Material Safety Data Sheet

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

Product name	**N140**
Product Use	Viscosity Reference Standard.
Supplier	Poulten Selfe and Lee Ltd. - PSL Calibration Laboratory Russell House Burnham Business Park Burnham-on-Crouch Essex CM0 8TE United Kingdom
Emergency telephone Number	**+44 (0) 1621 787100**

2. Composition/information on ingredients

Highly refined mineral oil (IP 346 DMSO extract < 3%). Proprietary performance additives.

This product does not contain any hazardous ingredients at above regulated thresholds.

3. Hazards identification

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]: This product is NOT classified as dangerous.
Classification according to Directive 1999/45/EC [DPD]: This product is NOT classified as dangerous.
See sections 11 and 12 for more detailed information on health effects, symptoms and environmental hazards.

Physical/chemical Hazards	Not classified as dangerous.
Human health hazards	Not classified as dangerous.
Environmental hazards	Unlikely to be harmful to aquatic organisms.
Effects and symptoms	
Eyes	No significant health hazards identified.
Skin	No significant health hazards identified.
Inhalation	No significant health hazards identified.
Ingestion	No significant health hazards identified.
Label elements	No signal word
Response	Not applicable
Storage	Not applicable
Disposal	Not applicable
Special packaging requirements	
Other hazards which do not result in classification	Defatting to skin.

4. First-aid measures

Eye Contact	In case of contact, immediately flush eyes with a copious amount of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get medical attention if irritation occurs.
Skin contact	Immediately wash exposed skin with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if irritation develops.
Inhalation	If inhaled, remove to fresh air. Get medical attention if symptoms appear.
Ingestion	If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Aspiration hazard if swallowed- can enter lungs and cause damage. Obtain medical attention.

Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training.
Notes to physician	Treatment should in general be symptomatic and directed to relieving any effects.

Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

5. Fire-fighting measures

Extinguishing Media	
Suitable	In case of fire, use water fog, foam, dry chemical or CO2 extinguisher or spray.
Not Suitable	Do not use water jet.
Hazards from the substance/mixture	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous combustion products	Combustion products may include the following: carbon oxides (CO, CO_2) (carbon monoxide, carbon dioxide)

Advice for firefighters

Special precautions for firefighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for firefighters	Firefighters should wear appropriate protective equipment and self-containes breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for firefighters (including helmets, protective boots and gloves) conforming to European Standard EN 469 will provide a basic level of protection for chemical incidents.

6. Accidental release measures

Personal Precautions, protective equipment and emergency procedures

For non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Floors may be slippery; use care to avoid falling. Put on appropriate personal protective equipment.
For emergency responders	if specialised clothing is required to deal with the spillage, take note of any information on Section 8 on suitable materials. See also the information in 'For non-emergency personnel'.
Environmental precautions	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil, air).

Methods and materials for containment and cleaning up

Small spill	Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large spill	Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material, e.g. Sand, earth, vermiculite or diatomaceous earth and place container for disposal according to local regulations. Discpose of via a licensed waste disposal contractor.
Reference to other sections	See Section 1 for emergency contact information See Section 5 for firefighting measures See Section 8 for information on appropriate personal protective equipment. See Section 12 for environmental precautions

See Section 13 for additional waste treatment information

7. Handling and storage

Protective measures	Put on appropriate personal equipment.
Advice on general occupational hygiene	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage	Store in accordance with local regulations. Store in a dry, cool and well-ventilated area, away from incompatible materials (See Section 10). Keep away from heat and direct sunlight. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store and use only in equipment/containers designed for use with this product. Do not store in unlabelled containers.
Not suitable	Prolonged exposure to elevated temperature.
Specific end use(s) recommendations	See Section 1 and Exposure scenarious in annex, if applicable.

8. Exposure controls/personal protection

Occupational Exposure Limits	No exposure limit value known. Whilst specific OELs for certain components may be shown in this section, other components may be present in any mist, vapour or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.
Recommended monitoring procedures	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres – Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres – Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres – General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
Derived No Effect Level	No DNELs/DMELs available.

