Safety Data Sheet

SECTION 1: IDENTIFICATION

SDS Number: 633, version 12/20/2018

(a) Product identifier
Gans Item ID: A115055, 88855, A115478, 86832, 80731, 80731L

Gans Description: OS Bronco Black, OS High Density Black, OS LZR Rotary Black, OS Spec Hard Dry Black, OS T/A Dense Black, Lo-Tack Turnabout Dense Black

(b) Other means of identification
General description: Lithographic printing ink

(c) Recommended use
Product Use: Industrial use only
Restrictions on use: Not for residential use.

(d) Supplier’s details
Manufacturer: Gans Ink and Supply Co, Inc.
Address: 1441 Boyd Street
Los Angeles, CA 90033
Contact Person: Marco Ramos
Telephone: 323-264-2200 x139
Email: MSDS@gansink.com

(e) Emergency telephone numbers:
Chemical spill or physical hazard: Contact the Local Emergency Response Agency 9-1-1, or the Local Fire Department
Ingestion or health hazard: Contact the National Capital Poison Center, Poison Control: 800 222-1222; Poison.org

SECTION 2: HAZARD(S) IDENTIFICATION

(a) Classification
- This mixture is hazardous according to OSHA Hazard Communication Standard (29 CFR 1910.1200).
- Physical hazards: Not classified as hazardous
- Health hazards:
  - Eye Damage/Irritation – Category 2A
  - Sensitization, Skin – Category 1
  - Germ Cell Mutagenicity – Category 2
  - Carcinogenicity – Category 2

(b) Label elements
Signal Word: Warning

Hazard Statements: Causes serious eye irritation; May cause an allergic skin reaction; Suspected of causing genetic defects; Suspected of causing cancer.

Precautionary Statements:

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing, eye protection, face protection.

Avoid breathing mist/vapors/spray. Contaminated work clothing must not be allowed out of the workplace. Wash contaminated areas thoroughly after handling.

Response: If exposed or concerned: Get medical advice/attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF ON SKIN OR HAIR: Wash with plenty of water and mild soap. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Storage: Store locked up

Disposal: Dispose of contents/container to disposal recycling center. Waste management should be in full compliance with federal, state and local laws.

Hazard Pictograms:

(c) Hazards not otherwise classified

None known

(d) Ingredients of unknown acute toxicity

None known

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture

TS = Trade Secret (as specified by substance manufacturer)

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS # (TS = trade secret)</th>
<th>Conc. min. (wt. %)</th>
<th>Conc. max. (wt. %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rosin Adduct Ester</td>
<td>TS</td>
<td>0.0%</td>
<td>11.5%</td>
</tr>
<tr>
<td>Proprietary Rosin Ester V-5139</td>
<td>TS</td>
<td>0.0%</td>
<td>9.6%</td>
</tr>
<tr>
<td>Proprietary Rosin Ester</td>
<td>TS</td>
<td>0.0%</td>
<td>5.1%</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated light naphthenic</td>
<td>64742-53-6</td>
<td>0.0%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Substance</td>
<td>CAS # (TS = trade secret)</td>
<td>Conc. min. (wt. %)</td>
<td>Conc. max. (wt. %)</td>
</tr>
<tr>
<td>----------------------------------------------------------</td>
<td>---------------------------</td>
<td>--------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Proprietary Rosin Ester 99-108</td>
<td>TS</td>
<td>0.0%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Fatty acids, tall-oil, cobalt salts</td>
<td>61789-52-4</td>
<td>0.6%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Hydroquinone</td>
<td>123-31-9</td>
<td>0.4%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Naphtha (petroleum), hydrotreated heavy</td>
<td>64742-48-9</td>
<td>0.0%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated middle</td>
<td>64742-46-7</td>
<td>0.2%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Residual oils (petroleum), solvent-dewaxed</td>
<td>64742-62-7</td>
<td>0.1%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Sodium perborate monohydrate</td>
<td>10332-33-9</td>
<td>0.0%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Cyclohexanone oxime</td>
<td>100-64-1</td>
<td>0.1%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Distillates (petroleum), steam-cracked, polymerized</td>
<td>68131-77-1</td>
<td>0.1%</td>
<td>0.1%</td>
</tr>
<tr>
<td>2,6-di-tert-butyl-4-methylphenol</td>
<td>128-37-0</td>
<td>0.0%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Distillates (petroleum), sweetened middle</td>
<td>64741-86-2</td>
<td>0.0%</td>
<td>0.1%</td>
</tr>
<tr>
<td>2-(2-methoxyethoxy)ethanol</td>
<td>111-77-3</td>
<td>0.0%</td>
<td>0.1%</td>
</tr>
</tbody>
</table>

SECTION 4: FIRST AID MEASURES

(a) Description of first aid measures:
Ingestion: If exposed or concerned: Get medical advice/attention.

