



SmartCare Environmentally Responsible Chemicals

Ensure that the products you use are environmentally sound—without sacrificing performance



The Baker Hughes SmartCare™ family of environmentally responsible chemicals gives you confidence that the products you use in your operations are both environmentally compliant and able to perform in the most extreme conditions. A SmartCare solution designation means that the product has been thoroughly examined and rated according to accepted regulatory and industry standards.

Becoming a SmartCare product

Before a product can become a part of the SmartCare family, it must undergo a rigorous assessment of its intrinsically hazardous properties. This assessment is conducted through a single, integrated chemical evaluation review process that examines each product at both holistic

and component levels for health, safety, and environmental acceptability, as well as for performance, compatibility, and value. The evaluation is managed by the Baker Hughes Environmental Services Group, a team of chemists and toxicologists charged with evaluating individual products and asking the key questions that are so often overlooked:

- What is the potential impact of this chemical on people and the environment?
- Is this chemical sustainable?
- Can another chemical offer a better environmental profile and deliver the same performance?
- How can we help improve oil and gas production without harming people or our environment?

Applications

- All exploration and production operations
- Cementing additives and systems
- Stimulation additives and systems
- Completion and drilling additives and systems
- Production chemicals
- Pipeline services

Benefits

- Provide clear identification of potential HSE hazards
- Offer a wide range of products
- Meet or exceed environmental regulations without sacrificing performance
- Confidently select environmentally sound chemicals
- Match environmentally responsible chemicals to the needs of your operations
- Verify chemical compatibilities before application
- Report chemical compositions to regulatory agencies and communities with assurance

To mitigate any intellectual property concerns, products manufactured for Baker Hughes by outside suppliers are assessed by an independent third-party environmental consulting firm.

The result of the assessment is a relative numerical rating that ranks the product or component according to three major hazard categories and 12 subcategories. This scientific method—based on the United Nations Globally Harmonized System for Classification and Labelling of Chemicals (GHS)—produces credible, transparent, and documented information for customers, regulators, investors, and the public.

In addition to the GHS-based evaluation score, other factors, such as the highly discouraged substances list, an OSPAR pre-screening model, and a review of more than 20 worldwide regulatory lists, are considered.

The overall evaluation enables comparison of functional groups of chemistries (such as surfactants, clay stabilizers,

corrosion inhibitors, etc.) so that the most environmentally preferred option can be selected. Compliant products can then be combined to create fit-for-purpose solutions that match reservoir characteristics and reduce environmental impact.

Continuous improvement

Once a product has been scored, all of its components and their respective ratings are input into a proprietary database. Containing more than 2,500 products and 25,000 data points, the database is continuously updated with new information and serves as the foundation for the development of even more environmentally sound Baker Hughes chemical products.

Tools like our chemical evaluation process help us proactively expand our portfolio of sustainable products. This gives customers assurance that they are using the best option.

Be confident about the chemical products you use. Depend on the Baker Hughes SmartCare family of chemicals to minimize environmental impact without sacrificing performance.



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