Appendix F – Health and Safety Data

Smoke Simulant Fluid – Phantom Smoke Oil 135 / 180

Data Sheet No 891121 Revision : 12.11.98 This Data Sheet has been prepared in accordance with the requirements of the Data Sheet Directive 91/155/EEC

Recommended Uses

Pea Soup Smoke Oil 135/180, in addition to its use as a smoke simulant, is used as a component in the pharmaceutical, food, cosmetic and plastics industries for applications that demand an extremely high standard of oil purity.

Known Misuses/Abuses

None known.

The disposal of Pea Soup Smoke Oil 135/180 to soil, watercourses and drains is a legal offence.

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1. Identification of the substance/preparation and the company undertaking

Name: Pea Soup Phantom Smoke Oil 135/180

Supplied By: **Pea Soup Limited**
3 Thornwood Ave
Ingleby Barwick
N Yorks TS17 0RS

Telephone: 01642 769952 Facsimile: 02071007527
Emergency Number as above

2. Composition/information on ingredients

Pea Soup Phantom Smoke Oil 135/180 is a highly refined mineral oil manufactured from crude petroleum oil.

EINECS NUMBER 232-455-8
CAS NUMBER 8042-47-5

White mineral oil (petroleum): A highly refined petroleum mineral oil consisting of a complex combination of hydrocarbons obtained from the intensive treatment of a petroleum fraction with sulphuric acid and oleum, or by hydrogenation, or by a combination of hydrogenation and acid treatment. Additional washing and treating steps may be included in the processing operation. It consists of saturated hydrocarbons having carbon numbers predominantly in the range C15 through C50.

3. Hazard Identification

Pea Soup Phantom Smoke Oil 135/180 has a low coefficent of friction presenting a slip hazard.

Pea Soup Phantom Smoke Oil 135/180 is not classified as dangerous for supply or conveyance. The DMSO extract by IP 346 of the oil is less than 3%. Consequently it is not classified as a carcinogen.

Pea Soup Phantom Smoke Oil 135/180 is a mineral oil, to which an exposure limit applies. See Pea Soup Health and Safety Data Pack for relevant copy reports from Health and Safety Executive /NOHS/ AWE Aldermaston. Prolonged and repeated skin contact with mineral oil causes defatting of the skin and may give rise to skin conditions including dermatitis.

Pea Soup Phantom Smoke Oil 135/180 will not biodegrade in anaerobic conditions and, hence, can be persistent.

4. First Aid Measures

Inhalation: Under normal conditions of use inhalation of vapours is not feasible or likely to present an acute hazard.

Skin Contact: Skin contact does not normally require first aid, but oil soaked clothing should be removed, and contaminated skin washed with soap and water. If persistent irritation occurs, medical advice should be sought without delay.

Where a high pressure injection injury has occurred medical attention should be obtained immediately. Show this Data Sheet to the physician drawing attention to Section 11 below.

Eye Contact: Flush the eyes with copious quantities of water. If irritation persists refer for medical attention.

Ingestion: DO NOT INDUCE VOMITING. If ingestion is suspected, wash out the mouth with water, and send to hospital immediately

5. Fire Fighting Measures

Extinguishants - Large Fire: Foam/Water Fog – NEVER USE WATER JET

- Small Fire: Foam/Dry Powder - AFF/CO2/Sand/Earth

6. Accidental Release Measures

Land Spillages: The first concern should be to prevent entry to drains or watercourses.

Large Spills: Should be bounded by a stable medium such as sand or earth. The liquid should be reclaimed directly or by an absorbent medium and then transferred to suitable, clearly marked containers and disposed of in accordance with local byelaws and the requirements of the Environmental Protection Act 1990.

Small Spills: Should be soaked up with sand or earth and disposed of as for large spills.

7. Handling and Storage

Handling: Pea Soup Phantom Smoke Oil 135/180 does not require any special handling techniques, but it should be handled in suitable containers and spillage avoided.

Storage: The storage of Pea Soup Phantom Smoke Oil 135/180 is not subject to any special controls or restrictions. It should be stored in properly designed, closable, labelled containers, eg mild steel or high density polyethylene (HDPE).

