

SAFETY DATA SHEET (SDS)

PRODUCT NAME : MECHANICAL PUMP OIL - ULTRAGRADE 15,19,20,70

1. Identification of the Substance/Mixture and of the Company/Undertaking

Product identifier

Product name: Ultragrade 15, Ultragrade 19, Ultragrade 20, Ultragrade 70 Mechanical Pump Oils
Other means of identification: None
Item numbers: Ultragrade 15: H110-26-010, H110-26-011, H110-26-012, H110-26-013, H110-26-015
Ultragrade 19: H110-25-010, H110-25-011, H110-25-012, H110-25-013,
H110-25-015, H110-25-020
Ultragrade 20: H110-24-010, H110-24-011, H110-24-012, H110-24-013, H110-24-015
Ultragrade 70: H110-28-010, H110-28-011, H110-28-013

Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Lubricant
Uses advised against: None known

Details of the supplier of the safety data sheet.

European Contact Details

Edwards, Crawley Business Quarter, Manor Royal,
Crawley, West Sussex, RH10 9LW, England
Email: info@edwardsvacuum.com

General enquiries

UK : +44 (0)1293 528844
France : +(33) 1 47 98 24 01
Germany : +(49) 6420-82-410
Italy : +(39) 0248-4471

US Contact Details

Edwards, 6416 Inducon Drive West, Sanborn,
New York, 14132, USA

General enquiries

Toll Free: 1-800-848-9800

Emergency telephone number

Chemtrec: 1-800-424-9300

2. Hazards Identification

EMERGENCY OVERVIEW

Non hazardous in bulk liquid form at low to moderate temperatures.

Incomplete combustion produces Carbon Oxides (CO, CO²), Nitrogen Oxides (NO_x), Sulphur Oxides (SO_x), hydrocarbons, smoke and irritating vapours.

Thermal decomposition may release CO_x, diphenylamine smoke and irritating vapours.

For short and long term exposure effects see Section 11 Toxicological data.

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Classification of the substance or mixture

GHS classification: Mixture
Classification according to Regulation (EC) No. 1272/2008: Not classified
Classification according to Directive 1999/45/EC: Not classified

Label elements

Hazard pictograms: Not applicable
Signal words: Not applicable
Hazard statements: Not applicable
Precautionary statements: Not applicable

Other hazards

PBT criteria: Not available
vPvB criteria: Not available
Other hazards which do not result in a classification: Not applicable

3. Composition/Information on Ingredients

Ingredient	% Weight	CAS No	Hazard class *	Risk phrase / Hazard Statements*
Mixture of severely hydrotreated and hydrocracked base oil (petroleum)	100	Mixture **	Not applicable	Not applicable

*Hazard class, Risk phrase and Hazard Statements. These columns are only completed for ingredients which are classified as hazardous under EU Directive No 1272/2008 (as amended) and are present in sufficient concentration to make the overall substance hazardous. In all other situations, the column will be completed as "Not applicable".

Full text for the declared risk phrases and hazards statements is given in Section 16.

**CAS No. The base oil will be a mixture of the following CAS No's: 8042-47-5, 64742-46-7, 64742-47-8, 64742-53-6, 64742-54-7, 64742-55-8, 72623-84-8, 72623-85-9, 72623-86-0, 72623-87-1, 178603-64-0, 178603-65-1, 178603-66-2 and 445411-73-4.

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4. First Aid Measures

Description of first aid measures

- Eyes:** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 15 minutes. Seek medical attention if symptoms persist.
- Skin:** Flush with large amounts of water (use soap if available) for at least 15 minutes. Remove grossly contaminated clothing, including shoes, and launder before reuse. Seek medical attention if symptoms persist.
- Ingestion/Oral:** If swallowed, give plenty of water to drink, and seek medical assistance. DO NOT give anything to drink to an unconscious person. Do not induce vomiting. Seek medical attention if symptoms persist.
- Inhalation:** Remove the affected person to fresh air and keep at rest. If breathing problems occur, a qualified individual should administer oxygen or artificial respiration as indicated. Seek immediate medical attention.

