



MECLAS (METALS CLASSIFICATION) tool for complex materials from the metals sector

Introduction

The CLP rules for mixtures are extremely complicated, requiring expert judgement, while appropriate guidance only recently became available. All this makes it difficult for companies and consortia to ensure correct hazard classification. While it is generally assumed that mixture classification will only be required after 2010 this is often not the case for the metals sector. Indeed complex materials like Ores and Concentrates, UVCB Intermediates, slags with a unique EINECS number, and many other complex materials with unique EINECS numbers, will require hazard assessment and appropriate classification before the end of 2010.

ARCHE-consulting and Eurometaux have designed and developed a web-based automated expert judgement system for the hazard identification and classification of complex inorganic materials. The tool fits for assessing appropriate hazard identification and classification of ores and concentrates, slags and complex intermediates; and has been proven relevant and efficient - but also “data-hungry” (e.g. need for (eco)toxicity reference values). The tool includes several tiers aimed at refining classification through recognition of speciation, specific mineral content, the availability of test data on the complex material and particles and surface information.

Generic objectives

Companies, consortia and commodities often face significant difficulties when assessing the hazard identification and classification of complex inorganic materials, including the following:

- Most complex materials in the metals sector contain widely different metals (compounds) and minerals, beyond what is covered by the REACH Consortium, thereby requiring extensive physico-chemical, toxicity and ecotoxicity reference data sets.
- Consortia usually do not have automatic access to such data from other metals/consortia.
- Any classification and labelling tool requires continuous updating, as more (self-) classifications and toxicity reference values will become available with time as a result of test or data gathering obligations under REACH and CLP.

MECLAS is designed as a web-based, self-learning, flexible and user-friendly hazard identification tool that allows DSD, CLP - and in a later phase also UN-GHS based hazard assessment and labelling recommendations – to be derived for complex inorganic mixtures, recognising the specificities of these materials.

The main advantages of such generic tools for the hazard identification and classification of complex materials from the metals sector include:

- o **Efficiency gains** through collective action and combined commitment to provide TRV values

- **Consistency gains** through using the same reference values for a metal (compound) across metals and including up-to-date interpretation of the regulatory and scientific aspects
- In addition, such a tool could **facilitate the exchange of information** between consortia, and would be easier to update on a regular basis and to control the correctness and adequacy of the classification ruling
- And finally, a common system to **ensure the quality and confidentiality of proprietary data**

The model is available in two formats:

- **Full access format**, enabling reference materials classifications to be defined to input all related data and derive classification. The full access holder can also allocate passwords to Consortia members, allowing them to access the reference materials classifications.
- **Limited access** (MECLAS light membership) enabling existing reference materials to be modified (to own needs), but not providing the possibility to input new reference materials and their classifications

Outline of the principles of the tool

MECLAS is built on a limited number of simple and basic principles:

1. **A tiered and inorganic specific approach**
 - allowing refinement in accordance with the following (not necessary sequential) steps: elemental concentrations - speciation data - mineralogical evidence - release tool correction (if relevant), surface/particle size correction (for the environment) and corrections based on test data on the complex material
2. **A core block** including the TRV values and CLP (and UN-GHS hazard ID rulings)²
 - forming the basis of the MECLAS tool
3. A two-layer structure: consortia can identify reference materials and save and store them in MECLAS. Companies and other agencies that have access to the Reference Material classifications can derive company-specific material classifications, derived from the Reference material classifications.
4. An **open building-block structure**,
 - Allowing specific side modules, if relevant (e.g. for Ores and Concentrates, for Transport classification, additional reference lists (e.g. Japan), alloys, ...)
5. A **quality control system** for updates on rulings and TRV data
6. **Confidentiality assurance** for proprietary information
7. Equal participation and sharing rights
 - All TRV data holders/providers are handled equally

The MECLAS system is fed by:

- Legal classifications as required by Annex VI of the CLP,
- TRV values from data owners (e.g. consortia or companies),
- Classification rulings from the CLP/DSD and DPD guidance
- Specific agreed hazard ID guidance on metals (e.g. from MERAG/HERAG, etc.)

A **quality control group** ensures that (eco)toxicity data that enter the MECLAS system will be checked for consistency and correctness in order to provide reassurance for the user, since the latter will not be capable of checking proprietary data.

MECLAS is web-based In order to **ensure the consistency** of the tool and also to ensure that all users always use the most recent version.

Added value blocks can be developed as an option, for example on downstream consequences such as Seveso, transport, etc.

Timing and further planning

MECLAS has been available since August 15; interested parties can request info via the special web-address: info@meclas.eu or directly via the website www.meclas.eu.

