

# Health and Safety Data

## Smoke Simulant Fluid – Smoke Oil 135/180/Artem Smoke canister

Dec 2012

| IDENTIFICATION OF THE SUBSTANCE & OF THE COMPANY / UNDERTAKING |   |
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| 1  | <p><b>IDENTIFICATION OF THE SUBSTANCE OR PREPARATION</b></p> <p>Smoke Oil 135 and Smoke Oil 180 are intrinsically biodegradable white mineral oils (pharmaceutical quality grade) complying with the purity requirements of:</p> <ul style="list-style-type: none"><li>▪ FDA, 21CFR 172-878 and FDA, 21 CFR 178-3620(a), 21 CFR 178-3570 (incidental food contact)</li><li>▪ European and US pharmacopeia</li><li>▪ Pharmacopeia of Japan, Germany DAB, Britain BP, France</li><li>▪ Due to the refining stage including a high technological high pressure hydrogenetio process, Smoke Oil 135 and Smoke Oil 180 guarantee specification more severe then the requirements of the pharmacopoeias</li></ul> |
|  | <p><b>COMPANY IDENTIFICATION</b><br/>Concept Engineering Ltd<br/>7 Woodlands Business Park<br/>Woodlands Park Avenue<br/>Maidenhead<br/>Berkshire SL6 3UA</p>   |
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| 2  | <p><b>COMPOSITION / INFORMATION ON INGREDIENTS</b></p>  |
|  | <p>Very highly refined hydrocarbon mineral oils. Not a hazardous substance or preparation according to EC directives 67/548/EEC or 1999/45/EC. Not classified with regard to Regultaion (EC) No 127/2008</p>  |
| 3  | <p><b>HAZARDS IDENTIFICATION</b></p>  |
|  | <p>On the basis of our knowledge of the highly refined mineral oils used, Concept's smoke oils are unlikely to be hazardous to man in normal use. In the environment, these oils are likely to biodegrade slowly.</p>   |

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| <b>4 FIRST AID MEASURES</b>   |  |
| TYPE OF EXPOSURE  | FIRST AID MEASURES   |
| <p><b>Ingestion</b></p> <p>Likely to be harmless if swallowed in small amounts - larger quantities may cause nausea and diarrhoea.</p> <p><b>Skin</b></p> <p>Unlikely to cause irritation. Prolonged and/or frequent contact, particularly where there is poor personal hygiene, may eventually cause irritation which could possibly, in sensitive individuals, lead to dermatitis.</p> <p><b>Eyes</b></p> <p>May cause minor irritation with short-term redness and stinging.</p> <p><b>Inhalation</b></p> <p>Unlikely in normal use.</p> | <p><b>Ingestion</b></p> <p>Wash mouth out with water. Do not induce vomiting because of the danger of aspiration. If aspiration occurs or is expected get immediate medical advice.</p> <p><b>Skin</b></p> <p>Wash skin as soon as possible with soap and water. Change contaminated clothing and launder before reuse.</p> <p><b>Eyes</b></p> <p>Wash out thoroughly with water. If redness and/or irritation continues get medical advice.</p> <p><b>Inhalation</b></p> <p>If inhalation of fumes irritates the nose or throat or causes coughing remove to fresh air. Get medical advice if irritation continues.</p> |
| <b>5 FIRE-FIGHTING MEASURES</b>   |  |
| <p>Extinguish with Dry Powder, Foam or Water Fog. For small fires use CO2 or BCF - the adverse environmental effects of BCF/Halon are such that their use is no longer considered acceptable.</p> <p>Do not tackle fires with water except as a fog; water may be used to cool the area surrounding fires.</p> <p>Fires in closed or confined spaces should be tackled by trained personnel who should wear breathing apparatus.</p>  |  |
| <b>6 ACCIDENTAL RELEASE MEASURES</b>  |  |
| <p>May cause slippery surfaces.</p> <p>Contain spillage - do not wash spillage down drain. Absorb using absorbent clay, diatomaceous clay or other suitable absorbent.</p>  |  |

## HANDLING AND STORAGE

### 7.1 Handling

It is recommended that, where there is likely to be prolonged and/or frequent contact protective clothing, as detailed in Section 8, should be worn when handling the Concept's range of oils.

