered but they need to be reflected in the Chemical Safety Report (applicable > 10 tonnes/year).

Rhenium project

Rhenium project and pre-registration preparation

Rhenium project:

- Need to form Re WG and appoint Re WG chairperson (who will join MC).
- Suitable CRO has been identified.
- Rhenium project could commence in August 2008 with a data gap analysis:
  - All concerned companies are invited to send all available information and reference to Secretariat by end of July.

Pre-registration preparation:

- Pre-registration must be done per legal entity and by Members, **not by Consortium**.
- Rhenium, Sodium rhenate and Ammonium perrhenate have been already pre-registered and the SIEF Formation Facilitator box has been secured in order to establish a link with the Consortium.
- Has anyone else pre-registered already?
- Cannot always use 'rhenate' instead as 'perrhenate' as names are automatically extracted from EC inventory (automatic – no choice).