



Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

| | | | |
|----------------------|--|-----------------------------|----------------------------------|
| Common Name | OPTIMOL VISCOGEN 4 | Code | 64400-AG |
| Supplier | CASTROL INDUSTRIAL NORTH AMERICA INC. 1001 WEST 31ST STREET DOWNERS GROVE, IL 60515-1280 | Validation Date | 10/17/2001. |
| Synonym | Not available. | Print Date | 10/17/2001. |
| Trade name | Not available. | Responsible Name | Product Stewardship & Toxicology |
| Material Uses | Not available. | In Case of Emergency | CHEMTREC (800) 424-9300 |
| Manufacturer | CASTROL INDUSTRIAL NORTH AMERICA INC 1001 WEST 31ST STREET DOWNERS GROVE, IL 60515-1280 | | |

Section 2. Composition, Information on Ingredients

| Name | CAS # | % by Weight | Exposure Limits |
|---|------------|-------------|--|
| 1) DISTILLATES, PETROLEUM, HYDROTREATED HEAVY NAPHTHENIC | 64742-52-5 | 55-60 | ACGIH (United States). TWA: 5 mg/m ³ Form: Mist OSHA (United States). TWA: 5 mg/m ³ Form: Mist ACGIH (United States). STEL: 10 mg/m ³ Form: Mist |
| 2) DISTILLATES, PETROLEUM, HYDROTREATED LIGHT NAPHTHENIC | 64742-53-6 | 1-5 | ACGIH (United States). TWA: 5 mg/m ³ Form: Mist OSHA (United States). TWA: 5 mg/m ³ Form: Mist ACGIH (United States). STEL: 10 mg/m ³ Form: Mist |
| 3) DISTILLATES, PETROLEUM, SOLVENT-DEWAXED HEAVY PARAFFINIC | 64742-65-0 | 15-20 | ACGIH (United States). TWA: 5 mg/m ³ Form: Mist OSHA (United States). TWA: 5 mg/m ³ Form: Mist ACGIH (United States). STEL: 10 mg/m ³ Form: Mist |
| 4) GRAPHITE | 7782-42-5 | 15-20 | ACGIH (United States, 1994). TWA: 2 mg/m ³ Form: Dust OSHA Final Rule (United States, 1989). TWA: 2.5 mg/m ³ Form: Respirable dust OSHA (United States). TWA: 3 mg/m ³ Form: Respirable fraction OSHA (United States). CEIL: 3 mg/m ³ Form: Respirable fraction |

Section 3. Hazards Identification

| | |
|--------------------------------------|---|
| Physical State and Appearance | Liquid. (Stiff black grease) |
| Emergency Overview | WARNING! CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: RESPIRATORY TRACT. |
| Routes of Entry | Absorbed through skin. Eye contact. Inhalation. |

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999-10487-0503

Potential Acute Health Effects

May cause eye irritation. Oral LD50 not established. Do not ingest. TLV for product not established. Refer to Hazardous Materials List for ingredient TLV's. No acute effects expected. May cause skin irritation.

Potential Chronic Health Effects

CARCINOGENIC EFFECTS: Not known to be carcinogen.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

Medical Conditions**Aggravated by Overexposure:**

Repeated or prolonged exposure is not known to aggravate medical condition.

Overexposure /Signs/Symptoms

Not available.

See Toxicological Information (section 11)

Section 4. First Aid Measures**Eye Contact**

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact

In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Inhalation

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Notes to Physician

Not available.

Section 5. Fire Fighting Measures**Flammability of the Product**

May be combustible at high temperature.

Autoignition Temperature

Not available.

Flash Points

CLOSED CUP: 200°C (392°F). (ISO 2592)

Flammable Limits

Not available.

Products of Combustion

These products are carbon oxides (CO, CO₂). Some metallic oxides.

Fire Hazards in Presence of Various Substances

Not available.

Explosion Hazards in Presence of Various Substances

Risks of explosion of the product in presence of mechanical impact: Not available.

Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions

SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Carbon dioxide, dry chemical, foam. Wear self-contained breathing apparatus when fire fighting in a confined space. Cool fire exposed containers with waterspray to prevent rupture.

Protective Clothing (Fire)

Be sure to use an approved/certified respirator or equivalent.

Special Remarks on Fire Hazards

Potential combustion products are oxides of carbon and sulfur.

Special Remarks on Explosion Hazards

Not available.