Inhalation: Not classified as hazardous.

Skin contact: Wash with plenty of water and mild soap. If skin irritation or rash occurs: Get medical advice/attention.

Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

(b) Most important symptoms and effects, both acute and delayed:

Ingestion: Suspected of causing genetic defects. Suspected of causing cancer.
Inhalation: Not classified as hazardous.
Skin contact: May cause an allergic skin reaction.
Eye contact: Causes serious eye irritation.

(c) Indication of any immediate medical attention and special treatment needed:
Symptoms such as burning, pain, or irritation to skin and/or eyes may indicate exposure and the need for first aid.

SECTION 5: FIRE – FIGHTING MEASURES

(a) Extinguishing Media:
Suitable extinguishing media: Use CO2, dry chemical, fire-fighting foam, or water fog extinguishing media
Unsuitable extinguishing media: Do not use water stream. Water stream or spray is OK to cool unopened containers only.

(b) Special hazards arising from the substance or mixture: None known.

(c) Special protective equipment and precautions for fire-fighters: Wear NIOSH approved self-contained respiratory protective device, and fully protective fire-fighting suit.

SECTION 6: ACCIDENTAL RELEASE MEASURES
(a.i) Personal precautions:
Ensure adequate ventilation. Use personal protective equipment. Avoid breathing vapor. Avoid contact with skin, eye or clothing.

(a.ii) Protective equipment: Positive pressure, full-face, self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA (NIOSH approved).

(a.iii) Emergency procedures: If dangerous conditions exist, contact emergency response personnel, follow emergency procedures, and contact emergency response authorities.

Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch or walk through spilled material. If spilled material is cleaned up using a regulated solvent, the resulting waste mixture may be regulated.

(b) Methods for containment and cleaning up:
Dike and contain spill. For large spills remove by mechanical means and place in containers. Absorb residue or small spills with absorbent material and remove to non-leaking containers for disposal.

SECTION 7: HANDLING AND STORAGE

(a) Precautions for safe handling:
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing, eye protection, face protection. Avoid breathing mist/vapors/spray. Contaminated work clothing must not be allowed out of the workplace.

(b) Conditions for safe storage:
Store in original container protected from direct sunlight in a dry, cool and well-ventilated area. Keep containers sealed and upright.

Incompatibilities: Keep away from strong oxidizing agents.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>(a) Permissible exposure limits</th>
<th>OSHA PEL</th>
<th>Cal/OSHA PEL</th>
<th>NIOSH REL</th>
<th>ACGIH 2015 TVL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance</td>
<td>CAS #</td>
<td>ppm</td>
<td>mg/m³</td>
<td>8-hour TWA (ST)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>STEL (C) Ceiling</td>
</tr>
<tr>
<td>Hydroquinone</td>
<td>123-31-9</td>
<td>2</td>
<td>2 mg/m³</td>
<td>(C) 2 mg/m³ [15 min]</td>
</tr>
</tbody>
</table>

No other hazardous ingredients appear on OSHA Annotated Tables Z-1, Z-2, or Z-3.

(b) Appropriate engineering controls:
Ventilation requirements: Handle only in a place equipped with local exhaust (or other appropriate exhaust). Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

General protective measures: Ensure that eye flushing /eye wash stations, and hand washing areas are accessible.

(c) Personal protective equipment:
Inhalation: Avoid breathing mist/vapors/spray. Where mist or aerosol is present, an organic vapor full facepiece respirator is recommended (to protect eyes and face as well).

Skin Contact: Wear protective gloves, and protective clothing. Contaminated work clothing must not be allowed out of the workplace. Recommended gloves (From Ansell Chemical Resistance Guide, 8th Edition): Sol-Vex, nitrile; PVA, supported polyvinyl alcohol; Chemtek Butyl, unsupported butyl; Chemtek Viton/Butyl, unsupported Viton/butyl.


