

MINIMAX-INTERNATIONAL

MINIMAX R-3

Is

Water-based alkaline, biodegradable composite cleaning agent for use in the Oil and Gas Industry and with many more various applications for general and specific oil- and grease-based contaminations.



Oil Rigs - equipment & surface maintenance & cleaning



Oil Tankers - surface clean



Oil Refineries - maintenance & cleaning



Spills & leaks - surface cleaning



Silos - surface & silo cleaning



Petrol station - maintenance & cleaning

Pipelines - cleaning



Storage - cleaning



Road Tankers - cleaning



- MINIMAX R-3 the key to environmental pollution prevention strategy
- MINIMAX can economically create a cleaner workplace and protect the environment

Amass Engrossed Concern with MINIMAX

MINIMAX can bring great sense of pride and personal satisfaction

MINIMAX R-3

Economic Concern

MINIMAX R-3 decreases costs for transportation, treatment, cleaner and disposal of contamination. Provides safer work environment, savings on materials and equipment.

Competitive Concern

MINIMAX R-3 increases operational efficiency, emphasises pollution prevention, supports an efficient business and high quality operations. Provides access to new methods and materials.

Regulatory Concern

MINIMAX R-3 streamlines the processes and reduces the need for strict regulation. Avoids improper waste management.

Community Related Concern

MINIMAX R-3 draws positive attention to your business for innovation in environmental management.

Workers Safety Concern

MINIMAX R-3 techniques can reduce worker exposure to toxic substances.

Environment Concern

MINIMAX R-3 techniques can reduce the potential of chemical releases that can have harmful effects on the environment and public health.

Personal Concern

MINIMAX R-3 can provide personal benefits to an employee by working pro actively economically, safer and result oriented.

Your core concept for success story by direct allocation of costs to product and processes.

Process for Cleaning of Surfaces with Oil Contamination

MINIMAX R-3 cleans oil contaminated surfaces in a 3 step operation:

a. Wetting of the surface

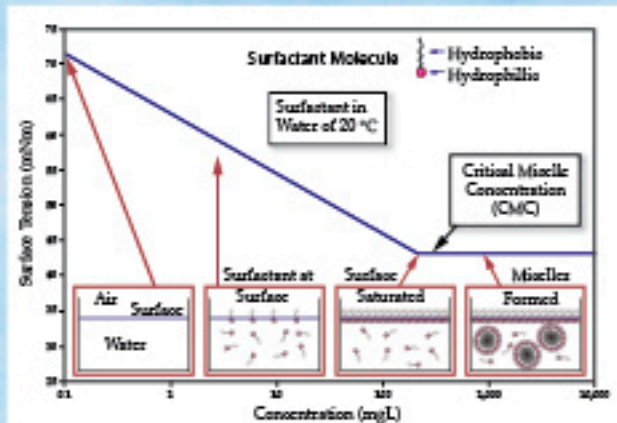


Figure 1:

The wetting stage is where MINIMAX R-3 surrounds the contamination and detaches oil drops from the surface. The concentrate strength of MINIMAX R-3 can penetrate a contaminated surface. The already formed Micelles immediately start a reaction by surrounding the oil drops in the contamination, thereby starting the emulsifying process.

In Figure 1 when the curve becomes horizontal, the maximum reaction is activated. At this stage the MINIMAX R-3 has reached its maximum wetting potential and extreme reaction point.

b. Emulsifying the oil into the cleaning emulsion

Soon after the oil droplets are detached, MINIMAX R-3 activates an emulsifying process.

The Micelles help to solubilise oil droplets into the water and reach the emulsification stage (Figure 2).

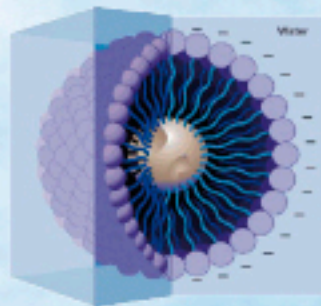


Figure 3

The hydrophobic (*attracted to fat*) extension of the surfactant sticks into the oil droplet and the hydrophilic (*attracted to water*) extension of the surfactant merges with the main body of the water (Figure 3).

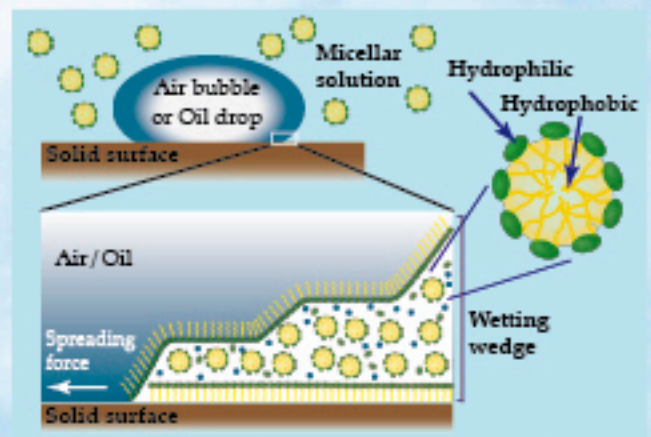


Figure 2

c. Demulsifying

Emulsified solution can be transported to the buffer tank for further demulsifying process.



