

<b>SECTION 1: Identification of the substance/mixture and of the company/undertaking</b>
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**1.1. Product identifier**

<b>Trade name or designation of the mixture</b>	Eastern Mediterranean Produced Water
<b>Registration number</b>	-
<b>Synonyms</b>	None.
<b>Issue date</b>	03-September-2014
<b>Version number</b>	01
<b>Revision date</b>	-
<b>Supersedes date</b>	-

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

<b>Identified uses</b>	Fuel.
<b>Uses advised against</b>	Use in accordance with supplier's recommendations.

**1.3. Details of the supplier of the safety data sheet**

<b>Manufacturer</b>	Noble Energy International Ltd
<b>Address</b>	73 Metochiou Str., 1st floor 2407 Engomi, Lefkosia, Cyprus
<b>General Information</b>	357.22.449190
<b>e-mail</b>	SDSGLOBAL@nobleenergyinc.com
<b>1.4. Emergency telephone number</b>	Poison Control: (1404)
<b>24 Hour Emergency</b>	1-760-476-3961
<b>Access code</b>	333053

<b>SECTION 2: Hazards identification</b>
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**2.1. Classification of the substance or mixture**
**Classification according to Directive 67/548/EEC or 1999/45/EC as amended**

<b>Classification</b>	Carc. Cat. 1;R45, Muta. Cat. 2;R46
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**Classification according to Regulation (EC) No 1272/2008 as amended**

<b>Health hazards</b>		
Germ cell mutagenicity	Category 1B	H340 - May cause genetic defects.
Carcinogenicity	Category 1A	H350 - May cause cancer.

**Hazard summary**

<b>Physical hazards</b>	Not classified for physical hazards.
<b>Health hazards</b>	May cause cancer. May cause heritable genetic damage.
<b>Environmental hazards</b>	Not classified for hazards to the environment.
<b>Specific hazards</b>	Prolonged exposure may cause chronic effects.
<b>Main symptoms</b>	Symptoms may include redness, oedema, drying, defatting and cracking of the skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

**2.2. Label elements**
**Label according to Regulation (EC) No. 1272/2008 as amended**

<b>Contains:</b>	Benzene, Calcium chloride, Potassium chloride, Sodium chloride
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**Hazard pictograms**


<b>Signal word</b>	Danger
<b>Hazard statements</b>	H340 - May cause genetic defects. H350 - May cause cancer.

## Precautionary statements

<b>Prevention</b>	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P280 - Wear protective gloves/protective clothing/eye protection/face protection.
<b>Response</b>	P308 + P313 - If exposed or concerned: Get medical advice/attention.
<b>Storage</b>	P405 - Store locked up.
<b>Disposal</b>	P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information None.

2.3. Other hazards None known.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Water	90	7732-18-5 231-791-2	Reach/Exempt	-	
<b>Classification:</b>	<b>DSD:</b> -				
	<b>CLP:</b> -				
Calcium chloride	< 10	10043-52-4 233-140-8	Exempted by Annex V(8)	017-013-00-2	
<b>Classification:</b>	<b>DSD:</b> Xi;R36				
	<b>CLP:</b> Acute Tox. 4;H302, Eye Irrit. 2;H319, Aquatic Chronic 3;H412				
Potassium chloride	< 10	7447-40-7 231-211-8	Exempted by Annex V(8)	-	
<b>Classification:</b>	<b>DSD:</b> Xi;R36				
	<b>CLP:</b> Acute Tox. 4;H302, Eye Irrit. 2;H319				
Sodium chloride	< 10	7647-14-5 231-598-3	Exempted by Annex V(8)	-	
<b>Classification:</b>	<b>DSD:</b> Xi;R36				
	<b>CLP:</b> Eye Irrit. 2;H319				
Benzene	< 1	71-43-2 200-753-7	Exempted by Annex V(7)	601-020-00-8	#
<b>Classification:</b>	<b>DSD:</b> F;R11, Carc. Cat. 1;R45, Muta. Cat. 2;R46, T;R48/23/24/25, Xn;R65, Xi;R36/38				E
	<b>CLP:</b> Flam. Liq. 2;H225, Asp. Tox. 1;H304, Skin Irrit. 2;H315, Eye Irrit. 2;H319, Muta. 1B;H340, Carc. 1A;H350, STOT RE 1;H372, Aquatic Chronic 2;H411				E
Petroleum distillate	< 1	8002-05-9 232-298-5	Exempted by Annex V(8)	649-049-00-5	
<b>Classification:</b>	<b>DSD:</b> Carc. Cat. 2;R45				
	<b>CLP:</b> Flam. Liq. 3;H226, Carc. 1B;H350, Aquatic Chronic 2;H411				