### 7.2 Storage

Drums should be stored on their sides on racks preferably under cover, out of direct sunlight, in well-ventilated conditions.

Other types of containers should be stored under cover out of direct sunlight, in well-ventilated conditions. Care should be taken to avoid over-stacking.

## 8 EXPOSURE CONTROL / PERSONAL PROTECTION

As with all mineral oil based products keep skin contact to a minimum and ensure good hygiene standards

Respiratory protection is unlikely to be required in normal use. Note: Occupational Exposure Limits for Oil Mist quoted in current HSE Guidance Note EH 40. (Reference Health & Safety reports within the main Concept H&S data pack).

For trainers where repeated exposure to extremely dense smoke concentrations can occur Concept would recommend a suitable facemask with 2 x 2135P3 particulate filters or similar

Long term exposure limit - (8 hour TWA reference period) 5 milligrams per cubic metre.

Short term exposure limit - (15 minute reference period) -10 milligrams per cubic metre.

Hand and skin protection - if continued or repeated exposure is likely protective clothing should be worn including gloves (nitrile rubber or neoprene).

Eye protection - eye protection should be worn if splashing is likely.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

|                             |                       |       |
|-----------------------------|-----------------------|-------|
| SMOKE OIL:                  | 135                   | 180   |
| Appearance                  | —Water-white liquids— |       |
| Density at 15°C             | 0.843                 | 0.847 |
| Flash Point COC °C          | 186                   | 208   |
| KV/40°C cSt                 | 14.3                  | 18.6  |
| Saybolt Viscosity SUS@100°F | 79                    | 99    |

## 10 STABILITY AND REACTIVITY

Conditions to Avoid - excess heat can lead to decomposition of constituent additives with evolution of oxides of carbon.

Materials to Avoid - may react with strong oxidising materials.

Hazardous Decomposition Products - oxides of carbon, with incomplete combustion carbon monoxide.

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| 11   | <b>TOXICOLOGICAL INFORMATION</b> |
| <p>The mineral oil components of these oils may be considered not to be essentially toxic in normal handling.</p> <p>This product is not classified as carcinogenic, and is not classified as a sensitizer</p>   |                                  |
| 12   | <b>ECOLOGICAL INFORMATION</b>    |
| <p><b>Air:</b> Concept Smoke Oil 135/180 is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities.</p> <p><b>Water:</b> If released to water, Concept Smoke Oil 135/180 will form a floating layer on the surface and its components will not evaporate or dissolve to any great extent. Dissolved components will be absorbed in sediments. In aerobic water and sediments they will biodegrade slowly, but in anaerobic conditions they will persist. Concept Smoke Oil 135/180 is practically non-toxic to aquatic organisms but contains components which have a high potential to bioaccumulate.</p> <p><b>Soil:</b> Small volumes released on land will be absorbed in the upper soil layers and be biodegraded slowly. Larger volumes may penetrate into anaerobic soil layers in which the product will persist and may reach the water table on which it will form a floating layer. The more soluble components may dissolve but their high soil absorption coefficient and the low solubility will prevent significant contamination of ground water.</p> <p><b><u>These oils are intrinsically biodegradeable</u></b></p> |                                  |
| 13   | <b>DISPOSAL CONSIDERATIONS</b>   |
| <p>Disposal - by incineration or by methods approved by Local Authority.</p>   |                                  |
| 14   | <b>TRANSPORT INFORMATION</b>     |
| <p><b>Not applicable; non-hazardous when shipped as bulk</b></p> <p>When packaged in aerosol format the goods are classified as hazardous because of the nature of the pressurised container. The propellant within the canister is inert. Aerosols are classified as UN1950, Hazard Class 2.2. Limited quantity provisions can apply.</p>   |                                  |
| 15   | <b>REGULATORY INFORMATION</b>    |
| <p>As far as is known not classified according to EEC Directives 67/548/EEC and 88/379/EEC.</p>  |                                  |
| 16   | <b>OTHER INFORMATION</b>         |
| <p>Further information can be found in various publications, a list of which may be obtained from the Health &amp; Safety Executive.</p>   |                                  |

#### LEGAL NOTICE

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