Most important symptoms and effect, both acute and delayed

Potential acute health effects:

- Eyes:** May cause irritation and redness.
- Skin:** May cause mild irritation.
- Ingestion / Oral:** May irritate the throat.
- Inhalation:** None known.

Over-exposure symptoms:

- Eyes:** Not available.
- Skin:** Not available.
- Ingestion / Oral:** Not available.
- Inhalation:** Not available.

Indication of any immediate medical attention and special treatment needed

Not available.

5. Fire Fighting Measures

Extinguishing media

- Suitable extinguishing media:** Alcohol resistant foam, Carbon Dioxide, water fog and dry chemical. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media:** DO NOT use water jets to cool containers.

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Special hazards arising from the substance or mixture

Fire and explosion hazard: Low fire hazard. The liquid must be heated before ignition will occur.

Hazardous combustion products Carbon Oxides (CO, CO₂), Nitrogen Oxides (NO_x), Sulphur Oxides (SO_x), hydrocarbons, smoke and irritating vapours may be emitted.

Advice for fire-fighters

Special precautions for fire-fighters: Not available.

Special protective equipment for fire-fighters: Fire-fighters should wear a self-contained breathing apparatus (SCBA) which meets appropriate standards operated in positive pressure mode and full turn out gear.

For Flammability Properties - see Section 9.

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 non-essential staff, or those not equipped with individual protection apparatus. Turn leaking containers leakerside up to prevent the escape of the product. Do not touch or walk through spilled material. Avoid inhalation and contact with skin and eyes. Put on appropriate personal protective equipment (refer to Section 8 for more information).

For emergency responders: None.

Environmental precautions:

Stop the leak if it is safe/possible to do so. Use dykes to prevent spreading. Avoid contaminating sewers, streams, rivers and other water courses with spilled liquid. Notify the appropriate authorities if significant contamination occurs.

Methods and material for containment and cleaning up

Use suitable inert absorbent materials to absorb spilled product. Transfer to a closable, labelled salvage container for disposal by an appropriate method. Dispose of collected product safely: see Section 13 for more information.

Reference to other sections

Refer to Section 8 for information on personal protective equipment.

Refer to Section 13 for information on disposal considerations.

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7. Handling and Storage

Precautions for safe handling

Ensure Personal Protective Equipment is used whenever handling the product, see Section 8. Avoid eating, drinking and smoking in areas where the product is used. Practice good hygiene. Wash hands after use and prior to consuming food and drink. Avoid the formation or spread of mists in the air. Avoid inhalation of mists and contact with skin, eyes and clothing. Prevent small spills and leakage to avoid slip hazard. DO NOT handle near an open flame, sources of heat or sources of ignition. Keep in the original container or an approved, labelled alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain liquid residue and can be hazardous. Do not reuse container.

Conditions for safe storage, including any incompatibilities

Store in original, sealed containers protected from direct sunlight in a dry, cool, well ventilated area away from food and drink, incompatible materials and sources of ignition. 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.

Specific end use(s)

Not available.

8. Exposure Controls/Personal Protection

Control parameters

Ingredient	ACGIH - TLV	OSHA - PEL	Occupational Exposure Limits EH40 (UK)
Mixture of severely hydrotreated and hydrocracked base oil (petroleum)	5 mg/m ³ - 8 hr TWA 10 mg/m ³ - STEL (as oil mist)	Not available	5 mg/m ³ - 8 hr TWA 10 mg/m ³ - STEL (as oil mist)

Exposure controls

Appropriate engineering controls: Ensure good ventilation under all working conditions. Ensure that eyewash station and safety shower are close to working area.

Individual protection measures:

Eye/Face Protection: Safety glasses with side shields.

Hand/Skin Protection: Wear chemical-resistant, impervious gloves, Viton®, Nitrile Neoprene or Polyvinyl alcohol (PVA) gloves are recommended. Gloves should be replaced immediately if signs of degradation are observed. Long sleeved clothing is recommended to minimise skin contact.

Respiratory Protection: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Recommended: Half face filtering respirator (EN140), Gas/vapour filter, type A: organic vapours (EN141).

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Hygiene Measures: Practice good hygiene. Wash hands after handling and before eating. Appropriate techniques should be used to remove potentially contaminated clothing. Launder contaminated clothing before reusing.