**Composition comments** The full text for all R-phrases is displayed in section 16 of the SDS. All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## SECTION 4: First aid measures

**General information** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

### 4.1. Description of first aid measures

<b>Inhalation</b>	If symptomatic, move to fresh air. Get medical attention if symptoms persist.
<b>Skin contact</b>	Wash skin with soap and water. Get medical attention promptly if symptoms occur after washing.
<b>Eye contact</b>	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.

Ingestion	Seek medical advice.
<b>4.2. Most important symptoms and effects, both acute and delayed</b>	Prolonged or repeated skin contact may cause irritation. May cause cancer. May cause genetic defects.
<b>4.3. Indication of any immediate medical attention and special treatment needed</b>	Treat symptomatically.

## SECTION 5: Firefighting measures

<b>General fire hazards</b>	This product is an aqueous mixture which will not burn.
<b>5.1. Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Use fire-extinguishing media appropriate for surrounding materials.
<b>Unsuitable extinguishing media</b>	Not applicable.
<b>5.2. Special hazards arising from the substance or mixture</b>	None known.
<b>5.3. Advice for firefighters</b>	
<b>Special protective equipment for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Special fire fighting procedures</b>	No specific precautions.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.

## SECTION 6: Accidental release measures

<b>6.1. Personal precautions, protective equipment and emergency procedures</b>	
<b>For non-emergency personnel</b>	Wear appropriate personal protective equipment (See Section 8).
<b>For emergency responders</b>	Keep unnecessary personnel away.
<b>6.2. Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.
<b>6.3. Methods and material for containment and cleaning up</b>	Absorb spill with vermiculite or other inert material, then place in a container for chemical waste for proper disposal.
	Large Spills: Flush with plenty of water. Prevent runoff from entering drains, sewers, or streams. Dike for later disposal.
<b>6.4. Reference to other sections</b>	For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

## SECTION 7: Handling and storage

<b>7.1. Precautions for safe handling</b>	Avoid breathing mist or vapour. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Use only with adequate ventilation.
<b>7.2. Conditions for safe storage, including any incompatibilities</b>	Keep containers tightly closed. Store away from incompatible materials.
<b>7.3. Specific end use(s)</b>	Fuel.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

Cyprus. OELs. Control of factory atmosphere and dangerous substances in factories regulation, PI 311/73, as amended.

Components	Type	Value
Benzene (CAS 71-43-2)	TWA	30 mg/m <sup>3</sup> 10 ppm
Petroleum distillate (CAS 8002-05-9)	TWA	0,2 mg/m <sup>3</sup>

EU. OELs, Directive 2004/37/EC on carcinogen and mutagens from Annex III, Part A

Components	Type	Value
Benzene (CAS 71-43-2)	TWA	3,25 mg/m <sup>3</sup> 1 ppm

**Biological limit values** No biological exposure limits noted for the ingredient(s).

<b>Recommended monitoring procedures</b>	Follow standard monitoring procedures.
<b>Derived no-effect level (DNEL)</b>	Not available.
<b>Predicted no effect concentrations (PNECs)</b>	Not available.
<b>Exposure guidelines</b>	
<b>Cyprus OEL: Skin designation</b>	
Benzene (CAS 71-43-2)	Can be absorbed through the skin.
<b>8.2. Exposure controls</b>	
<b>Appropriate engineering controls</b>	Ensure adequate ventilation, especially in confined areas. Provide easy access to water supply and eye wash facilities.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>General information</b>	Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin protection</b>	
- <b>Hand protection</b>	Chemical resistant gloves are recommended.
- <b>Other</b>	Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.
<b>Respiratory protection</b>	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister.
<b>Thermal hazards</b>	Not applicable.
<b>Hygiene measures</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.
<b>Environmental exposure controls</b>	Environmental manager must be informed of all major releases.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Clear or opaque liquid.
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Colour</b>	Clear.
<b>Odour</b>	Salty to slightly hydrocarbon.
<b>Odour threshold</b>	Not relevant.
<b>pH</b>	6,5 - 8
<b>Melting point/freezing point</b>	1 °C (33,8 °F)
<b>Initial boiling point and boiling range</b>	100 °C (212 °F)
<b>Flash point</b>	Aqueous Solution, may release flammable gases
<b>Evaporation rate</b>	< 1 (n-Butylacetate=1)
<b>Flammability (solid, gas)</b>	Not relevant.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not relevant.
<b>Flammability limit - upper (%)</b>	Not relevant.
<b>Vapour pressure</b>	17,5 mm Hg at 21°C/70°F
<b>Vapour density</b>	> 1 at 20°C/68°F
<b>Relative density</b>	1,018 - 1,02
<b>Relative density temperature</b>	> 20 °C (> 68 °F)
<b>Solubility(ies)</b>	Completely Soluable
<b>Partition coefficient (n-octanol/water)</b>	3,6