Exposure controls

Appropriate engineering controls	Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits. All activities involving chemicals should be assessed for their risks to health, to ensure after other forms of control measures (e.g. engineering controls) have been suitable for use, be kept in good condition and properly maintained. Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organization for standards. The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

Individual protection measures

Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection

Respiratory protective equipment is not normally required where there is adequate natural or local exhaust ventilation to control exposure.
In case of insufficient ventilation, wear suitable respiratory equipment.
The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Eye/face protection

Safety glasses with side shields.

Skin protection

Hand protection:

General information:
Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. The correct choice of protective gloves depends upon the chemicals being handled, and the conditions of work and use. Most gloves provide protection for only a limited time before they must be discarded and replaced. (Even the best chemically resistant gloves will break down after repeated chemical exposure).
Gloves should be chosen in consultation with the supplier/manufacturer and taking account of a full assessment of the working conditions.

Recommended: Nitrile Gloves

Breakthrough time:
Breakthrough time data are generated by glove manufacturers under laboratory test conditions and represent how long a glove can be expected to provide effective permeation resistance. It is important when following breakthrough time recommendations that actual workplace conditions are taken into account. Always consult with your glove supplier for up-to-date technical information on breakthrough times for the recommended glove type. Our recommendations on the selection of gloves are as follows:

Continuous contact:
Gloves with a minimum breakthrough time of 240 minutes or >480 minutes if suitable gloves can be obtained.
If suitable gloves are not available to offer that level of protection, gloves with shorter breakthrough times may be acceptable as long as appropriate glove maintenance and replacement regimes are determined and adhered to.

Short term/splash protection:
Recommended breakthrough times as above.
It is recognised that for short-term, transient exposures, gloves with shorter breakthrough times may commonly be used. Therefore, appropriate maintenance and replacement regimes must be determined and rigorously followed.

Glove-thickness:
For general applications, we recommend gloves with a thickness typically greater than 0.35 mm. It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.
Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturer's technical data should always be taken into account to ensure selection of the most appropriate glove for the task.

Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:

- Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.
- Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential.

Skin and body:	Use of protective clothing is good industrial practice. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Wear clothing and footwear that cannot be penetrated by chemicals or oils. Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.
Environmental exposure controls:	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

Physical State	Liquid
Colour	Amber
Odour	Mild
Boiling point / range	Above 250 °C
Pour Point	Below minus 18 °C
Kinematic Viscosity	220 cSt at 40 °C
Flash Point	Above 200 °C (closed)
Autoignition	Above 250 °C
Explosive Properties	Not determined
Relative Densisty	Below 1.0 at 20 °C
Water Solubility	Insoluble
Fat Solubility	Not determined

10. Stability and reactivity

10.1: Reactivity: No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.

10.2: Chemical Stability: The product is stable.

10.3: Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.
Under normal conditions of storage and use, hazardous polymerisation will not occur.

10.4: Conditions to avoid: Avoid all possible sources of ignition (spark or flame).

10.5: Incompatible materials: Reactive or incompatible with the following materials: oxidising materials.

10.6: Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

11.1: Information on toxicological effects

Acute toxicity estimates:	Not available.
Information on the likely routes of exposure:	Routes of entry anticipated: Dermal, Inhalation.

Potential acute health effects

Inhalation:	Vapour inhalation under ambient conditions is not normally a problem due to low vapour pressure.
Ingestion:	No known significant effects or critical hazards.
Skin contact:	Defatting to skin. May cause skin dryness and irritation.
Eye contact:	No known significant effects or critical hazards.

Symptoms related to the physica, chemical and toxicological characteristics

Inhalation	May be harmful by inhalation if exposure to vapour, mists or fumes resulting from thermal decomposition products occurs.
Ingestion	No specific data.
Skin contact	Adverse symptoms may include irritation, dryness and cracking.
Eye contact	No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Inhalation	Overexposure to the inhalation of airborn droplets or aerosols may cause irritation of the respiratory tract.
Ingestion	Ingestion of large quantities may cause nausea or diarrhoea.
Skin contact	Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.
Eye contact	Potential risk of transient stinging or redness if accidental eye contact occurs.

Potential chronic health effects

General:	No known significant effects or critical hazards.
Carcinogenicity:	No known significant effects or critical hazards.
Mutagenicity:	No known significant effects or critical hazards.
Developmental effects:	No known significant effects or critical hazards.
Fertility effects:	No known significant effects or critical hazards.

