

# **HEALTH AND SAFETY**

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## OUTLINE

1. Health hazards and precautions for dealing with spilt oil
2. Safety hazards and precautions

## HEALTH HAZARDS OF SPILT OIL

- ✓ Effects of vapours
- ✓ Inhalation (aspiration)
- ✓ Skin contact
- ✓ Ingestion

## HAZARD DATA SHEETS (PROPERTIES)

Substance Name	UN - No.	CAS - No.	Formula			
<b>BENZENE</b>	1114	000071432	C6H6			
Health Hazards	<b>Materials may be poisonous if inhaled or absorbed through skin. Vapours may cause dizziness or suffocation. Contact may irritate or burn skin and eyes. Fire may produce irritating or poisonous gases.</b>					
Fire/Explosive Hazards	<b>These materials are flammable or combustible: danger of explosion. They may be ignited by heat, sparks or flames. Vapours may travel to a source of ignition.</b>					
Environmental Hazards	Substance presents a hazard to either marine resources or human health or causes harm to amenities or other legitimate uses of the sea.					
Health Hazards	TLV 10	IDLH Ca	Carcinogen Yes	Skinsensitizer -	Neurotoxic -	Dermaltoxic -
Che./Phys. Data	State Liquid	Density 0.88	Boil Pt. 80	Flash pt -11		
	Solubility in water: 0.07%					
	Behaviour i/o water: evaporates rapidly					
Chem. Reactive	Water: No, Air: Yes, OxidAgts: yes, Acids : Yes, Alkalis: No, Other Substances: Yes, Self reac: No, Polym: No, Decomp: No					
Unsuit. With	Metals: No, Plastics: No, Rubber: Yes, Others: U					

## HAZARD DATA SHEETS (RESPONSE)

Protection Equipment	Goggles; self-contained breathing apparatus; spray nozzle
Emergency Actions	Isolate a wide ranged area; keep unnecessary people away. Stay upwind and out of low areas
Emergency Actions in case of Fire	Extinguish with water spray, standard foam, CO2, or halon. Cool container with water from the side until well after fire is out. Withdraw immediately if safety valve blows off or tank discolours. Stay away from ends of tank
Emergency Actions in case of Spills	Beware of ignition sources. Stop leak if you can do it without risk. Water spray may reduce vapour, but it may not prevent ignition in closed spaces. Take up the spill with a non- combustible absorbent. Dike far ahead of spill for later disposal.

## HYDROGEN SULPHIDE (H<sub>2</sub>S)

- ✓ Hazardous atmospheres
- ✓ Highly volatile
- ✓ May be a threat in some oils
- ✓ Reduces as oil weathers

### INITIAL TOXIC EFFECTS OF H<sub>2</sub>S

- ✓ Dulls the sense of smell  
يضعف حاسة الشم
- ✓ Makes one dizzy  
يجعل المرء يشعر بالدوار
- ✓ Headache  
صداع
- ✓ Irritates the eyes  
يهيج العيون

### INCREASED EXPOSURE TO H<sub>2</sub>S

- ✓ Staggering  
صاعق
- ✓ Confusion  
ارتباك
- ✓ Loss of consciousness  
فقدان الوعي

### LARGE EXPOSURE TO H<sub>2</sub>S

- ✓ Arrest of breathing  
توقف التنفس
- ✓ Arrest of heart  
سكتة قلبية
- ✓ Death  
الوفاه

## TOXICITY TO HUMAN BEINGS

### INHALATION

Breathing of liquid into the lungs from a leaking pump or spraying of dispersants

### SKIN CONTACT

- Skin layers
- Hair follicles
- Sweat glands

### INGESTION

- Wash with soap and water before eating
- In case of ingestion - seek urgent medical advice

### PRECAUTIONS

Wear protective masks with appropriate filters

### PRECAUTIONS

- Remove oil from skin as quickly as possible
- Use soap and water or
- Use special cleaner
- Flush eyes with water if oil gets into them
- If necessary use protective clothing

## INDICATION OF POTENTIAL TOXIC EXPOSURE

- ✓ Sudden weight loss or change in appetite  
فقدان الوزن المفاجئ أو تغير في الشهية
- ✓ Unusual fatigue or new sleeping difficulties  
إرهاق غير عادي أو صعوبات نوم جديدة
- ✓ Unusual irritability تهيج غير عادي
- ✓ Skin rashes/allergies/ sores  
طفح جلدي / حساسية / تقرحات
- ✓ Hearing loss فقدان السمع
- ✓ Vision loss/problems فقدان الرؤية / مشاكل
- ✓ Changes in sense of smell تغيرات في حاسة الشم
- ✓ Shortness of breath/ asthma/cough or sputum production  
ضيق التنفس / الربو / السعال أو إفراز البلغم
- ✓ Chest pains آلام في الصدر
- ✓ Nausea/vomiting/diarrhoea/constipation  
الغثيان / القيء / الإسهال / الإمساك
- ✓ Weakness/tremors الضعف / الهزات
- ✓ Personality changes تغيرات في الشخصية



## SAFETY HAZARDS

### FIRE/EXPLOSION HAZARD

May be present in early stages  
with  
fresh crude and light fuels

Risk Diminishes  
as  
Oil Weathers

### POTENTIALLY FLAMMABLE CONDITIONS

- Determine hazards for specific product
- Assess impact of delaying response action
- Monitor atmosphere
- Approach and work up-wind

### PUBLIC SAFETY

- Keep public at safe distance – put up notices and barriers
- Keep volunteers out unless authorised by higher authority (eg bird cleaners)
- Instruct representatives from the media on essential safety precautions

### PERSONAL SAFETY

- Hearing, head and eye protection
- Gloves and protective footwear
- Coveralls/slicker suits
- Lifejackets & Insulated clothing
- Respirator protection
- Awareness, Preparedness & Procedures

**THANK YOU FOR YOUR ATTENTION**