

PRODUCT NAME : Mechanical Pump Oil -Ultragrade 15, 19, 20, 70**1. Product and Company Identification**

Product Names: Ultragrade 15, Ultragrade 19, Ultragrade 20, Ultragrade 70 Mechanical Pump Oils

Synonyms: Ultragrade 15: Super Vac fluid 15
Ultragrade 19: Super Vac fluid 19
Ultragrade 20: Super Vac fluid 20
Ultragrade 70: 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
Ultragrade 20: H110-24-010, H110-24-011, H110-24-012, H110-24-013, H110-24-015
Ultragrade 70: H110-28-013, H110-28-011, H110-28-010

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2. Composition/Information on Ingredients

Ingredient	% Weight	CAS No	Hazard class*	Risk phrase*
Severely hydrotreated paraffinic oil and additives	100	8042-47-5	Not applicable	Not applicable

*Hazard class & Risk phrase. These columns are only completed for ingredients which are classified as hazardous under EU Directive (67/548/EEC, 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".

3. Hazards Identification**EMERGENCY OVERVIEW**

Non hazardous in bulk liquid form at low to moderate temperatures. Prolonged/repeated skin contact may cause irritation/dermatitis. Heating to high temperature or mechanical actions may produce fumes which may cause irritation of the breathing passages.

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

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Eye Effects: May cause irritation.

Skin Effects: Prolonged or repeated contact with skin may cause irritation and possible dermatitis.

Ingestion/Oral Effects: Low toxicity on ingestion, has laxative effect and is rapidly eliminated.

Inhalation Effects: Negligible breathing hazard at normal temperatures (up to 38°C/100°F) or recommended blending temperatures. Elevated temperatures or mechanical action may form vapours, mists and fumes. Inhalation of oil mists or vapours from hot oil may cause irritation to the upper respiratory tract. Oil deposits in the lung may lead to fibrosis and reduced pulmonary functions.

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

4. First Aid Measures

Eyes: Flush eyes with large amounts of water until irritation subsides. If irritation persists get medical assistance. Keep eyelids open whilst flushing.

Skin: Flush with large amounts of water-use soap if available. Remove grossly contaminated clothing, including shoes, and launder before reuse.

Ingestion/Oral: If swallowed, do not induce vomiting. Keep at rest. Get prompt medical attention.

Inhalation: Using approved respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing has stopped. If breathing is difficult, give oxygen. Keep at rest. Call for prompt medical attention.

Other Information: None.

5. Fire Fighting Measures

Extinguishing Media: Use water spray to cool surfaces exposed to fire. Extinguish with foam or dry chemical. Avoid spraying water directly into storage containers due to danger of boil over.

Fire and Explosion Hazard: Containers may explode if exposed to fire. Hazardous combustion products : carbon dioxide (CO₂), carbon monoxide(CO), nitrogen oxides (NO_x), phosphorus oxides (PO_x), smoke and irritating fumes as result of incomplete combustion. Direct water stream may cause violent frothing.

Special Protective Equipment for Fire Fighters: No special protection required for small outdoor fires. Indoor fires & significant outdoor fires, wear a self-contained breathing apparatus (SCBA) which meets appropriate standards operated in positive pressure mode, and full turn out gear.

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For Flammability Properties - see Section 9

6. Accidental Release Measures

In case of land spillage :

- Eliminate sources of ignition. Warn occupants of downwind areas of fire and explosion hazard. Prevent liquid from entering sewers, watercourses or low areas.
- Keep public away. Shut off source if possible to do so without hazard. Advise police if substance has entered watercourse or sewer or has contaminated soil or vegetation. Take measures to minimise the effect on ground water.
- Contain spillage with sand or earth. Remove by pumping (use an explosion proof pump or hand pump) or with a suitable absorbent. If liquid is too viscous for pumping, scrape up with shovels and place in suitable containers for recycle or disposal. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

In case of spillage into water :

- Eliminate sources of ignition. Warn occupants and shipping in downwind areas of fire and explosion hazard and request them to stay clear.
- Notify port or relevant authority and keep public away. Shut off source if possible to do so without hazard. Confine if possible.
- Remove from surface by skimming or with suitable absorbents. If allowed by local authorities and environmental agencies, sinking and/or suitable dispersants may be used in non-confined waters.
- Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

See Section 4 "First Aid measures" and Section 10 "Stability and Reactivity".

