1 Identification of the substance/mixture and of the company/undertaking

- Trade name: CANTESCO® VISIBLE DYE PENETRANT P101S – SOLVENT REMOVABLE
- Article number: P101S-A
- MSDS Number: 00089-CA-EN
- UPC bar code(s): 699913-10020
- Relevant identified uses of the substance: INSPECTION DYE
- Manufacturer/Supplier: WWW.CANTESCO.COM

USA ADDRESS :

KEMPER SYSTEM AMERICA, INC
1200 NORTH AMERICA DR,
WEST SENECA, NY 14224
PH (716) 693-8206
FAX (716) 558-2969

CANADIAN ADDRESS :

KEMPER SYSTEM CANADA
13 - 5200 DIXIE ROAD
MISSISSAUGA, ON L4W 1E4
PH (905) 624-5463
FAX (905) 624-2840

- Information department:
  Tel: (716) 558-2971 ext. 228
  www.cantesco.com
- Emergency telephone number:
  ChemTrec (800) 424-9300
  Canada only: CANUTEC (Call collect) (613) 996-6666

2 Hazards identification

- Classification of the substance or mixture:
  GHS02 Flame
  Flam. Aerosol 1 H222 Extremely flammable aerosol.
  GHS08 Health hazard
  Carc. 2 H351 Suspected of causing cancer.
- Information concerning particular hazards for human and environment:
  The product has to be labelled due to the calculation procedure of international guidelines.
  Warning! Pressurized container.
- Classification system:
  The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- Risk phrases:
  Extremely flammable.
3 Composition/information on ingredients

· Chemical characterization: Mixtures
· Description: Mixture of the substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>Dangerous components:</th>
</tr>
</thead>
<tbody>
<tr>
<td>64742-94-5</td>
</tr>
<tr>
<td>91-20-3</td>
</tr>
<tr>
<td>112-34-5</td>
</tr>
<tr>
<td>71819-51-7</td>
</tr>
</tbody>
</table>
4 First aid measures

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Most important symptoms and effects, both acute and delayed:** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

5 Firefighting measures

- **Suitable extinguishing agents:** CO2, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture:** No further relevant information available.
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures:**
  Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
  Do not allow product to reach sewage system or any water course.
  Inform respective authorities in case of seepage into water course or sewage system.
  Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
  Ensure adequate ventilation.
  Do not flush with water or aqueous cleansing agents
- **Reference to other sections:**
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- **Handling**
- **Precautions for safe handling:**
  Ensure good ventilation/exhaustion at the workplace.
  Open and handle receptacle with care.
- **Information about protection against explosions and fires:**
  Do not spray on a naked flame or any incandescent material.
  Keep ignition sources away - Do not smoke.
Proven against electrostatic charges.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.

Storage
- Requirements to be met by storerooms and receptacles:
  Store in a cool location.
  Observe official regulations on storing packagings with pressurized containers.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions:
  Keep receptacle tightly sealed.
  Do not gas tight seal receptacle.
  Store in cool, dry conditions in well sealed receptacles.
  Protect from heat and direct sunlight.
- Specific end use(s): No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.

<table>
<thead>
<tr>
<th>Components with limit values that require monitoring at the workplace:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>68476-85-7 Petroleum gases, liquefied</strong></td>
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<tr>
<td>EL</td>
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<tr>
<td></td>
</tr>
<tr>
<td>EV</td>
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<tr>
<td><strong>91-20-3 naphthalene</strong></td>
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<td>EL</td>
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<td></td>
</tr>
<tr>
<td>EV</td>
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<td></td>
</tr>
<tr>
<td><strong>98-82-8 cumene</strong></td>
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<tr>
<td>EL</td>
</tr>
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<td></td>
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<tr>
<td>EV</td>
</tr>
</tbody>
</table>

- Additional information: The lists that were valid during the creation were used as basis.
- Personal protective equipment
- General protective and hygienic measures:
  Keep away from foodstuffs, beverages and feed.
  Wash hands before breaks and at the end of work.
- Breathing equipment: Not required.
- Protection of hands:
  The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
  Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- Material of gloves:
  The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
9 Physical and chemical properties

- **Form:** Liquid Under Pressure
- **Color:** Dark red
- **Odor:** Aromatic
- **Odour threshold:** Not determined.
- **pH-value:** Not determined.
- **Melting point/Melting range:** -68.3 °C
- **Boiling point/Boiling range:** 132 °C
- **Flash point:** -104 °C (Prop. (28.3°C liq.))
- **Flammability (solid, gaseous):** Extremely flammable liquefied gas.
- **Ignition temperature:** 227.8 °C
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
- **Explosion limits**
  - **Lower:** .85 Vol %
  - **Upper:** 24.6 Vol %
- **Vapor pressure at 20 °C:** 70 psig
- **Density at 20 °C:** 0.775 g/cm³
- **Relative density:** Not determined.
- **Vapour density at 20 °C:** 5.58 (AIR=1)
- **Evaporation rate:** Not applicable.
- **Solubility in / Miscibility with Water:** Not miscible or difficult to mix.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity**
  - **Dynamic:** Not determined.
  - **Kinematic:** Not determined.
- **Solvent content**
  - **Organic solvents:** 6.9 %
Trade name: CANTESCO® VISIBLE DYE PENETRANT P101S – SOLVENT REMOVABLE