Figure 4

MINIMAX R-3 is a macro emulsion and not a stable emulsion solution.

During the emulsification process the majority of the components in contamination will separate and collect in a water-based layer or solvent /oil layer.

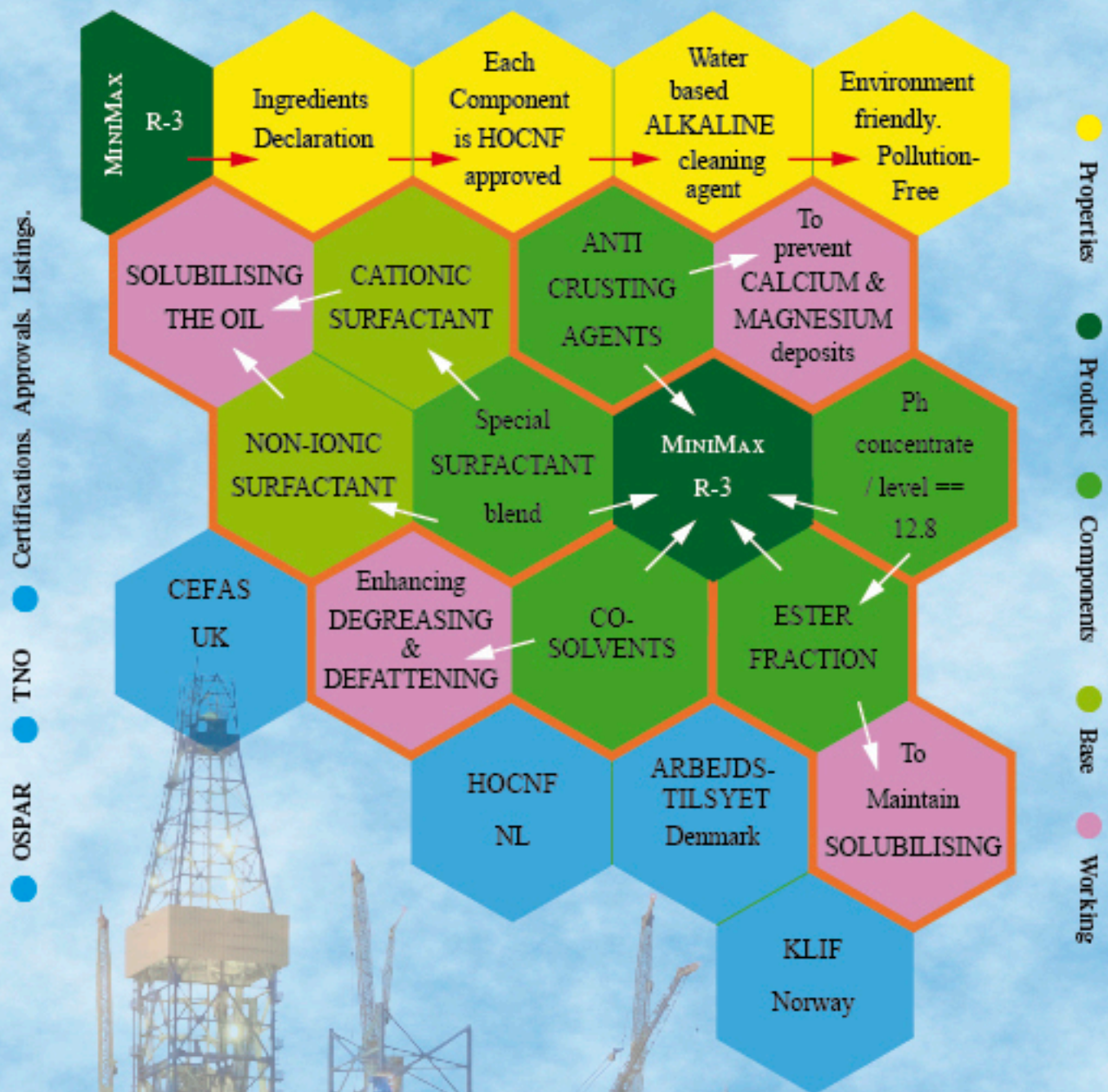
If the water layer has a higher density than the solvent /oil layer, the oil will float, otherwise the water will float.

During final treatment, the oil is removed and the residual solution is taken for environmentally sound disposal treatment, after which the water is released without any pollution to the environment.