12. Ecological information

Toxicity	
Environmental hazards	Not classified as dangerous.
Persistence and degradability	Expected to be biodegradable.
Bioaccumulative potential	Not expected to be bioaccumulative through food chains in the environment.
Coil/water partition coefficient (K_{oc})	Not available.
Mobility	Spillages may penetrate the soil causing water contamination.
Results from PBT and vPvB	Not available.
Other ecological information	Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

13. Disposal considerations

Waste treatment methods

Product

Methods of disposal:	Where possible, arrange for product to be recycled. Dispose of via an authorised person/licensed waste disposal contractor in accordance with local regulations.
Hazardous waste:	Yes.

European Waste Catalogue (EWC)

Waste code:	13 02 05*
EWC:	Mineral based non-chlorinated engine, gear and lubricating oils.

However, deviation from the intended use and/or the presence of any potential contaminants may require an alternative waste disposal code to be assigned by the end user.

Packaging

Methods of disposal:	Where possible, arrange for product to be recycled. Dispose of via an authorised person/licensed waste disposal contractor in accordance with local regulations.
Waste code:	15 01 10*
EWC:	Packaging containing residues of or contaminated by dangerous substances.
Special precautions	This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

14. Transport information

Not classified as hazardous for transport (ADR, RID, UN , IMO, IATA/ICAO).

15. Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV – List of substances subject to authorisation

Substances of very high concern

None of the components are listed.

Annex XVII – Resctrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles:	Not applicable.

Other regulations

REACH Status:	The company, as identified in Section 1, sells this product in the EU in compliance with the current requirements of REACH.
United States Inventory (TSCA 8b):	All components are listed or exempted.
Australia Inventoru (AICS)	All components are listed or exempted.
Canada Inventory	All components are listed or exempted.
China Inventory (IECSC)	All components are listed or exempted.
Japan Inventory (ENCS)	All components are listed or exempted.
Korea Inventory (KECI)	All components are listed or exempted.
Philippines Inventory (PICCS)	All components are listed or exempted.
Taiwan Inventory (CSNN)	All components are listed or exempted.

15.2: Chemical Safety Assessment

This product contains substances for which Chemical Safety Assessments are still required.

16. Other information

HMIS and NFPA

Hazardous Material Information System (U.S.A.)

Health	1
Flammability	1
Physical hazards	0
Personal protection	X

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

National Fire Protection Association (U.S.A.)

Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging Regulations [Regulation (EC) No. 1272/2008]
CSA = Chemical Safety Assessment
CSR = Chemical Safety Report
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
DPD = Dangerous Preparations Directive [1999/45/EC]
DSD = Dangerous Substances Directive [67/548/EEC]
EINECS = European Inventory of Existing Commercial chemical Substances
ES = Exposure Scenario
EUH Statement = CLP-specific Hazard Statement
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = Logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
OECD = Organisation for Economic Co-Operation and Development
PBT = Persistent, Bioaccumulative and Toxic
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SADT = Self-Accelerating Decomposition Temperature
SVHC = Substances of Very High Concern
STOT-RE = Specific Target Organ Toxicity – Repeated Exposure
STOT-SE = Specific Target Organ Toxicity – Single Exposure
TWA = Time Weighted Average
UN = United Nations
UVCB = Complex Hydrocarbon Substance
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Full text of abbreviated H Statements: Not applicable.

Full text of classifications [CLP/GHS]: Not applicable.
Full text of abbreviated R phrases: Not applicable.
Full text of classifications [dsd/dpd]: Not applicable.

The data and advice given apply when the product is sold for the stated application or applications. The product is not sold as suitable for any other application. Use of the product for applications other than as stated in this sheet may give rise to risks not mentioned in this sheet. You should not use the product other than for the stated application or applications without seeking advice from us. If you have purchased the product for supply to a third party for use at work, it is your duty to take all necessary steps to secure that any person handling or using the product is provided with the information in this sheet.If you are an employer, it is your duty to tell your employees and others who may be affected of any hazards described in this sheet and of any precautions which should be taken. Further copies of this Safety Data Sheet may be obtained from Poulten Selfe & Lee Ltd.