

MATERIAL SAFETY DATA SHEET

Revision Date : 08.06.2006

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : WHITOL 368
Chemical name : Severely-refined paraffinic distillate
Product use : Pharmacopoeia lubricant for pharmaceuticals, cosmetics,
food-processing and veterinary preparations.
MSDS Internet website : www.hitechchemicals.co.za

2. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical name | CAS-No. | Weight% | Symbol Codes | R-Phrase Numbers |
|--|-----------|---------|--------------|------------------|
| Severely-refined heavy paraffinic distillate | 8042-47-5 | 100.00 | | |

See Section 15 for European Label Information.

See Section 8 for Exposure Limits (if applicable).

3. HAZARDS IDENTIFICATION

Emergency response data : Colourless Liquid. DOT ERG No. - Not applicable.

Potential health effects

Note : No significant effects expected.

See Section 11 for further health effects/toxicological data.

4. FIRST AID MEASURES

Inhalation : Not expected to be a problem. However, if respiratory irritation occurs due to excessive vapour or mist exposure, seek immediate medical assistance.

Skin contact : Not expected to be a problem.

Eye contact : Flush thoroughly with water. If irritation occurs call a doctor.

Ingestion : Not expected to be a problem. However, if discomfort occurs seek medical attention. Do not induce vomiting.

5. FIRE-FIGHTING MEASURES

Extinguishing media : Carbon dioxide, foam, dry chemical and water fog.

Special fire fighting procedure : Water or foam may cause frothing. Use water to keep fire exposed containers cool. Water spray may be used to flush spills away from exposure. Prevent runoff from fire control or dilution from entering streams, municipal sewers, or drinking water supply.

Special protective equipment for firefighters : For fires in enclosed areas, fire fighters must use Self-Contained Breathing Apparatus.

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| Unusual fire and explosive hazards | : | None. |
| Products of decomposition | : | Fumes, smoke, carbon monoxide, sulphur oxides, aldehydes and other decomposition products, in the case of incomplete combustion. |
| Flash Point | : | 200 °C (ASTM D-92) |
| Upper Explosion Limit | : | 7 %(V) |
| Lower Explosion Limit | : | 0.9 %(V) |
| NFPA Hazard Id | : | Health: 0; Flammability: 1; Reactivity: 0 |

6. ACCIDENTAL RELEASE MEASURES

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| Procedure if material is released or spilled | : | Report spills/releases as required to appropriate authorities. |
| Methods for cleaning up | : | LAND SPILL: Shut off source taking normal safety precautions. Take measures to minimize the effects on ground water. Recover by pumping using explosion-proof equipment or contain spilled liquid with sand or other suitable absorbent and remove mechanically into containers. If necessary, dispose of absorbed residues as directed in Section 13. WATER SPILL: Notify port and relevant authorities. Confine with booms if skimming equipment is available to recover the spill for later recycling or disposal. |
| Environmental precautions | : | Prevent spill from entering municipal sewers, water sources or low lying areas. Advise the relevant authorities if contaminations have occurred. |

7. HANDLING AND STORAGE

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| Safe handling advice | : | No special precautions are necessary beyond normal good hygiene practices. See Section 8 for additional personal protection advice when handling this product. |
| Storage information | : | Keep containers closed when not in use. Do not store in open or unlabelled containers. Do not store near heat sources, sparks, flames, strong oxidizing agents and combustible materials. |
| Storage and handling procedures | : | Prevent small spills and leakages to avoid slip hazard. |

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits (OELs)

| Components | CAS-No. | Source | TWA | Value | | Notations |
|--|----------------|---------------|--------------|---|--|------------------|
| Severely-refined heavy paraffinic distillate | 8042-47-5 | ACGIH(TLV) | LTEL STEL | 5 mg/m ³ 10 mg/m ³ | | Oil mists |

LTEL: Long Term Exposure Limits - Time Weight Average (TWA) over 8 hours.

STEL: Short Term Exposure Limits - Time Weight Average (TWA) over 15 Minutes

Note: Limits Shown for guidance only. Follow applicable regulations.

Personal Protection Equipment (PPE)

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| Engineering controls | : | If mists are generated, use ventilation, local exhaust or enclosures to control below exposure limits. |
| Respiratory protection | : | Approved respiratory equipment must be used when mist concentrations exceed the recommended exposure limits. |
| Eye protection | : | If splash with liquid is possible, chemical type goggles should be worn. |
| Skin and body protection | : | No special equipment required. However, if frequent splashing or liquid contact is likely to occur, wear oil impervious gloves and clothing. Good personal hygiene practices should always be followed. |

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9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
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| Appearance | : | Liquid. |
| Colour | : | Colourless |
| Odour | : | Mild |
| Solubility | : | Negligible |
| Boiling point/range | : | > 316 °C |
| Flash Point | : | 200 °C (ASTM D-92) |
| Vapour pressure | : | < 0.1 hPa |
| Density | : | 0.8550 g/cm ³ @ 20 °C (ASTM D- |
| Viscosity, kinematic | : | 68.00 mm ² /s @ 40 °C (ASTM D-445) |

10. STABILITY AND REACTIVITY

| | | |
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| Stability | : | Stable. |
| Conditions to avoid | : | Extreme Heat |
| Materials to avoid | : | Strong oxidizers. |
| Hazardous decomposition products | : | Fumes, smoke, carbon monoxide, sulphur oxides, aldehydes and other decomposition products, in the case of incomplete combustion. |

