

ANNEX

## **ECHA clarifies how to report substances used in hydraulic fracturing**

The European Commission adopted in January 2014 a Recommendation<sup>1</sup> and a Communication<sup>2</sup> on the exploration and production of hydrocarbons (such as shale gas) using high volume hydraulic fracturing in the EU. The Recommendation invites Member States to ensure that manufacturers, importers and downstream users of chemical substances used in hydraulic fracturing refer to this specific use when complying with their obligations under REACH. The Communication announced changes in the existing database of registered chemicals under REACH, so as to improve and facilitate the search of information on registered substances used for hydraulic fracturing purposes (also commonly called "fracking"). ECHA is now clarifying how companies can report more explicitly the use of substances in the exploration or extraction of oil and gas with fracturing techniques in their registration dossiers using the current IUCLID. Upon a request of the European Commission, ECHA has defined a standard label for the use name - Hydraulic fracturing for oil and gas exploration and extraction - and a corresponding product category "oil and gas field fracturing products". (to be reported under PC 0 "other"). This would aim at covering substances that are typically used for oil and gas exploration and extraction via the so-called fracturing techniques. These techniques are applied to enhance the rock permeability and enable access to oil and gas resources. ECHA encourages registrants to update their dossier with this use description if their substances are intended to be used in hydraulic fracturing. If the substance fulfils certain hazard classes or categories<sup>3</sup>, the registration dossier must include an exposure assessment demonstrating how damage to the environment and human health can be avoided. These updates are considered 'spontaneous updates' and as such are not subject to any fee (unless new confidentiality claims are included).

The Agency also encourages all downstream users, who supply or use substances or mixtures for fracturing fluids but have not received any corresponding exposure scenarios covering this particular use with the safety data sheet yet, to get active: request the registrants to cover hydraulic fracturing in their registration dossiers. Otherwise the downstream user would be required to carry out an own assessment and report the use to ECHA.

ECHA's REACH database has not allowed authorities to identify and to assess easily potential risks of registered substances used in fracturing because no standard identifier for such uses has been available in the current IUCLID. There are two routes to report these uses:

1. For registrants: Through the current IUCLID, the use should be reported as "Hydraulic fracturing for oil and gas exploration or extraction" and the corresponding product category should be named "oil and gas field fracturing products" and reported as product category 0 'other'
2. For downstream users: Through a web-form for downstream use reports on [ECHA's website \(http://echa.europa.eu/en/support/dossier-submission-tools/reach-it/downstream-user-report\)](http://echa.europa.eu/en/support/dossier-submission-tools/reach-it/downstream-user-report). Use naming and assigning a product category (in the field "market sector by type of mixture") should follow the same convention as for the registrants.

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<sup>1</sup> Commission Recommendation of 22 January 2014 - <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32014H0070>

<sup>2</sup> COM/2014/023 final/2: [http://ec.europa.eu/environment/integration/energy/unconventional\\_en.htm](http://ec.europa.eu/environment/integration/energy/unconventional_en.htm)

<sup>3</sup> See Article 14 of REACH

ECHA will make available information received in response to this call for reporting in the context of the usual dissemination of use information from registration dossiers through its [Registered substances Dissemination webpage \(http://echa.europa.eu/information-on-chemicals/registered-substances\)](http://echa.europa.eu/information-on-chemicals/registered-substances). Information on uses can be searched by chemical name and use descriptor in this webpage. For each use, the use name and related market information are published (unless claimed confidential). Improvements to the dissemination website including enhanced searching functionalities are planned for the end of 2015. With the next IUCLID update in 2016, a specific product category for oil and gas field fracturing products and a corresponding route for release estimates into underground rock formations will be introduced. This will allow a more systematic search of the reported information.

The use descriptors that will be incorporated into the new IUCLID 6 version are currently being subject to a stakeholder consultation in the context of the usual Guidance update consultation process i.e. via a Partner Expert Group (PEG). The draft update of the Guidance on Information Requirements and Chemical Safety Assessment Chapter R.12: Use description was sent to the PEG on 03 February 2015. The ongoing consultation can be followed here: <http://echa.europa.eu/support/guidance/consultation-procedure/ongoing-reach>

In addition, a new field to report on the route for release estimates into the underground will be included in IUCLID. IUCLID 6 consultation is ongoing mainly via the OECD, particularly the IUCLID expert group and the Task Force on Exposure assessment.

**Example of a use description in section 3.5 of IUCLID 5 for a substance used as a corrosion inhibitor in fracturing fluids - Table 3.5.3 – Uses at industrial sites**

Field label in IUCLID 5	Information reported	Remark regarding the example
Identified Use name	<i>Hydraulic fracturing for oil and gas exploration or extraction</i>	
Brief description of use process	<i>The technique aims to enhance the rock permeability to enable access to oil and gas resources. Fracturing fluids, a mixture typically consisting of water, a proppant (such as sand) and chemical substances are injected under high pressure into the rock formations. The use process includes receipt and storage of chemicals at the site, preparation of the fracturing fluids on-site, injection of the fracturing fluids under high pressure into the rock-formation via a well, stimulation of the rock formation, recovery of part of the fluid at the surface, mixed with fluids displaced from the geological formation and naturally occurring substances. This flow-back can then be prepared for re-use/recycling, or treated and sent to disposal..</i>	This can be a generic description agreed at sector level.
Tonnage of substance	<i>..... t/y</i>	Market tonnage supplied to fracking in Europe
Number of sites range	<i>10-100</i>	Assumes a limited number of sites in Europe where hydraulic fracturing is carried out
Environmental Release Category	<i>ERC 4</i>	Fracking fluids are processing aids; their components do not end up in articles

Process Category	<i>PROC 5, PROC 8b</i>	From an occupational perspective, the use includes mixing and transfer processes
Product category used	<i>oil and gas field fracturing products (PC 0)</i>	At present no specific PC is available
Sector of end use	<i>Extraction of crude petroleum and natural gas (SU 0)</i>	At present no specific sectors category is available that covers specifically onshore oil and gas extraction. Extraction should be understood as encompassing exploration.
Technical function of the substance	<i>Corrosion inhibitors</i>	
Substance supplied to that use in the form of	<i>Mixture</i>	
Subsequent service life relevant to that use	<i>No</i>	
Link to the subsequent service life	<i>n/a</i>	
Exposure scenario reference		Applicable if exposure assessment required
Use covered by joint CSR		
Remarks		