

APPLICATION RATES AND TECHNIQUES

The recommended rate of application of Superdispersant-25 is 1 part dispersant to 20-30 parts of oil, although this depends on many factors including type of oil, viscosity, degree of weathering, ambient temperature and prevailing weather conditions.

In general, the oil should be treated as quickly as possible, as weathering increases the viscosity of the oil, and this in turn necessitates a substantial increase in the dispersant required.

As a Type 2 (water dilution mode) Superdispersant-25 is used premixed at a ratio of 1 part dispersant to 10 parts of sea water and sprayed onto the slick using surface breaker boards or other enhanced agitation techniques to give greater mixing of the dispersant/oil emulsion.

As a Type 3 (undiluted mode), Superdispersant-25 is used in its neat form, utilising appropriate spraying equipment from aircraft or vessels onto the slick. In all circumstances, the Type 3 mode is the preferred method as this gives far greater efficiency in the dispersal of the oil slick.

Application Techniques

Vessel Application

Ideally Superdispersant-25 is sprayed undiluted from bow mounted spray booms in order to take advantage of the "roll-over" effect of the vessel's bow wave. If Superdispersant-25 is used in the diluted mode, additional agitation is required by the use of surface breaker boards or fire hoses.

Aerial Application

Superdispersant-25 can be applied by a wide variety of rotary and fixed wing aircraft, particularly dedicated spraying aircraft if these are available. It must be emphasised that due to aircraft speed, atomisation of the dispersant must be reduced by using a spray nozzle system that will give a large droplet size (700 – 1200 microns).

As stated previously, the rate of application for Superdispersant-25 to the slick will vary according to a number of parameters, but can generally be estimated for a slick that is dark brown/black in colour as 100 – 200 microns in thickness. This would represent 1-2 tonnes of oil per hectare and would require 50 – 100 litres per hectare of dispersant to treat the slick.

The discharge rate for Superdispersant-25 can be obtained from the general relationship:-

$$\begin{array}{cccc} \text{DISCHARGE RATE} = & \text{APPLICATION RATE} \times & \text{SPEED} \times & \text{SWATHE WIDTH} \\ \text{(litres/min)} & \text{(litres/m}^2\text{)} & \text{(m/min)} & \text{(m)} \end{array}$$

On Beaches, Rocky Shores and Harbour Walls

Spray the undiluted Superdispersant-25 on to the contaminated areas. Using portable back sprayers or dedicated beach cleaners if these are available. It is preferable to spray in front of a rising tide, in order to effect rapid natural dispersion.

At all times advice should be sought from the incident commander.