

INTERVENTION ON FLOATERS

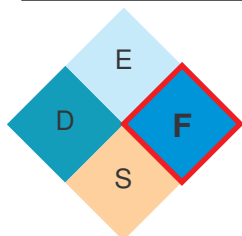
CARD NUMBER: **F 2.1** and **F 2.2**

F 2.1	Fire dangerous slick.
F 2.2	Persistence / hindrance causing slick on the water surface.

Applicable for groups F, FE, FED and FD (in the SEBC code, all groups with F).



F 2.1



FLOATERS

Density	< Water
Vapour Pressure	< 3 kPa
Solubility	< 5%

MAJOR RISKS



Pollutant



Toxic



Flammable



Explosive

EMERGENCY

TO PROTECT

- To cut ignition sources out
- To stop the leakage

TO ALERT

- Immediate alert of the site help & public help
- Urgent alert in the leeward zone

TO RESPOND

- To identify substance and define spillage location
- To estimate volume spilled & contaminated zone
- To delimit danger area & control the access

PRIORITY STRATEGIES

- Only the responders team on site due to the explosive risk,
- Always be aware of the weather forecast and the meteo-oceanic conditions (water temperature, swell, currents...),
- Wear the appropriate equipment (Personal Protective Equipment, gloves...),
- Monitoring the drift of the slick, containment and recovery options,
- Monitoring the spread of the vapor clouds: Toxicity, Corrosivity, and Carcinogenicity.



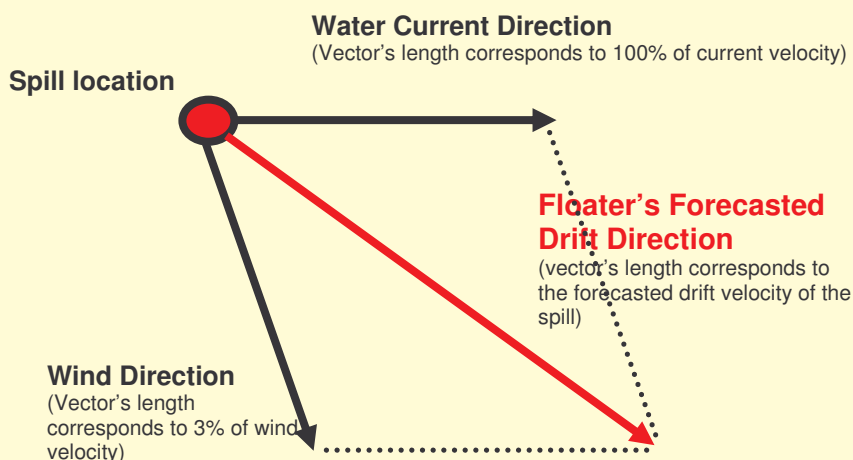
EMERGENCY RESPONSES

Shoreline Harbour Open sea

Forecasting the drift of the slick at the sea surface

Softwares: (MOTHY, OSIS, CHEMMAP...)

Difficulty to get accurate & efficient information.
Never substitute this information to monitoring.



This figure shows how a floating chemical slick's drift can be calculated by means of a vector diagram. However, most chemical spills, except for F and Fp categories, will disappear by evaporation and / or dissolution within roughly 10 hours.

X X X

Monitoring (performed by equipped & qualified personnel)

Trace gas (delimitate a safety zone)

Gas detection tubes	Photoionization instruments	Portable gas chromatographs
Semiconductor instruments	IR trace gas detectors	Mobile mass spectrometers

Flammability & Explosiveness

Explosive meter	Combustible gas detector
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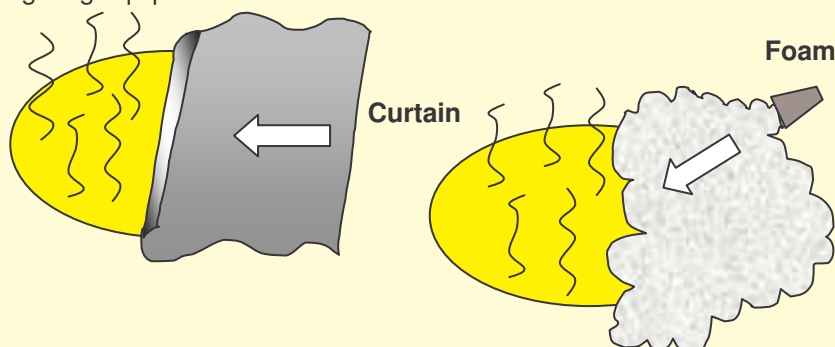
Oxygen-deficiency

Chemical celloxygen meters

X X -

To reduce the vaporisation process and the risk of fire and explosion

Suppressing vapours by applying curtain or foam by means of fire fighting equipment



The curtain and the foam can temporarily suppress vapour formation from the spill and thus reduce the risk of formation of noxious and or flammable gas concentration.