Other/General Protection: Use work clothes which protect arms, legs and body.

Environmental exposure controls:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of the environmental protection legislation. Engineering modifications may be necessary to reduce emissions to acceptable levels.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Colourless to pale yellow liquid	Melting point / freezing point	<u>Grades 15, 19:</u> -15 / 5 <u>Grades 20, 70:</u> -12 / 10	°C / °F
Odour	Characteristic	Initial boiling point and boiling range	Not applicable	°C / °F
Odour threshold	Not available	Flash point	<u>Grades 15, 19, 20:</u> > 220 / 428 <u>Grade 70:</u> 230 / 446	°C / °F
pH	Not available	Upper/lower flammability or explosive limits	Not available	°C / °F
Evaporation rate	Negligible	Vapour pressure	Not available	hPa
Flammability (solid, gas)	Not available	Vapour density	Not available	g/cm ³
Solubility(ies)	Insoluble in water	Relative density	0.86 @ 15 °C	g/ml
Partition coefficient: n-octanol/water	Not available	Auto-ignition temperature	Not available	°C / °F
Explosive properties	Not available	Decomposition temperature	Not available	°C / °F
Oxidising properties	Not available	Viscosity	<u>Grade 15:</u> 38 / 100 @ 40 °C <u>Grade 19:</u> 55 / 131 @ 40 °C <u>Grade 20:</u> 103 / 217 @ 40 °C <u>Grade 70:</u> 70 / 158 @ 40 °C	cSt

Other information

Not applicable.

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10. Stability and Reactivity

Reactivity:	Not available.
Chemical stability:	Stable under normal conditions of use.
Possibility of hazardous reactions:	Not available.
Conditions to avoid:	None known.
Incompatible materials:	Oxidising agents, reducing agents, acids and alkalis.
Hazardous decomposition products:	Does not decompose at ambient temperatures. Thermal decomposition will give rise to carbon oxides, diphenylamine. Thermal decomposition can lead to the release of irritating gases and vapours.

11. Toxicological Information

Information on toxicological effects

Acute toxicity:	LD50 Oral: > 5,000 mg/kg (rat) LD50 Dermal: > 2,000 mg/kg (rat) LC50 Inhalation: > 2,500 mg/m ³ (rat, dusts and mists)
Irritation:	Not available.
Corrosivity:	Not available.
Sensitisation:	Not available.
Repeat dose toxicity:	Not available.
Carcinogenicity:	Not known to be carcinogenic.
Mutagenicity:	Not available.
Specific Target Organ Toxicity (STOT) - single exposure	Not available
STOT - repeated exposure	Not available
Aspiration hazard	Not available
Toxicity for reproduction:	Not available.

Information on likely routes of exposure

Not available.

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Symptoms related to the physical, chemical and toxicological characteristics

Eye Effects: May cause irritation and redness.
Skin Effects: May cause mild irritation.
Ingestion/Oral Effects: May irritate the throat.
Inhalation Effects: None known.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Not available.

Other information

Not available.

12. Ecological Information

There are no known incidents of ecological damage, nor would be this be expected in normal use.

Acute Toxicity

Not available.

Persistence and Degradability

Expected to be biodegradable.

Bioaccumulative Potential

Not bioaccumulative potential.

Mobility in soil

Not available.

Results of PBT and vPvB assessment

PBT: Not available.
vPvB: Not available.

Other adverse effects

No known adverse effects.

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13. Disposal Considerations

Waste treatment methods

Product: This product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

Used material should be disposed of through a suitably qualified or licensed waste contractor. Care should be taken to ensure compliance with national and local regulations. This product is NOT suitable for disposal by either landfill or via municipal sewers, drains, natural streams or rivers

Packaging: Empty packaging should be taken for recycling, recovery or disposal through a suitably qualified or licensed contractor. Ensure compliance with local regulations.

DO NOT pressurise, cut, heat or weld containers. Empty product containers may contain product residue.

DO NOT reuse empty containers without commercial cleaning or reconditioning.

14. Transport Information

This product is not classified as dangerous under transport regulations.