11. TOXICOLOGICAL INFORMATION

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| Acute oral toxicity | : | (Rats): Practically non-toxic (LD50: Greater than 2000 mg/kg). Based on testing of similar products and/or components. |
| Acute inhalation toxicity | : | Not applicable. Harmful concentrations of mists and/ or vapours are unlikely to be encountered through any customary or reasonably foreseeable handling, use, or misuse of this product. |
| Acute dermal toxicity | : | (Rabbits): Practically non-toxic (LD50: greater than 2000 mg/kg). Based on testing of similar products and/or the components. |
| Skin irritation | : | (Rabbits): Practically non-irritating. (Primary Irritation Index: 0.5 or less). Based on testing of similar products and/or the components. |
| Eye irritation | : | (Rabbits): Practically non-irritating. (Draize score: greater than 0 but 6 or less). Based on testing of similar products and/or the components. |
| Repeated dose toxicity | : | Severely solvent refined and severely hydrotreated mineral base oils have been tested at an Environmental and Health Sciences Laboratory by dermal application to rats 5 days/week for 90 days at doses significantly higher than those expected during normal industrial exposure. Extensive evaluations including microscopic examination of internal organs and clinical chemistry of body fluids, showed no adverse effects. |
| Carcinogenicity | : | Chronic mouse skin painting studies of severely solvent refined mineral base oils showed no evidence of carcinogenic effects. |
| Other toxicological information | : | Overexposure to oil mist may result in oil droplet deposition and/or granuloma formation. |

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

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| Biodegradability | : | Readily Biodegradable. |
| Physico-chemical removability | : | Adsorption to sediment and soil will be the predominant behaviour. |
| Bioaccumulation | : | Minimal owing to low water solubility. |

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Ecotoxicity effects

Toxicity to aquatic organisms : This substance is practically non-toxic to aquatic organisms (LL50 >1000 mg/l).

Further information on ecology

Remarks : In the absence of specific environmental data for this product, this assessment is based on information for representative substances.

13. DISPOSAL CONSIDERATIONS

Waste disposal : Product is suitable for burning in an enclosed, controlled burner for fuel value or disposal by supervised incineration. Such burning may be limited pursuant to the Resource Conservation and Recovery Act. In addition, the product is suitable for processing by an approved recycling facility or can be disposed of at any government approved waste disposal facility. Use of these methods is subject to user compliance with applicable laws and regulations and considerations of product characteristics at time of disposal.

Other regulations : The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity, or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

Flash Point : 200 °C (ASTM D-92)

14. TRANSPORT INFORMATION

Note : This product is not regulated by the following: U.S. DOT (CFR), ADR, IATA and IMDG.

Static Accumulator (50 picosiemens or less) : Yes

15. REGULATORY INFORMATION

US OSHA Hazard Communication Standard : When used for its intended purposes, this product is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

Governmental Inventory Status : All components comply with TSCA, EINECS/ELINCS, AICS, METI, DSL, KECI, ENCS, PICCS and IECSC.

EU Labelling : Product is not dangerous as defined by the European Union Dangerous Substances/Preparations Directives. EU labelling not required.

SARA

U.S. Superfund Amendments and Reauthorization Act SARA Title III : This product contains no "EXTREMELY HAZARDOUS SUBSTANCES".

SARA (311/312) Reportable Hazard Categories : None

The following product ingredients are cited on the lists below

| Chemical name | CAS-No. | Concentration [%] | List Citations |
|--|-----------|-------------------|----------------|
| Severely-refined heavy paraffinic distillate | 8042-47-5 | 100.00 | |

Regulatory List Searched

1 = ACGIH ALL 6 = IARC 1 11 = TSCA 4 17 = CA P65 22 = MI 293
2 = ACGIH A1 7 = IARC 2A 12 = TSCA 5a2 18 = CA RTK 23 = MN RTK

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|--------------|---------------|---------------|-------------|-------------|
| 3 = ACGIH A2 | 8 = IARC 2B | 13 = TSCA 5e | 19 = FL RTK | 24 = NJ RTK |
| 4 = NTP CARC | 9 = OSHA CARC | 14 = TSCA 6 | 20 = IL RTK | 25 = PA RTK |
| 5 = NTP SUS | 10 = OSHA Z | 15 = TSCA 12b | 21 = LA RTK | 26 = RI RTK |

Code Key: CARC = Carcinogen; SUS = Suspected Carcinogen

16. OTHER INFORMATION

Note: Our products do not contain PCBs.

FIRST AID: Wash skin with soap and water. Flush eyes with water. If overcome by fumes or vapour, remove to fresh air. If ingested do not induce vomiting. If symptoms persist seek medical attention. Read and understand the MSDS before using this product.

INJECTION INJURY WARNING: If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a doctor as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

SAFETY: Under normal conditions of intended use, this product does not pose a risk to health. Excessive exposure may result in eye, skin or respiratory irritation. Always observe good hygiene measures.

Disclaimer

Information given herein is offered in good faith as accurate, but without guarantee. Conditions of use and suitability of the product for particular uses are beyond our control; all risks of use of the product are therefore assumed by the user and we expressly disclaim all warranties of every kind and nature, including warranties of merchantability and fitness for a particular purpose in respect to the use or suitability of the product. Nothing is intended as a recommendation for uses which infringe valid patents or as extending license under valid patents. Appropriate warnings and safe handling procedures should be provided to handlers and users.