<b>Auto-ignition temperature</b>	Not relevant.
<b>Decomposition temperature</b>	Not relevant.
<b>Viscosity</b>	1 mPa·s
<b>Viscosity temperature</b>	37,8 °C (100,04 °F)
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	No oxidizing properties.

#### 9.2. Other information

<b>Bulk density</b>	8,33 lb/gal
<b>VOC (Weight %)</b>	Negligible

Solubility complete except for possible crude component.

### SECTION 10: Stability and reactivity

<b>10.1. Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>10.2. Chemical stability</b>	Material is stable under normal conditions.
<b>10.3. Possibility of hazardous reactions</b>	Hazardous polymerisation does not occur.
<b>10.4. Conditions to avoid</b>	None known.
<b>10.5. Incompatible materials</b>	Strong oxidising agents.
<b>10.6. Hazardous decomposition products</b>	No hazardous decomposition products are known.

### SECTION 11: Toxicological information

**General information** Occupational exposure to the substance or mixture may cause adverse effects.

#### Information on likely routes of exposure

<b>Inhalation</b>	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
<b>Skin contact</b>	Prolonged or repeated contact may dry skin and cause irritation.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Ingestion</b>	No adverse effects due to ingestion are expected.

**Symptoms** Direct contact with eyes may cause temporary irritation. Prolonged or repeated contact may dry skin and cause irritation. Prolonged exposure may cause chronic effects.

#### 11.1. Information on toxicological effects

**Acute toxicity** Not classified.

Components	Species	Test results
Benzene (CAS 71-43-2)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Mouse	4700 mg/kg
	Rat	3306 mg/kg
Calcium chloride (CAS 10043-52-4)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg, 24 Hours
<i>Oral</i>		
LD50	Mouse	1940 mg/kg
	Rabbit	1000 mg/kg
	Rat	2120 mg/kg
<i>Other</i>		
LD50	Mouse	382 mg/kg
	Rat	264 mg/kg
Potassium chloride (CAS 7447-40-7)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	2600 mg/kg

Components	Species	Test results
Sodium chloride (CAS 7647-14-5)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 10000 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 42 mg/l, 1 Hours
<i>Oral</i>		
LD50	Rat	3550 mg/kg
<b>Skin corrosion/irritation</b>	Prolonged or repeated skin contact may cause irritation.	
<b>Serious eye damage/eye irritation</b>	Direct contact with eyes may cause temporary irritation.	
<b>Respiratory sensitisation</b>	Not a respiratory sensitiser.	
<b>Skin sensitisation</b>	Not a skin sensitiser.	
<b>Germ cell mutagenicity</b>	May cause genetic defects.	
<b>Carcinogenicity</b>	May cause cancer.	
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
Benzene (CAS 71-43-2)	1 Carcinogenic to humans.	
Petroleum distillate (CAS 8002-05-9)	3 Not classifiable as to carcinogenicity to humans.	
<b>Reproductive toxicity</b>	Not classified.	
<b>Specific target organ toxicity - single exposure</b>	Not classified.	
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.	
<b>Aspiration hazard</b>	Not classified.	
<b>Mixture versus substance information</b>	Not relevant.	
<b>Other information</b>	Prolonged exposure may cause chronic effects.	