7. Handling and Storage

Handling: Keep away from sources of ignition. Avoid contact with eyes and skin. Practice good hygiene. Wash hands after handling and before eating. Launder work clothes frequently. Do not reuse empty containers without commercial cleaning or reconditioning.

Storage: Combustible materials should be stored away from extreme heat and strong oxidising agents. Store in tightly closed containers in cool, dry and well ventilated areas. Electrically earth all equipment containing the material.

Exposure Controls/Personal Protection**Exposure Limits**

Ingredient	ACGIH - TLV -	OSHA - PEL	Occupational Exposure Limits EH40 (UK)
Severely hydrotreated paraffinic oil	5 mg/m ³ - 8 H TWA** 10 mg/m ³ - STEL (as oil mist, mineral)	5 mg/m ³ - 8 H TWA (as oil mist, mineral)	5 mg/m ³ - 8 H TWA 10 mg/m ³ - STEL (as oil mist, mineral)

Recommendation by the manufacturer for oil mists : ACGIH TLV. TWA : 8h - 5 mg/m³.

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Personal Protection:

Engineering Measures:	Ensure good ventilation under all working conditions. Ensure that eyewash station and safety shower are close to working area.
Respiratory Protection:	No special respiratory protection is normally required. For high airborne concentrations with inadequate ventilation, use an approved organic vapour cartridge respirator.
Hand/Skin Protection:	For casual contact PVC gloves are suitable. For direct contact of more than 2 hours, Viton or Nitrile gloves are recommended. Long sleeved clothing is recommended to minimise skin contact.
Eye/Face Protection:	Chemical splash goggles in case of splashing.
Hygiene Measures:	Practice good hygiene. Wash hands after handling and before eating.
Other/General Protection:	None.

9. Physical and Chemical Properties

Appearance and Odour	Pale yellow, odourless liquid	Boiling Point	Grades 15, 19 & 20: 380/716 Grade 70: 400/752	⁰ C/ ⁰ F
pH (as supplied)	No data available	Freezing Point	No data available	⁰ C/ ⁰ F
Solubility in Water	Insoluble in cold water	Auto Ignition	Grades 15, 29 & 20: 355/671 Grade 70: 365/689	⁰ C/ ⁰ F
Volatile Content by Volume	Non volatile	Flash Point	Grades 15, 19: >200/362 Grade 20: 230/448 Grade 70: 200/392	⁰ C/ ⁰ F
Specific Gravity	0.86-0.87 @ 20°C			
Vapour Pressure (mbar)	Grades 15 & 19: 2.7x10 ⁻⁷ @ 25°C Grades 20 & 70: 8x10 ⁻⁶ @ 20°C	Vapour Pressure (Torr)	Grades 15 & 19: 2x10 ⁻⁷ @ 68°F Grade 20 & 70: 6x10 ⁻⁶ @ 68°F	

10. Stability and Reactivity

Stability:	Stable.
Material/Conditions to Avoid:	Strong oxidising agents. Excessive heat and formation of oil mist
Hazardous Decomposition:	Carbon dioxide (CO ₂), carbon monoxide (CO), nitrous oxides (NO _x), phosphorus oxides (PO _x), and smoke on combustion.

11. Toxicological Information

For a comprehensive description for the various toxicological (health) effects which may arise if the user comes into contact with the substance or preparation refer to Section 3 Hazards Identification.

PRODUCT NAME : Mechanical Pump Oil -Ultragrade 15, 19, 20, 70**Animal Data:**

LD50 value: Oral : 5000 mg/kg (rat)
Dermal : >2000 mg/kg (rabbit),
LC50 value: Inhalation :>5200 mg/m³/4h (rat)
Dermal/eye irritation : non irritant to rabbit

Carcinogenicity:

No information available.