The tool can be developed fairly quickly by building further on the Excel sheet for current work. The tool will be further validated in September and October, and new TRV values will be added as soon as they are available from the Consortia.

The table below summarizes the building blocks for 2010 and the near future

Consortia/commodities	Companies
In 2010: <ul style="list-style-type: none"> - Complex intermediated - Ores and concentrates - Group classifications of other UVCB's 	In 2010: <ul style="list-style-type: none"> - Single legal entity registrations and classifications not covered by consortia - Recalculation fro complex materials based on company-specific data
In 2011 and later: <ul style="list-style-type: none"> - Classification of other mixtures - Alloys 	In 2011 and later: <ul style="list-style-type: none"> - Company-specific mixtures that are not intermediates - Specific alloys
(Other countries)	Other countries
	Transport

MECLAS principles

MECLAS is governed by the following principles. All licence holders of the model must agree to these principles when buying licence rights to the MECLAS tool:

- MECLAS follows classification guidance and implements it in accordance with the legal ruling and provided technical guidance (ECHA, UN). For the EU, MECLAS will not deviate from the proposed CLP guidance unless ECHA agrees to the proposed deviations approach
- The MECLAS model will be adapted to the classification ruling when necessary.
- MECLAS classifies and ranks ERV-TRV data according to quality and following a strict procedure. New higher quality information overrules older or lower quality info after assessment by the quality control committee
- ERVs and TRVs are never made public unless the consortia provides explicit written agreement to do so
- All consortia and company-specific RCS are stored on (a protected part of) the MECLAS server enabling any changes to the classification system, ERV or TRV values to be made automatically and on an immediate basis.
- A membership commitment is always for 3 years, and is subsequently prolonged on an annual basis

Financial aspects, government and terms of reference

A financial plan has been developed for the base building block, including IT, expertise and quality screening/assurance and administration. The fee structure for MECLAS is calculated on the basis of a membership of 12-15 full access members, which could include Consortia, Commodities or Companies.

The fee includes a first-year *development and use licence cost* and an annual maintenance cost with a 3-year commitment. Acknowledgement will be given to those Consortia or organisations that have already financially invested in the original spreadsheet development.

The fees for MECLAS for the period 2010-2012 are set as follows (all costs are exclusive of VAT, if relevant):

- **Full MECLAS access:** 6250 € (2010), 2250 € (2011), 2250 € (2012)
 - **This provides the possibility to create 25 own mixtures**, elemental + speciation + TDP + bio-elution)
 - Additional packages for 25 entries can be bought for a single payment of 2500€ without annual maintenance cost.
- **Restricted access (MECLAS light):** at 50 % of the price of the full MECLAS, i.e. 3125 € (2010), 1125 € for 2011 and 1125 € for 2012. This access level is restricted to the possibility of modifying reference materials entries for company-specific materials, but does not allow for the creation of new entries. Restricted access members are not members of the MECLAS Steering group

Full or Restricted MECLAS members can opt for an annual billing or for a single contribution covering the cost for 3 years. The single contribution option benefits from a 10 % reduction of the total fee.

This low price for the MECLAS tool can be assured under the condition that REACH Consortia that join full MECLAS membership **share their TRV values on a cost-free basis** and allow them to be screened for consistency with the MECLAS quality assessment rules. It will be ensured that the MECLAS users cannot use the proprietary TRV values for regulatory purposes other than classification, and with full protection of the proprietary information.

If the MECLAS tool attracts a much larger membership than originally planned, the additional funds collected will preferably be used to develop new additions on the tool and refinement levels. The Steering Group will be asked for guidance regarding priorities and expectations in this respect.

Specific added-value options (like the identification of the consequences of the classification, classification under other jurisdictions) can be decided by the Steering Group or on an individual basis, and will be paid from the additional income or charged separately.

The governance of the project will be in the hands of Eurometaux and the Consultants. A Steering Group overviews the progress, and advises and decides on priorities for the next year. Every full licence holder of MECLAS is considered as a Steering Committee member.

A steering meeting (conference call) defining guidance and priorities will be organised at least once a year:

- The Steering Committee members define the need for, priority and timing of the updates according to the budget possibilities.
- The following updates have already been set, however:
 1. Labelling recommendation (autumn 2010)
 2. Update to include the environmental classification system as introduced by the 3rd GHS (early 2011)
- The Steering Committee decides by quality majority (2/3) in favour of a proposal

Confidentiality and other challenges

Confidentiality of proprietary data is assured through the non-accessibility of the TRV database. Quality screening and review should provide assurance, and best practices will be applied.