X X -



F2.2

FLOATERS

Density	< Water
Vapour Pressure	< 0.3 kPa
Solubility	< 5%

MAJOR RISKS:



Pollutant



Toxic



Corrosive

EMERGENCY

TO PROTECT

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- To stop the leakage

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TO RESPOND

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PRIORITY STRATEGIES

- Always be aware of the weather forecast and the meteo-oceanic conditions (water temperature, swell, currents...),
- Wear the appropriate equipment (Personal Protective Equipment, gloves...),
- Monitoring the drift of the slick, containment and recovery options.



EMERGENCY RESPONSES

Shoreline Harbour Open sea

Forecasting the drift of the slick at the sea surface (See 2.1)

X

X

X

Monitoring (performed by equipped & qualified personnel) (See 2.1)

X

X

X

To recover the floating spills

Spills of substances that float on the water surface and form high viscosity layers or lumps that neither evaporate into the air nor disperse in the water column.

X

X

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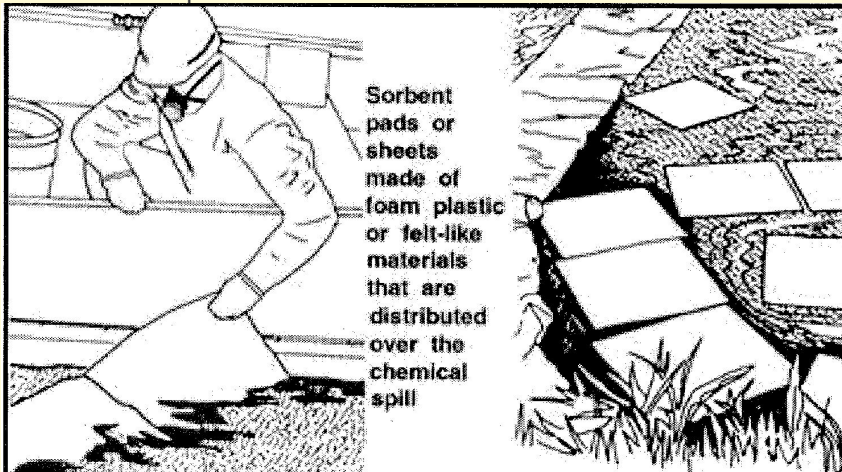
by using sorbent

Distributing sorbents over the floating spill on the water surface and recovery of the sorbent-spill mixture.

X

X

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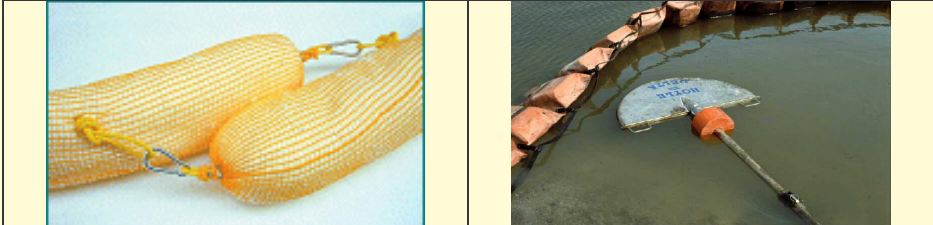

Helcom, 2002



Powder sorbent spread on the slick.



EMERGENCY RESPONSES *(Continued)*

	<i>Shoreline</i>	<i>Harbour</i>	<i>Open sea</i>
<p>by using conventional oil response equipment (skimmer, booms...) The floating chemicals can be contained with booms and recovered with skimmers. In some case, this response may be facilitated by pretreatment with sorbents (pads or / and powder).</p>	X	X	X
 <p>Booms on a river to stop the drift of slicks.</p>			
 <p>Booms in sorbent. Skimmer well adapted for small slick.</p>			
<p>by trawling A trawl system consists of the guide booms, the entrance net, and detachable trawl bags. Bags can be disconnected and recovered during the operations at sea.</p>	-	-	X
 <p>Slick of palm nut oil at sea and rubbery balls of oil on the shoreline after the Allegra spill in the Channel (1997).</p> <p><i>On 1 October 1997, in the Channel, just offshore Guernsey, the Liberian parcel tanker the Allegra was involved in a collision and subsequently spilled 900 tonnes of palm nut oil. The oil solidified quickly forming a slick measuring 800 by 400 metres. Several fisher boats were involved in trawling operations.</i></p>			
<p>To disperse the floating spills The slick can be dispersed if the released compounds are non toxic and if environmental conditions are respected (sea water column depth...).</p>	-	-	X