8. Exposure Controls/Personal Protection

Exposure Limits: Oil Mist, Mineral: 5 mg/cubic metre 8-hour TWA value
15 mg/cubic metre 15-min TWA value

For copy reports relating to the use of Phantom Smoke Oil 135/180 for creating dense concentrations of smoke (for example for firefighting applications) please see Pea Soup Health and Safety Information Pack..

Note: Fume arising from high temperature product is essentially an oil mist.

Recommended Protective Clothing: Impervious gloves and overalls where regular contact is likely, and goggles if there is a risk of splashing.

9. Physical & Chemical Properties

	135	180
Physical State:	Liquid at ambient temperature	Liquid at ambient temperature
Appearance:	Water White	Colourless
Odour:	Odourless	Odourless
Acidity/Alkalinity :	Not applicable	Not applicable
Initial Boiling Point:	>350ºC	>320ºC
Pour Point:	-15ºC	-25ºC
Flashpoint:	175ºC	175ºC
Flammability:	Not applicable	Not applicable
Autoflammability:	> 250ºC	Expected > 320ºC
Flammability Limits:	Upper 10% vol. Lower 1% vol.	Upper 10% vol. Lower1% vol.
Explosive Properties:	Not applicable	Not applicable
Oxidising Properties:	Not applicable	Not applicable
Vapour pressure @ 20ºC:	< 0.1 k.Pa	< 0.1 k.Pa.
Relative Density @ 15ºC:	0.851	0.860
Solubility: Water solubility:	Very Low	Very Low
Fat Solubility/solvent	Not available	Not available
Partition Coefficient, n-octanol water:	Expected to be >7	Expected to be > 7
Vapour density (Air = 1):	>5	> 5
Viscosity @ 40 DºC:	15 Cst.	23.5 Cst

10. Stability & Reactivity

Conditions to avoid:

Oil covered surfaces owing to the potential for slips.
Accumulation of oily rags.
Extremes of temperature. Store between 0 and 50 Deg. C.

Materials to avoid:

Strong oxidising agents, eg chlorates which may be used in agriculture.

Decomposition products:

The substances arising from the thermal decomposition of these products will largely depend upon the conditions bringing about decomposition. The following substances may be expected from normal combustion:

Carbon dioxide	Polycyclic Aromatic Hydrocarbons
Carbon Monoxide	Unburned Hydrocarbons
Water	Unidentified Organic and Inorganic Compounds
Particulate Matter	Nitrogen Oxides

Analysis of the resulting smoke condensate indicates no pyrolysis occurs in normal conditions, and the resulting condensate does not contain any decomposition materials.

11. Toxicological Information

Acute Health Hazards and Advice: Toxicity following single exposure to high levels (orally, dermally or by inhalation) is of a low order. The main hazards are: in the unlikely event of ingestion, aspiration into the lungs with possible resultant chemically induced pneumonia; and, if the products are handled under high pressures, of high pressure injection injuries.

Inhalation: Under normal conditions of use inhalation of vapours is not feasible or likely to present an acute hazard.

Skin: Skin contact presents no acute health hazard except in the case of high pressure injuries. These can lead to the loss of the affected limbs if not treated immediately and properly.

Precautions: Avoid contact with the skin by the use of suitable protective clothing. Where skin contact is unavoidable, a high standard of personal hygiene must be practiced. Extreme care must be exercised where the product is likely to be encountered at high pressures, when it is recommended that safe systems of work must be employed.

First Aid: Skin contact does not normally require first aid, but oil soaked clothing should be removed, and contaminated skin washed with soap and water. If persistent irritation occurs, medical advice should be sought without delay.

Where a high pressure injection injury has occurred, medical attention should be obtained immediately.

Eyes: Eye contact may cause some discomfort.

Precautions: If there is a risk of splashing while handling the liquid, suitable eye protection should be used.

First Aid: Flush the eye with copious quantities of water. If irritation persists refer for medical attention.