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Section 6. Accidental Release Measures

| | |
|-----------------------------|--|
| Small Spill and Leak | Absorb with an inert material and put the spilled material in an appropriate waste disposal. |
| Large Spill and Leak | Absorb with an inert material and put the spilled material in an appropriate waste disposal. |

Section 7. Handling and Storage

Avoid breathing vapors or spray mists.

Keep container tightly closed. Keep container in a cool, well-ventilated area.

Wash contaminated clothing before reuse. Do not take internally. Avoid contact with skin and eyes. Keep containers closed when not in use. Store in cool dry place. Bring product to room temperature prior to use.

Section 8. Exposure Controls, Personal Protection

Engineering Controls Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Good industrial hygiene practices recommend that engineering controls be used to reduce environmental concentrations to the threshold limit value (TLV) or permissible exposure limit (PEL), if applicable. If any associated TLV or PEL is exceeded, provide NIOSH approved respiratory protection.

Personal Protection

Eyes Safety glasses.

Body Lab coat.

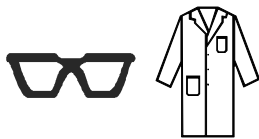
Eyewash facility

Respiratory Not applicable.

Hands

Chemical resistant gloves should be used when handling this product.

Feet Not applicable.

Protective Clothing (Pictograms)

Personal Protection in Case of a Large Spill Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Product Name**Exposure Limits**

1) DISTILLATES, PETROLEUM, HYDROTREATED HEAVY NAPHTHENIC

ACGIH (United States).

TWA: 5 mg/m³ Form: Mist **OSHA (United States).**

TWA: 5 mg/m³ Form: Mist **ACGIH (United States).**

STEL: 10 mg/m³ Form: Mist

2) DISTILLATES, PETROLEUM, HYDROTREATED LIGHT NAPHTHENIC

ACGIH (United States).

TWA: 5 mg/m³ Form: Mist **OSHA (United States).**

TWA: 5 mg/m³ Form: Mist **ACGIH (United States).**

STEL: 10 mg/m³ Form: Mist

3) DISTILLATES, PETROLEUM, SOLVENT-DEWAXED HEAVY PARAFFINIC

ACGIH (United States).

TWA: 5 mg/m³ Form: Mist **OSHA (United States).**

TWA: 5 mg/m³ Form: Mist **ACGIH (United States).**

STEL: 10 mg/m³ Form: Mist

4) GRAPHITE

ACGIH (United States, 1994).

TWA: 2 mg/m³ Form: Dust **OSHA Final Rule (United States, 1989).**

TWA: 2.5 mg/m³ Form: Respirable dust

OSHA (United States).

TWA: 3 mg/m³ Form: Respirable fraction **OSHA (United States).**

CEIL: 3 mg/m³ Form: Respirable fraction

Consult local authorities for acceptable exposure limits.

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Section 9. Physical and Chemical Properties

| | | | |
|--------------------------------------|------------------------------|-------------------|----------------|
| Physical State and Appearance | Liquid. (Stiff black grease) | Odor | Not available. |
| Boiling/Condensation Point | Not available. | Taste | Not available. |
| Melting/Freezing Point | 185°C (365°F) | Color | Not available. |
| pH Concentrate | Not applicable. | | |
| pH Dilution % and Value | NA | | |
| Critical Temperature | Not available. | | |
| Specific Gravity | 0.9 (Water = 1) | | |
| Vapor Pressure | Not available. | | |
| Vapor Density | Not available. | | |
| Volatility | 3.44% (w/w). | | |
| Odor Threshold | Not available. | | |
| Evaporation Rate | Not available. | | |
| VOC | 3 (%) | VOC Method | Not available. |
| Viscosity | Not available. | | |
| Solubility | Insoluble in cold water. | | |
| Physical Chemical Comments | Not available. | | |

Section 10. Stability and Reactivity

| | |
|--|--------------------------|
| Stability and Reactivity | The product is stable. |
| Conditions of Instability | None known. |
| Incompatibility with Various Substances | Strong oxidizing agents. |
| Hazardous Decomposition Products | Not available. |
| Hazardous Polymerization | Will not occur. |

