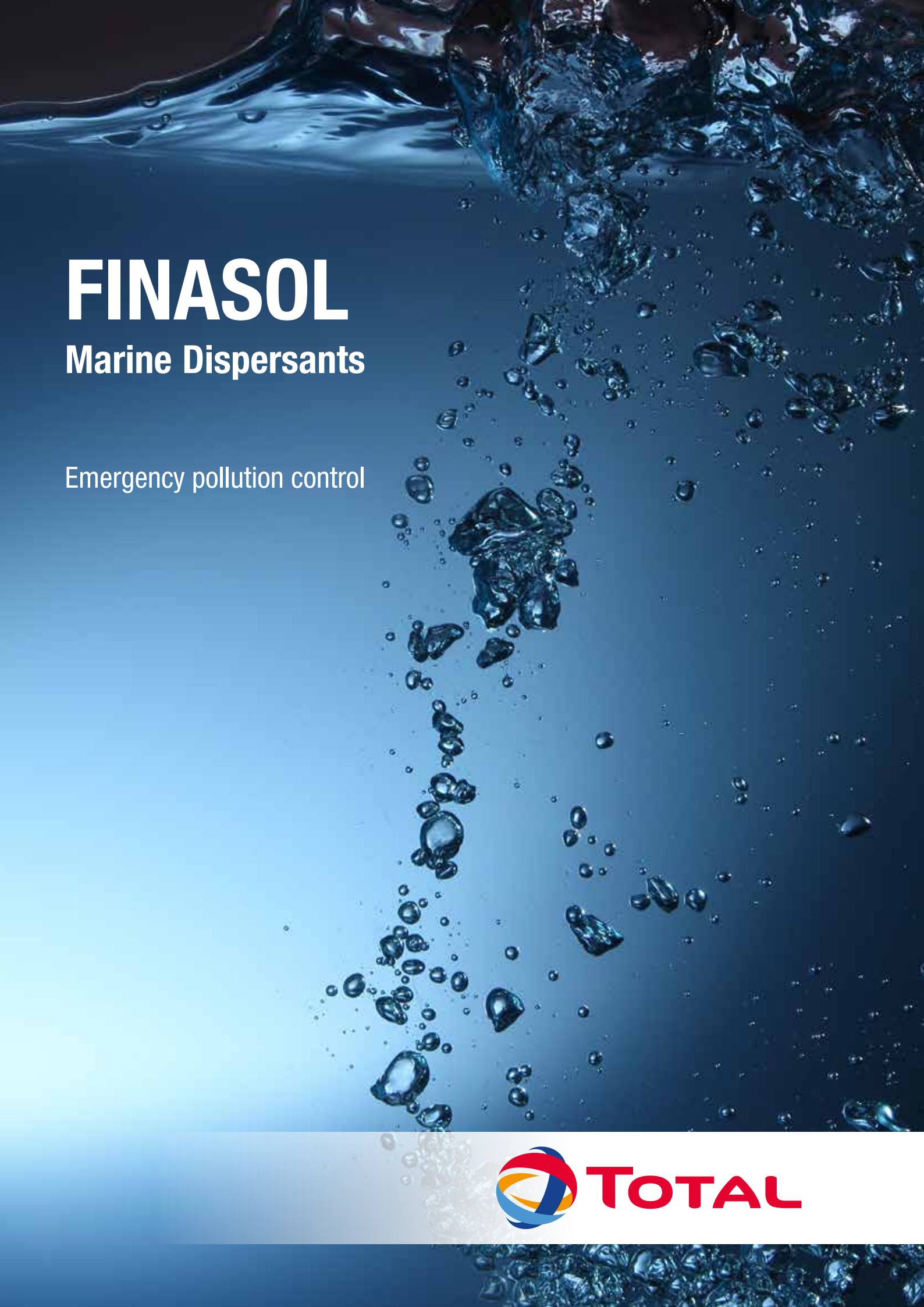


FINASOL

Marine Dispersants

Emergency pollution control

TOTAL

Finasol Range

Emergency pollution control

Used across all the oceans for over 20 years, TOTAL Fluides' Finasol® OSR product range is the result of unrivaled expertise in the development of optimized solutions for crude oil dispersion at sea.

Setting the standards in marine dispersants

The FINASOL OSR is a range of «third-generation» concentrate marine dispersants. They are considered to be among the best on the market, offering very good eco-toxicological performance.
They can be used pure or diluted at 10% in seawater (references of the profession: MMO type II and III).

FINASOL OSR 52

Offering outstanding performance, Finasol OSR52 provides a rapid and effective response. It is also the benchmark product in the market as being the first product to comply with all three major international regulations – EPA* (USA), MMO** (UK), and CEDRE*** (France). Moreover, Finasol OSR 52 is registered in a great many countries around the world.