Ingestion: Avoid eating, drinking, or smoking in work area and wash hands after handling this product.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

(a) Appearance (physical state, color): Viscous paste, black colored
(b) Odor: Oleoresinous
(c) Odor threshold: Data not available
(d) pH: NA
(e) Melting point/ freezing point; Data not available
(f) Initial Boiling point / Range: Data not available
(g) Flashpoint: ~ 250 °F (~121 °C) estimated
(h) Evaporation Rate: Data not available
(i) Flammability (solid/ gas): Data not available
(j) Upper/ lower flammability explosion limits: Data not available
(k) Vapor Pressure (mm Hg @ 68°F): Data not available
(l) Vapor Density (Air = 1): Data not available
(m) Relative Density (H₂O = 1): 1.0 - 1.1
(n) Solubility: Minimally soluble in water
(o) Partition coefficient n-Octanol/ Water: Data not available
(p) Auto-ignition temperature: Data not available
(q) Decomposition temperature: Data not available
(r) Viscosity: Data not available

Other properties
VOC % (wt.): 10.0 – 15.5
VOC: A115055 0.98 lbs./gal., 118 g/L; 88855 1.18 lbs./gal., 140 g/L

SECTION 10: STABILITY AND REACTIVITY INFORMATION

(a) Reactivity: Not reactive under normal storage conditions. See Section 7.
(b) Chemical stability: Mixture is chemically stable under normal storage and handling conditions, and under normal temperatures and pressures.
(c) Possibility of hazardous reactions: No data available
(d) Conditions to avoid: Avoid excessive heat and cold, and sources of ignition.
(e) Incompatible materials: Strong oxidizers.
(f) Hazardous decomposition product: No data available

SECTION 11: TOXICOLOGICAL INFORMATION

(a) Likely routes of exposure: Skin contact, eye contact, inhalation, and ingestion.
(b) Symptoms related to physical, chemical, and toxicological characteristics:
   - **Skin contact:** May cause an allergic skin reaction.
   - **Eye contact:** Causes serious eye irritation
   - **Inhalation:** Data not available
   - **Ingestion:** Suspected of causing genetic defects. Suspected of causing cancer.

(c) Delayed and immediate effects, and chronic effects from long-term exposure
Suspected of causing genetic defects. Suspected of causing cancer.

(d) Numerical measures of toxicity, acute:

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS # (TS= trade secret)</th>
<th>Oral</th>
<th>Inhalation</th>
<th>Dermal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rosin Adduct Ester</td>
<td>TS</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Proprietary Rosin Ester V-5139</td>
<td>TS</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Proprietary Rosin Ester</td>
<td>TS</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Distillates (petroleum), 64742-53-6</td>
<td>LD50 5000 mg/kg bw (rat)</td>
<td>LC50 (4 h) 2.18 - 5.53 mg/L air (rat)</td>
<td>LD50 2000 - 5000 mg/kg bw (rabbit)</td>
<td></td>
</tr>
<tr>
<td>Proprietary Rosin Ester 99-108</td>
<td>TS</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Fatty acids, tall-oil, cobalt salts</td>
<td>61789-52-4</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Hydroquinone</td>
<td>123-31-9</td>
<td>LD50 367.3 - 375 mg/kg bw (rat)</td>
<td>No data available</td>
<td>LD50 2000 mg/kg bw (rabbit)</td>
</tr>
<tr>
<td>Naphtha (petroleum)</td>
<td>64742-48-9</td>
<td>LD50 5000 mg/kg bw (rat)</td>
<td>No data available</td>
<td>LD50 2000 mg/kg bw (rabbit)</td>
</tr>
<tr>
<td>Distillates (petroleum)</td>
<td>64742-46-7</td>
<td>LD50 5000 mg/kg bw (rat)</td>
<td>LC50 (4 h) 4.6 mg/L air (rat)</td>
<td>LD50 2000 mg/kg bw (rabbit)</td>
</tr>
<tr>
<td>Residual oils (petroleum), solvent-dewaxed</td>
<td>64742-62-7</td>
<td>LD50 5000 mg/kg bw (rat)</td>
<td>LC50 (4 h) 2.18 - 5.53 mg/L air (rat)</td>
<td>LD50 2000 - 5000 mg/kg bw (rabbit)</td>
</tr>
<tr>
<td>Sodium perborate monohydrate</td>
<td>10332-33-9</td>
<td>LD50 890 - 1300 mg/kg bw (rat)</td>
<td>LC50 (4 h) 1.165 mg/L air (rat)</td>
<td>LD50 2000 mg/kg bw (rabbit)</td>
</tr>
<tr>
<td>Cyclohexanone oxime</td>
<td>100-64-1</td>
<td>LD50 882.82 - 1765.01 mg/kg bw (rat)</td>
<td>No data available</td>
<td>LD50 5000 mg/kg bw (rabbit)</td>
</tr>
<tr>
<td>Distillates (petroleum)</td>
<td>68131-77-1</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>2,6-di-tert-butyl-4-methylphenol</td>
<td>128-37-0</td>
<td>LD50 2930 - 6000 mg/kg bw (rat)</td>
<td>No data available</td>
<td>LD50 2000 mg/kg bw (rabbit)</td>
</tr>
<tr>
<td>Distillates (petroleum)</td>
<td>64741-86-2</td>
<td>LD50 5000 mg/kg bw (rat)</td>
<td>LC50 (4 h) 1.72 - 4.6 mg/L air (rat)</td>
<td>LD50 2000 mg/kg bw (rabbit)</td>
</tr>
<tr>
<td>2-(2-methoxyethoxy)ethanol</td>
<td>111-77-3</td>
<td>LD50 7 128 - 8188 mg/kg bw (mouse)</td>
<td>LC0 (6 h) 1.2 mg/L air (rat)</td>
<td>LD50 9404 mg/kg bw (rabbit)</td>
</tr>
</tbody>
</table>
(e) Carcinogens information:
IARC: Group 1 (Carcinogenic to humans), Group 2A (Probably carcinogenic to humans), or Group 2B (Possibly carcinogenic to humans) by IARC: This mixture does not contain listed materials.
NTP: 13th Report on Carcinogens: This mixture does not contain listed materials.
OSHA: This mixture does not contain listed materials.