Section 11. Toxicological Information

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|---|--|
| Toxicity to Animals | LD50: Not available. LC50: Not available. |
| Chronic Effects on Humans | CARCINOGENIC EFFECTS: Not known to be carcinogen. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. |
| Other Toxic Effects on Humans | No specific information is available in our database regarding the other toxic effects of this material for humans. |
| Special Remarks on Toxicity to Animals | Not available. |
| Special Remarks | In case of contact, flush eyes with plenty of water. Get medical attention if irritation persists. If swallowed, call a physician immediately. Only induce vomiting at the instructions of a physician. Never give anything by mouth to an unconscious person. If respiratory discomfort or irritation occurs, move the person to fresh air. See a doctor if discomfort or irritation continues. Wash skin with soap and water. If irritation occurs, get medical attention. Wash clothing before reuse. |
| Special Remarks on Other Toxic Effects on Humans | May cause eye irritation. Oral LD50 not established. Do not ingest. TLV for product not established. Refer to Hazardous Materials List for ingredient TLV's. No acute effects expected. May cause skin irritation. |

Section 12. Ecological Information

| | |
|--|---|
| Ecotoxicity | Not available. |
| BOD and COD | Not available. |
| Biodegradable/OECD | Not available. |
| Mobility | Not available. |
| Products of Degradation | These products are carbon oxides (CO, CO2) and water. Some metallic oxides. |
| Toxicity of the Products of Biodegradation | The product itself and its products of degradation are not toxic. |
| Special Remarks on the Products of Biodegradation | Not available. |

Section 13. Disposal Considerations

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|--|---|
| Waste Information | Waste must be disposed of in accordance with federal, state and local environmental control regulations. Do not allow Grease to enter streams, sewers, or other waterways. Scoop up excess grease and store in closed container until disposal. Clean up area with appropriate cleaner. Dispose of in accordance with local, state and federal regulations. Disposal of this material to the land may be banned by federal law (40 CFR 268). |
| RCRA Waste Code(s) | USED OIL |
| Waste Stream | Not available. |
| Consult your local or regional authorities. | |

Section 14. Transport Information

| | | |
|---------------------------|----------------|--|
| DOT Classification | Not available. | |
| | Not regulated. | |
| Marine Pollutant | Not available. | |

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Special Provisions for Transport Greases, not regulated in containers less than 3500 gallons.

ADR/RID Classification Not available.

IMO/IMDG Classification Not available.

ICAO/IATA Classification Not available.

Section 15. Regulatory Information

U.S. Federal Regulations No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Not listed.

SARA 313 toxic chemical notification and release reporting: No products were found.

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean air act (CAA) 112 accidental release prevention: No products were found.

Clean air act (CAA) 112 regulated toxic substances: No products were found.

Clean air act (CAA) 112 regulated flammable substances: No products were found.

State Regulations Pennsylvania RTK: GRAPHITE, NATURAL (generic environmental hazard)
 Massachusetts RTK: MINERAL OIL, PETROLEUM DISTILLATES, HYDROTREATED LIGHT NAPHTHENIC; GRAPHITE, NATURAL
 California prop. 65: No products were found.

Inventory Lists TSCA 8(b) inventory: All components of this product are listed on (or meet the exemption requirements of) the applicable inventory list.

CEPA DSL: All components of this product are listed on (or meet the exemption requirements of) the applicable inventory list.

Australia (NICNAS): All components of this product are listed on (or meet the exemption requirements of) the applicable inventory list.

Korea (TCCL): All components of this product are listed on (or meet the exemption requirements of) the applicable inventory list.

Philippines (RA6969): All components of this product are listed on (or meet the exemption requirements of) the applicable inventory list.

MITI: One or more of the materials contained in this product may not appear on the applicable inventory list. Please consult the manufacturer for additional information.

EINECS: One or more of the materials contained in this product may not appear on the applicable inventory list. Please consult the manufacturer for additional information.

Section 16. Other Information

Label Requirements CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: RESPIRATORY TRACT.

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

| | | |
|---------------------|---|---|
| Health | * | 0 |
| Fire Hazard | | 1 |
| Reactivity | | 0 |
| Personal Protection | | A |

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



References Not available.

Other Special Considerations

PETROLEUM OIL: STEL = 10 mg/M3. Using terminology of the International Agency for Research on Cancer (IARC), the petroleum distillates listed in Section II are classified by the supplier as severely processed. Not all those listed in Section II may be present. The supplier has stated that these distillates do not require a carcinogen label as defined by OSHA 29 CFR 1910.1200. No component known to be present in this product at >0.1% is presently listed as a carcinogen by IARC, NTP or OSHA.

Validated by Larry J. Barder-CINA on 10/17/2001.

Printed 10/17/2001.

CHEMTREC (800) 424-9300

Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.