Parameter	ADR/RID	IMDG	IATA	Canadian TDG	United States DOT
UN number	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
UN proper shipping name	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Transport hazard class	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Packing group	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Environmental hazards	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Special precautions for user	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code

Not available.

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15. Regulatory Information

Safety, health and environment regulations/legislation specific for the substance or mixture

European

This product has been classified in accordance with EU Regulation No 1272/2008 (as amended) on the Classification, Labelling and Packaging of Substances and Mixtures.

Classified as dangerous to supply: No.

German Federal Water Management Act: Water contaminating class - Not available.

United States

All materials contained in this product are on the U.S. Toxic Substances Control Act (TSCA).

SARA TITLE III - SECTION 313 SUPPLIER NOTIFICATION:

This product does not contain toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 and 40 CFR Part 372.

California Proposition 65: This product does not contain chemicals known to the State of California to cause cancer or reproductive toxicity.

Canadian

WHMIS Classification: Not applicable.

All ingredients in this product are included in the Canadian DSL.

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16. Other Information

This SDS is compiled in accordance with ANSI Z400.1, Regulation (EC) No 1907/2006 (as amended by Regulation No 453/2010) concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Full text of abbreviated statements and phrases

Not applicable.

NFPA / HMIS hazard codes

NFPA Hazard codes		HMIS Hazard codes		Rating System
Health	1	Health	1	0 = No Hazard
Flammability	1	Flammability	1	1 = Slight Hazard
Instability	0	Reactivity	0	2 = Moderate Hazard
				3 = Serious Hazard
				4 = Severe Hazard

Sources of information for this data sheet

- Multisol Limited "ULTRAGRADE 15" Material Safety Data Sheet. Revision 04. Date: 13th November 2009.
- Multisol Limited "ULTRAGRADE 19" Material Safety Data Sheet. Revision 04. Date: 13th November 2009.
- Multisol Limited "ULTRAGRADE 20" Material Safety Data Sheet. Revision 04. Date: 13th November 2009.
- PETRO-CANADA "ULTRAGRADE 70" Material Safety Data Sheet. Revision 00. Date: 30th October 2009.

Glossary

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; ANSI - American National Standards Institute; Canadian TDG - Canadian Transportation of Dangerous Goods; CAS - Chemical Abstracts Service; Chemtrec - Chemical Transportation Emergency Center (US); DSL - Domestic Substances List; EC - Effective Concentration; EH40 (UK) - HSE Guidance Note EH40 Occupational exposure limits; EPCRA - Emergency Planning and Community Right-to-Know Act; GHS - Globally Harmonized System of Classification and Labelling of Chemicals; HMIS - Hazardous Material Information Service; IATA - International Air Transport Association; IMDG - International Maritime Dangerous Goods; LC - Lethal Concentration; LD - Lethal Dose; NFPA - National Fire Protection Association; OSHA - Occupational Safety and Health Administration, US department of Labour; PBT - Persistent, Bioaccumulative and Toxic; vPvB - Very Persistent, Very Bioaccumulative; PEL - Permissible exposure limit; RID - European Agreement concerning the International Carriage of Dangerous Goods by Rail; SARA (Title III) - Superfund Amendments and Reauthorization Act; SARA 313 - Superfund Amendments and Reauthorization Act, Section 313; SCBA - Self-Contained Breathing Apparatus; STEL - Short Term Exposure Limit; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act Public Law 94-469; TWA - Time-Weighted Average; US DOT - US Department of Transportation; WHMIS - Workplace Hazardous Materials Information System.



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Revisions:

December 2010 - Data Sheet updated to reflect the latest regulatory and supplier safety information.

February 2012 - Data Sheet updated to reflect the latest regulatory and PETRO-CANADA (supplier) safety information for "ULTRAGRADE 70".

July 2012 - Data Sheet updated to reflect the latest regulatory and PETRO-CANADA (supplier) safety information for "ULTRAGRADE 70".

November 2012 - European and US Contact Details updated.

February 2013 - Amendments to Section 3.

September 2013 - Data Sheet updated to conform to Regulation (EC) No 1907/2006 (as amended by Regulation No 453/2010) and GHS.

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