SECTION 12: ECOLOGICAL INFORMATION

(a) Ecotoxicity
Classification of mixture:
(b) Persistence and degradability: No data available
(c) Bioaccumulative potential: No data available.
(d) Mobility in soil: No data available
(e) Other adverse effects: No known adverse effects

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of contents/container in accordance with local/regional/national regulations. The hazard and precautionary statements displayed on the label also apply to any residues left in the container.

SECTION 14: TRANSPORT INFORMATION

US DOT (Ground):
(a) UN number: Not regulated as a dangerous good
(b) UN Proper Shipping Name: Not regulated as a dangerous good
(c) Transport hazard class: Not regulated as a dangerous good
(d) Packing Group: Not regulated as a dangerous good
(e) Environmental hazards: Not regulated as a dangerous good
(f) Transport in bulk
   MARPOL 73/78: No data available
   IBC: No data available.
(g) Special Precautions: None known

SECTION 15: REGULATORY INFORMATION

U.S. Federal Regulations

TSCA Section 8(b) Inventory Status: All ingredients in this mixture are listed on the TSCA Chemical Inventory, or are not required to be listed.

EPCRA, Section 302 – Extremely hazardous substances:
   o Hydroquinone CAS 123-31-9 TPQ 500/10,000

CERCLA Hazardous Substances:
   o Hydroquinone CAS 123-31-9: RQ = 100

EPCRA Section 313 Toxic Chemicals:
   o Hydroquinone CAS 123-31-9

CAA 112(r) Regulated Chemicals for Accidental Release Prevention: This mixture does not contain listed materials.
Hazardous Air Pollutants (HAP): This mixture does not contain listed materials.

U.S. State Regulations
California Proposition 65: This mixture does not contain listed materials.
New Jersey Right to Know
- Hydroquinone CAS 123-31-9, Substance #1019
- 2,6-di-tert-butyl-4-methylphenol CAS 128-37-0, Substance #0814

Pennsylvania Right to Know
- Hydroquinone CAS 123-31-9, Environmental Hazard
- 2,6-di-tert-butyl-4-methylphenol CAS 128-37-0

Canadian Environmental Protection Act:
WHMIS Classification: No data available

European Chemical Agency (ECHA)
Candidate List of Substances of Very High Concern (SoVHC), including 27 June 2018 update:
Sodium perborate monohydrate CAS 10332-33-9

SECTION 16: OTHER INFORMATION

The information herein is presented in good faith, based on the data available to us and is believed to be correct as of the date hereof. However, Gans Ink and Supply Co., Inc. makes no warranty, expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. Gans Ink and Supply Co., Inc. assumes no responsibility for any damages of any nature directly or indirectly resulting from the use of or reliance upon the information contained herein. Users must make their own determination as to the suitability of the product for their purpose prior to use. In accordance with good practices of personal cleanliness and hygiene, handle with due care and avoid unnecessary contact with this product.