## SECTION 12: Ecological information

**12.1. Toxicity** The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test results
Benzene (CAS 71-43-2)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea (Daphnia magna) 8,76 - 15,6 mg/l, 48 hours
Fish	LC50	Rainbow trout, donaldson trout (Oncorhynchus mykiss) 5,3 mg/l, 96 hours
Petroleum distillate (CAS 8002-05-9)		
<b>Aquatic</b>		
Fish	LC50	Cutthroat trout (Oncorhynchus clarki) 2,1 - 4,3 mg/l, 96 hours
Sodium chloride (CAS 7647-14-5)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea (Daphnia magna) 340,7 - 469,2 mg/l, 48 hours
<b>12.2. Persistence and degradability</b>	Not established.	
<b>12.3. Bioaccumulative potential</b>		
<b>Partition coefficient n-octanol/water (log Kow)</b>		
Eastern Mediterranean Produced Water (CAS Mixture)	3,55	
Benzene (CAS 71-43-2)	2,13	
<b>Bioconcentration factor (BCF)</b>	Not available.	
<b>12.4. Mobility in soil</b>	Not established.	
<b>12.5. Results of PBT and vPvB assessment</b>	Not a PBT or vPvB substance or mixture.	

12.6. Other adverse effects Not available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

<b>Residual waste</b>	Dispose of in accordance with local regulations.
<b>Contaminated packaging</b>	Since emptied containers retain product residue, follow label warnings even after container is emptied.
<b>EU waste code</b>	Waste codes should be assigned by the user based on the application for which the product was used.
<b>Disposal methods/information</b>	Do not discharge into drains, water courses or onto the ground. Discharge, treatment, or disposal may be subject to national, state, or local laws.

## SECTION 14: Transport information

### ADR

Not regulated as dangerous goods.

### RID

Not regulated as dangerous goods.

### ADN

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** This substance/mixture is not intended to be transported in bulk.

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU regulations

F - Highly flammable

**Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I**

Not listed.

**Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II**

Not listed.

**Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended**

Benzene (CAS 71-43-2)

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended**

Not listed.

**Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry**

Not listed.

**Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA**

Not listed.

#### Authorisations

**Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended**

Not listed.

#### Restrictions on use

**Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended**

Benzene (CAS 71-43-2)

Petroleum distillate (CAS 8002-05-9)

**Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work**

Benzene (CAS 71-43-2)

Petroleum distillate (CAS 8002-05-9)

**Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding**

Benzene (CAS 71-43-2)  
Petroleum distillate (CAS 8002-05-9)

**Other EU regulations**

**Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances**

Not listed.

**Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work**

Benzene (CAS 71-43-2)  
Calcium chloride (CAS 10043-52-4)  
Petroleum distillate (CAS 8002-05-9)

**Directive 94/33/EC on the protection of young people at work**

Benzene (CAS 71-43-2)  
Petroleum distillate (CAS 8002-05-9)

**Other regulations** The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

**National regulations** Not available.

**15.2. Chemical safety assessment** Not available.

**SECTION 16: Other information**

**List of abbreviations** DNEL: Derived No-Effect Level. PNEC: Predicted No-Effect Concentration. LD50: Lethal Dose, 50%. LC50: Lethal Concentration, 50%. TWA: Time weighted average. TLV: Threshold Limit Value

**References** ECHA registered substances database  
HSDB® - Hazardous Substances Data Bank  
IARC Monographs. Overall Evaluation of Carcinogenicity  
National Toxicology Program (NTP) Report on Carcinogens  
Registry of Toxic Effects of Chemical Substances (RTECS)

**Information on evaluation method leading to the classification of mixture** Not available.

**Full text of any statements or R-phrases and H-statements under Sections 2 to 15**

R11 Highly flammable.  
R36 Irritating to eyes.  
R36/38 Irritating to eyes and skin.  
R45 May cause cancer.  
R46 May cause heritable genetic damage.  
R48/23/24/25 Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.  
R65 Harmful: may cause lung damage if swallowed.  
H225 Highly flammable liquid and vapour.  
H226 Flammable liquid and vapour.  
H302 Harmful if swallowed.  
H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H340 May cause genetic defects.  
H350 May cause cancer.  
H372 Causes damage to organs through prolonged or repeated exposure.  
H411 Toxic to aquatic life with long lasting effects.  
H412 Harmful to aquatic life with long lasting effects.

**Training information** Follow training instructions when handling this material.

**Further information** Not applicable.

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