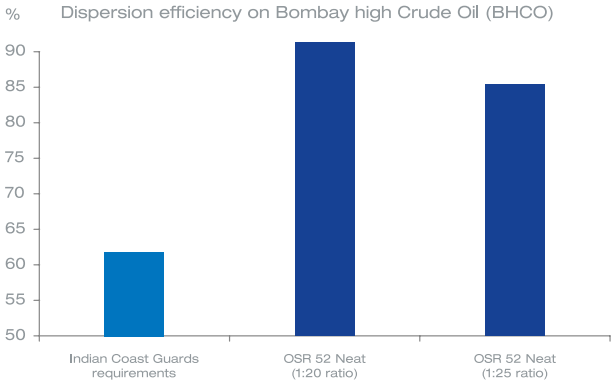
FINASOL OSR 51

Finasol OSR 51 is compliant with the MMO (UK) and CEDRE (France) international regulations.

* EPA (USA) - Environmental Protection Agency
** MMO (UK) - Marine Management Organization
*** CEDRE (France) - Centre de Documentation, de Recherche et d'Expérimentations sur les Pollutions Accidentelles des Eaux

Ensuring fast and efficient response

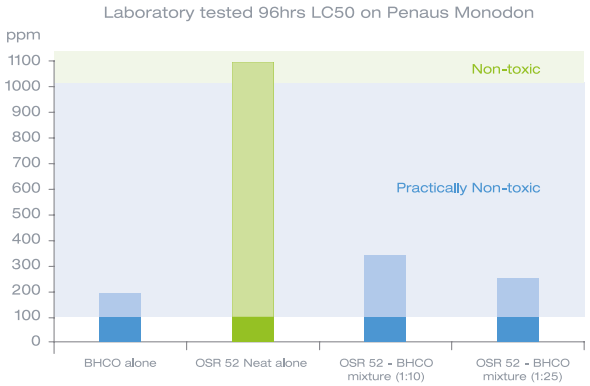
When a spillage occurs at sea, a short term response is crucial to ensure minimal environmental damage, taking into account both local and weather forecast conditions. To avoid any loss of time, stocks of dispersants must be available locally. The very specific active ingredients of Finasol® OSR offer high dispersion potential, as shown by the successful registration tests on a variety of crude oils.



Finasol OSR 52 dispersion efficiency
(Indian registration process/ 2014)

Minimizing environmental impacts

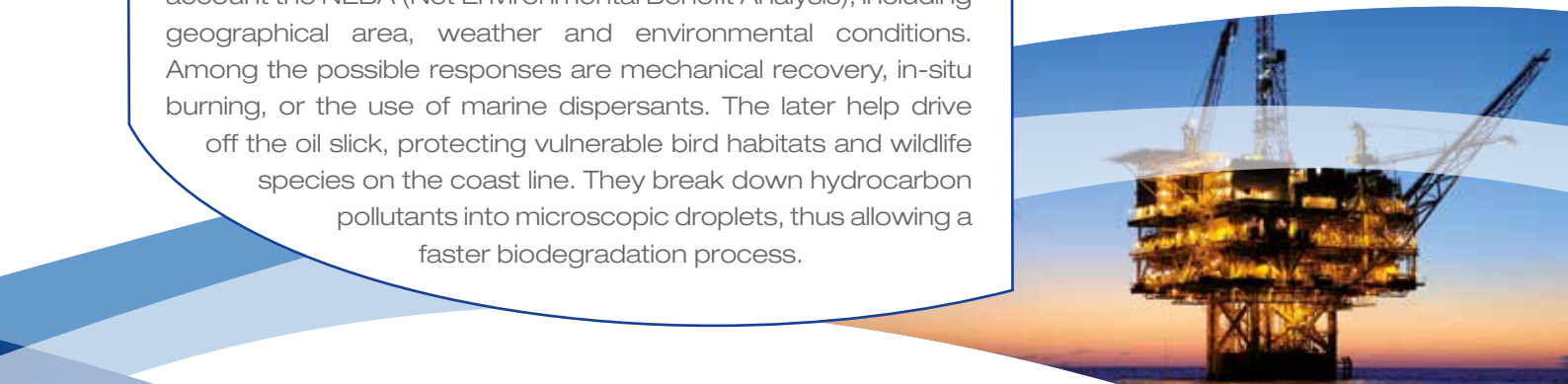
Environmental impact evaluation is part of national authorities' registration processes and includes biodegradability and eco-toxicity tests on marine eco-systems. These criteria, along with TOTAL Fluides' sustainable development policy, have been key drivers in the selection of solvents and surfactants for the development of Finasol® OSR.



Finasol OSR 52 Minor Toxicity on marine species
(Indian registration process/ 2014)

CHOOSING THE RIGHT RESPONSE

In case of oil spill at sea, the appropriate response is always decided by local authorities. Upon them rest the selection of the best method to limit the impact while taking into account the NEBA (Net Environmental Benefit Analysis), including geographical area, weather and environmental conditions. Among the possible responses are mechanical recovery, in-situ burning, or the use of marine dispersants. The later help drive off the oil slick, protecting vulnerable bird habitats and wildlife species on the coast line. They break down hydrocarbon pollutants into microscopic droplets, thus allowing a faster biodegradation process.



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