MINIMAX R-3 for effective implementation of pollution prevention practises in your company.

For Oil & Gas Industry

MINIMAX R-3 Product Specifications



MINIMAX-INTERNATIONAL has in depth knowledge of environmental issues.

MINIMAX-INTERNATIONAL		Effective to Eliminate from Surfaces various Specific Contaminations & Pollution													
Applications	MINIMAX Products	Base Component													
		Grease	Oil	Carbon	Coal	Glass	Chalk	Sanitair	pH value	Hazard Symbols	R & S Indication	Origin	Alkaline	Acide	

Oil & Gas Industry

On & Offshore cleaning	MMX R-3	●	●	●	●				12.6			R & D	Water	●	
On & Offshore cleaning	MMX R-1	●	●	●	●				13.0	●	●	R & D	Water	●	

Industrial Products

Descaling	Sanall						●	●	1.0	●	●	R & D	Water		●
Unplugging	L. Drain unblock	●	●	●	●		●	●	0	●	●	PL	Water		●
Hand soap	Hand clean yellow	●	●						-			PL	Water		
Hand soap	Hand clean red	●	●						-			PL	Water		
Glass & Screen cleaning	Glass clean				●				9.0			R & D	Water	●	
Degreasing	Force 10	●	●	●					12.9	●	●	R & D	Water	●	
Brake cleaning	Fast cleaner	●	●	●					13.0	●	●	PL	Petroleum	●	
Dry surface lubrication	Dry greasing								-			PL	Oil		
Descaling & Detartrating	Decalcify						●	●	1.0	●	●	R & D	Water		●
High temp. lubrication	Ceramic 1200								-			PL	Oil + Ceramic		
Furnace degreaser	Catering cleaner	●	●	●	●				12.9	●	●	R & D	Water	●	
Truck wash	Car minute clean								13.5	●	●	PL	Water	●	
Car wash	Auto shampoo glans								5.5	●	●	PL	Water		●

Vessel Maint. & Cleaning

Hull cleaning	Quick clean						●		2.0	●		R & D	Water		●
Teak deck & furniture cleaner	Teak clean	●	●						9.0	●	●	R & D	Water	●	
Algae cleaning	Bio clean						●		2.0	●	●	R & D	Water		●
Boat shampoo	Fresh clean						●		5.5	●	●	R & D	Water		●
Degreasing & dewaxing	Bilge all clean	●	●	●	●				12.8	●	●	R & D	Water	●	
Descaling & toilet cleaning	Aqua toilet						●	●	2.0	●	●	R & D	Water		●

Lubricants

High pr. ind. lubricating	Flon grease EP2								-			PL	Oil + PTFE		
High pr. engine lubricating	Flon lub. 101								-			PL	Oil + PTFE		
PTFE surface wax	Flon 2000								-			PL	Oil + PTFE		

M.S.D.S. Sheets for all products available upon request.

**Eliminate environmental impacts and substitute with MINIMAX R-3
for pollution-free results on all types of oil contaminated surfaces**

Features

- Equipment and surface maintenance and cleaning
- Economical solution
- No hazard symbols
- Non-flammable
- Easy to apply and work with
- No regulations for logistics & storage
- Environmentally friendly
- Can be diluted with fresh water or sea water
- Pollution-free
- Effective
- Standard safety procedures
- Free of acids
- Fast results
- For spill & leak emergencies
- And any other advantages

Applications

- All grease, oil and lubricant soiled surfaces.
- On and off shore units and platforms
- Industrial machinery and equipment.
- Industrial /commercial vessels
- Aviation industry
- Railways
- Refineries and plants
- Emergency services
- Environmental contamination disasters
- Marinas and luxury yachts
- Cars and trucks
- Workshops
- Oil transportation vehicles
- Catering industry units and kitchens
- Hospitals
- Many more contaminated emergency situations
- And added value to many other

Eliminates Contamination

- Acids and caustics
- Bactericides
- Defoamers
- Emulsifiers
- Filtrate reducers
- Shale control inhibitors
- Thinners and dispersants
- Weighting materials
- Lost circulation materials
- Paraffins and oils
- Lubricating oils
- Brine contaminated soils
- Product produced water
- Sand
- Slop oil
- Oil contaminated soils
- Spent hydraulic fluid
- Used oil and filters
- Hydrocarbons
- Skim oil
- Spilt crude oil
- Tank bottom sludges
- Production pit waste
- Mud pit waste
- Spent mud
- Spilt fuel
- And many more

**For Extended Time Horizon
MINIMAX R-3 Is the feasible option**



MiniMax International

Zandloper 10
1731 LM Winkel
Tel. 0224-541001
Fax 0224-541545
Mob. 0653-515554
Website : www.minimax-int.nl
E mail: info@minimax-int.nl