Ingestion: The main hazard following ingestion is of aspiration into the lungs during subsequent vomiting.

Precautions: Accidental ingestion is unlikely. Normal handling and hygiene precautions should be taken to avoid ingestion.

First Aid: DO NOT INDUCE VOMITING. If ingestion is suspected, wash out the mouth with water, and send to hospital immediately.

See 'Reports' in the full Pea Soup Health and Safety Manual

12. Ecological Information

Air: Pea Soup Smoke Oil 135/180 is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities.

Water: If released to water, Pea Soup 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. Pea Soup Smoke Oil 135/180 is practically non-toxic to aquatic organisms but contains components which have a high potential to bioaccumulate.

Soil: 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.

13. Disposal Considerations

Pea Soup Phantom Smoke Oil 135/180 is a controlled waste and must be disposed of to a licensed waste contractor. If in doubt, seek advice from your Local Authority.

The disposal of mineral oils to sewers, watercourses or land without consent of the Local Water authority or the national Rivers Authority (NRA) is an offence under the Environmental Protection Act 1990 or the Water Resources Act 1991 or the Water Industry Act 1991.

14. Transport Information

This product is not regulated as hazardous in bulk form.

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 CO2

Aerosols are classified as UN1950, Hazard Class 2.2 Air (Aerosols-20), 2.1 Aerosols by sea)

15. Regulatory Information

This material has been classified according to the requirements of the Dangerous Substances directive 67/548/EEC as last amended by the 7th amendment 92/32/EEC, the 22nd Adaptation to Technical Progress 96/54/EC, and the Preparations Directive 88/379. Not Dangerous for supply.

Inclusion of substance from which Pea Soup Phantom Smoke Oil 135/180 is manufactured in national inventories:

EINECS (European Union)	Yes	CSI under TSCA (USA)	Yes
DSL (Canada)	Yes	AICS (Australia)	Yes
ECL (Korea)	Yes	MITI (Japan)	Yes
(Phillipines)	Information not available		

16. **Other Information**

The references set out herein give further information on specific aspects.

Legislation

Consumer Protection Act 1987
Control of Pollution Act 1974
Environmental Protection Act 1990
Factories Act 1961
Health and Safety at Work Act 1974
Carriage of Dangerous Goods by Road and Rail (Classification, Packaging and Labelling) Regulations
Chemical (Hazards, Information, and Packaging for Supply) Regulations
Control of Substances Hazardous to Health Regulations
Dangerous Substances in Harbour Areas Regulations
Merchant Shipping (Dangerous Goods and Marine Pollutants) Regulations
Road Traffic (Carriage of Dangerous Substances in Packages etc.) Regulations
Road Traffic (Carriage of Dangerous Substances in Road Tankers and Tank Containers) Regulations
Road Traffic (Training of Drivers of Vehicles Carrying Dangerous Goods) Regulations
Reporting of Injuries, Diseases and Dangerous Occurences Regulations
Special Waste Regulations

Guidance Notes

EH/26	Occupational Skin Diseases: Health and Safety Precautions
EH/40	Occupational Exposure Limits
EH/43	Carbon Monoxide
EH/58	The Carcinogenicity of Mineral Oils
HS(G)5	Hotwork
GS/5	Entry into confined spaces
IND(G)35(L)	Hot work on Tanks and Drums

Other Literature

Concawe Report 9/81	A Field Guide to Coastal Oil Spill Control and Clean-up Techniques
Concawe Report 10/83	A Field Guide to Inland Oil Spill Clean-up Techniques
Concawe Report 86/69	Health Aspects of Worker Exposure to Oil Mists

The American Conference of Governmental Hygienists (ACGIH) Threshold Limit Values 1994-1995
Department of the Environment – Waste Management – The Duty of Care – A Code of Practice

Addresses

Concawe, Madouplein 1, B-1210 Brussel, Belgium

Legal Disclaimer

The above information is based on the present state of our knowledge of the product at the time of publication. It is given in good faith, no warranty is implied with respect to the quality or the specification of the product. The user must satisfy themselves that the product is entirely suitable for this purpose.