12. Ecological Information

This product has the potential for degradation by bacteria over an extended period of time. Based on toxicity of similar products, base oils have none to low acute toxicity towards aquatic organisms. 57-88% of base oils are biodegradable in 28 days.

Potential for food chain concentration or accumulation is low.

13. Disposal Considerations

Used material and empty containers 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.

14. Transport Information

This product is not regulated as dangerous under transport regulations.

PARAMETER	EUROPEAN	CANADIAN TDG	UNITED STATES DOT
Proper Shipping Name	Not applicable	Not applicable	Not applicable
Hazard Class	Not applicable	Not applicable	Not applicable
Identification Number	Not applicable	Not applicable	Not applicable
Shipping Label	Not applicable	Not applicable	Not applicable

15. Regulatory Information**European Regulatory Information**

This product has been classified in accordance with the Dangerous Substances Directive (67/548/EEC, as amended) and the Preparations Directive (88/379/EEC, as amended), implemented in the UK as the Chemical (Hazard Information and Packing) Regulations 1994 (CHIP, as amended).

Classified as dangerous to supply : No

Risk Phrases : Not applicable

Safety Phrases : Not applicable

Symbols : None

PRODUCT NAME : Mechanical Pump Oil -Ultragrade 15, 19, 20, 70**United States Regulatory Information**

This material is on the Toxic Substances Act Inventory (TSCA-USA)

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 Regulatory Information

This material is on the Domestic Substances List (DSL-Canada)

WHMIS Classification: Not Classified

16. Other Information

This MSDS is compiled in accordance with ANSI Z400.1 and the EU Safety Data Sheet Directive 91/155/EEC.

Sources of information for this data sheet:

- Multisol Material Safety Data Sheet for Ultragrade 15. Revision 01. Date : 9 July, 1997.
- Multisol Material Safety Data Sheet for Ultragrade 19. Revision 01. Date : 9 July, 1997.
- Multisol Material Safety Data Sheet for Ultragrade 20. Revision 01. Date : 8 July, 1997.
- Multisol Material Safety Data Sheet for Ultragrade 70. Revision 01. Date : 21 November, 1997.

Glossary : **CAS**, Chemical Abstracts Service; **NFPA**, National Fire Protection Association; **HMIS**, Hazardous Material Information Service; **LD**, Lethal Dose; **LC**, Lethal Concentration; **ACGIH**, American Conference of Governmental Industrial Hygienists; **TLV**, threshold limit value; **OSHA**, Occupational Safety and Health Administration, US department of Labour; **PEL**, Permissible exposure limit; **EH40 (UK)**, HSE Guidance Note EH40 Occupational exposure limits; **PPM**, parts per million; **TWA**, Time-Weighted Average; **STEL**, Short Term Exposure Limit; **Canadian TDG**, Canadian Transportation of Dangerous Goods; **US DOT**, US Department of Transportation. **HSDB**, Hazardous Substances Data Bank; **RTECS**, Registry of Toxic Effects of Chemical Substances; **CHEMID**, Chemical Identification; **DSL**, Domestic Substances List ; **TSCA**, Toxic Substances Control Act Public Law 94-469; **CERCLA**, Comprehensive Environmental Response, Compensation and Liability Act; **EPCRA**, Emergency Planning and Community Right-to-Know Act; **CAA**, Clean Air Act; US, **SARA (Title III)**, Superfund Amendments and Reauthorization Act.; **SARA 313**, Superfund Amendments and Reauthorization Act, Section 313; **EHS**, Extremely Hazardous Substance; **WHMIS**, Workplace Hazardous Materials Information System.

Revisions

Although the information and recommendations in this data sheet are to the best of our knowledge correct, it is recommended that you make your own determination of the material's suitability for your purpose before you use it. The information contained in this data sheet has been reproduced from the manufacturers data, the accuracy of this information is the responsibility of the manufacturer. BOC Edwards accept no responsibility for damage of any nature resulting from the use of, or the reliance upon this data sheet.