

Debunking the Myths:

Are There More than 100,000 Chemicals in Commerce?

Mainstream and social media propagate a common refrain that there are more than 100,000 chemicals in commerce¹ and that little is known about their potential health, safety and environmental impacts. Such rhetoric is scaring the public and further eroding trust that government and industry are doing enough to protect them from harm. To investigate this misunderstanding, the International Council of Chemical Associations (ICCA) and UN Environment worked together to develop a report that improves the understanding of the number of chemicals in commerce and provides stakeholders guidance on where to find and use chemical environmental, health and safety (EHS) information.²

What is a "Chemical in Commerce"?

Any organic or inorganic substance of a particular molecular identity, including any combination of these substances occurring in whole or in part as a result of a chemical reaction or occurring in nature, and any element or uncombined radical that has been manufactured or processed above 1 metric ton per annum, anywhere in the world, during the past 10 years.



Report: Information Management and Sharing for the Sound Management of Industrial Chemicals

This report provides a comprehensive inventory of the available public databases of EHS information and a descriptive evaluation of their quality as measured by five criteria: 1) scope of chemicals addressed; 2) ease of access and use; 3) breadth and depth of EHS information available; 4) quality of the underlying information; and 5) procedures to keep the information current.

MAJOR FINDINGS IN THE REPORT INCLUDE:



Using the most recent data available from the EU, US, Canada, Japan and China, **there are an estimated 40,000 to 60,000 industrial chemicals in commerce globally.** Far fewer than is commonly claimed.



Approximately **6,000 industrial chemicals account for more than 99% of the total volume** of industrial chemicals in commerce globally.



There are **more than 100 publicly available EHS information sources.** The report provides detailed profiles of 41 of the largest and most comprehensive of them.



10 of the 41 largest publicly available EHS information **sources provide access to EHS regulatory decisions.**



7 of the 41 largest publicly available EHS information sources provide users **easy access to multiple, third-party owned databases.**



24 of the 41 largest publicly available EHS information sources are **managed by either inter-governmental organizations, non-governmental organizations, or regional or national governments.**



ECHA's CHEM is the largest and more comprehensive sources of EHS information with **hazard, use, exposure, risk and risk management information available for the 21,000+ (and growing) chemicals** produced and imported into the EU.

¹ Some published estimates reach as high as more than 140,000 chemicals in commerce.

² UN Environment, ICCA, *Knowledge Management and Information Sharing for the Sound Management of Industrial Chemicals*, 2019



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FACT: There Are Far Less Chemicals in Commerce than Expected

Conservative estimations taking into account substances listed in the EU, US, Canada, Japan and China, the report concludes there are an estimated 40,000 to 60,000 industrial chemicals in commerce globally. This number is much smaller than the 100,000+ chemicals which are often cited. The 100,000 number includes numerous duplications, as well as chemicals no longer in use. Importantly, approximately 6,000 chemicals in commerce account for more than 99% of the total volume of industrial chemicals in use, globally. There are a number of factors that could contribute to the uncertainty in the estimates of the numbers of chemicals, including:

- a lack of chemical inventories for many countries in the world;
- uncertain and variable definitions of industrial chemicals in commerce (i.e., different scopes);
- varying volume thresholds for reporting;
- uncertainty as to whether or not listed chemicals are actually on the market; and
- lack of reporting or misreporting to government authorities.



FACT: EHS Information Exists for a Majority of High Production Volume Chemicals

There exists EHS information to support varying degrees of screening level hazard and risk assessment for the majority of the highest production volume chemicals. Nevertheless, important gaps in information remain. There is a need for more information to assess hazards for lower production volume chemicals, and better use and exposure information to assess chemical risks overall, particularly in developing countries.

Nevertheless, there are several reasons to be optimistic that going forward information gaps can be closed at an accelerated rate. The combined effect of recently adopted legislation in multiple regions and countries (e.g., EU, US, Korea and China) that requires manufacturers and importers to collect and publicly report hazard, use, exposure and risk information on their chemicals; the increasing focus on safe substitution and greener chemistry; as well as the advent and acceptance of new tools and methods (e.g. read across, computational toxicology) provide excellent opportunities to close such information gaps more rapidly than in the past.



FACT: ICCA and UN Environment Share the Same Goal – Safe Management of Chemicals & Waste

UN Environment and ICCA share a number of important perspectives, objectives and goals. For instance, they both agree that while chemistry provides important benefits to society and is critical to solving some of humanity's greatest challenges, it must be practiced responsibly. Working together with a host of others and for nearly two decades, they have partnered on the Strategic Approach to International Chemicals Management (SAICM) whose aim is to achieve sound management of chemicals throughout their life cycle so that by the year 2020, chemicals are produced and used in ways that minimize significant adverse impacts on the environment and human health.

To learn more visit: www.ICCA-chem.org/ChemicalsInCommerce.com