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided**: No decomposition if used according to specifications.
- **Possibility of hazardous reactions**: No dangerous reactions known.
- **Conditions to avoid**: No further relevant information available.
- **Incompatible materials**: No further relevant information available.
- **Hazardous decomposition products**: No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**:
- **Acute toxicity**
  - **LD/LC50 values that are relevant for classification**:
    - **91-20-3 naphthalene**
      - Oral LD50: 490 mg/kg (rat)
      - Dermal LD50: 5000 mg/kg (rat)
    - **98-82-8 cumene**
      - Oral LD50: 1400 mg/kg (rat)
      - Dermal LD50: 12300 mg/kg (rabbit)
      - Inhalative LC50/4 h: 24.7 mg/l (mouse)
    - **95-63-6 1,2,4-trimethylbenzene**
      - Oral LD50: 5000 mg/kg (rat)
- **Primary irritant effect**
  - **on the skin**: No irritant effect.
  - **on the eye**: No irritating effect.
  - **Sensitization**: No sensitizing effects known.
- **Additional toxicological information**:
- **Carcinogenic categories**
  - **IARC (International Agency for Research on Cancer)**
    - 91-20-3 naphthalene: 2B
  - **NTP (National Toxicology Program)**
    - 91-20-3 naphthalene: R

12 Ecological information

- **Aquatic toxicity**: No further relevant information available.
- **Persistence and degradability**: No further relevant information available.
- **Behavior in environmental systems**
- **Bioaccumulative potential**: No further relevant information available.
- **Mobility in soil**: No further relevant information available.
Additional ecological information

General notes:
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.

Other adverse effects: No further relevant information available.

13 Disposal considerations

Waste treatment methods
Recommendation:
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings
Recommendation:
Place in a sealed container and label as waste. Place in a safe area, and comply with all federal, state, provincial and local regulations for disposal.

14 Transport information

UN-Number
DOT, TDG, IMDG, IATA
UN1950

UN proper shipping name
DOT, IATA
AEROSOLS, flammable
TDG
1950 AEROSOLS, ENVIRONMENTALLY HAZARDOUS
IMDG
A E R O S O L S  ( N A P H T H A L E N E ,  C R U D E , ISOPROPYLBENZENE), MARINE POLLUTANT

Transport hazard class(es)

DOT

Class 2.1
Label 2.1

TDG (Transport dangerous goods):

TDG class: 2 5F Gases
Label 2.1

IMDG

Class 2.1
Trade name: CANTESCO® VISIBLE DYE PENETRANT P101S – SOLVENT REMOVABLE

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara
  - Section 355 (extremely hazardous substances):
    None of the ingredients is listed.
Trade name: CANTESCO® VISIBLE DYE PENETRANT P101S – SOLVENT REMOVABLE

- Section 313 (Specific toxic chemical listings):
  - 91-20-3 naphthalene
  - 98-82-8 cumene
  - 95-63-6 1,2,4-trimethylbenzene

- TSCA (Toxic Substances Control Act):
  All ingredients are listed.

- Proposition 65
  - Chemicals known to cause cancer:
    - 91-20-3 naphthalene
    - 98-82-8 cumene
  - Chemicals known to cause reproductive toxicity for females:
    None of the ingredients is listed.
  - Chemicals known to cause reproductive toxicity for males:
    None of the ingredients is listed.
  - Chemicals known to cause developmental toxicity:
    None of the ingredients is listed.

- Carcinogenic categories
  - EPA (Environmental Protection Agency):
    - 91-20-3 naphthalene CBD
    - 98-82-8 cumene CBD
  - TLV (Threshold Limit Value established by ACGIH):
    - 91-20-3 naphthalene A4
  - NIOSH-Ca (National Institute for Occupational Safety and Health):
    None of the ingredients is listed.
  - OSHA-Ca (Occupational Safety & Health Administration):
    None of the ingredients is listed.

- Canadian substance listings
  - Canadian Domestic Substances List (DSL):
    All ingredients are listed.
  - Canadian Ingredient Disclosure list (limit 0.1%):
    - 95-63-6 1,2,4-trimethylbenzene
  - Canadian Ingredient Disclosure list (limit 1%):
    - 91-20-3 naphthalene
    - 112-34-5 2-(2-butoxyethoxy)ethanol
    - 98-82-8 cumene

- Product related hazard informations:
  - Risk phrases:
    Extremely flammable.
  - Safety phrases:
    Keep locked up and out of the reach of children.
    Keep away from food, drink and animal feedingstuffs.
    Keep away from sources of ignition - No smoking.
    When using do not eat or drink.

(Contd. on page 10)
Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).
After contact with skin, wash immediately with plenty of water
Take precautionary measures against static discharges.
Wear suitable protective clothing and eye/face protection.
In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.
If swallowed, seek medical advice immediately and show this container or label.
Use only in well-ventilated areas.

- **Special labeling of certain preparations:**
  Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights.
  Do not pierce or burn, even after use.
  Do not spray on a naked flame or any incandescent material.

### 16 Other information

This MSDS format meets ANSI Z400.1-1998, OSHA 1910.1200 and WHMIS requirements. Kemper System America, Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Product use and conditions of use are beyond the control of Kemper System America, Inc. Warranty of materials is limited to test results of product performance as detailed in certificates of compliance. Interpretation of test results is the responsibility of end-user. No other warranties, expressed or implied, are made. Kemper System America, Inc is an ISO 9001:2008 registered company.

- **Department issuing MSDS:** Product safety department
- **Contact:** Stephen Nowicki
- **Abbreviations and acronyms:**
  - IMDG: International Maritime Code for Dangerous Goods
  - DOT: US Department of Transportation
  - IATA: International Air Transport Association
  - ACGIH: American Conference of Governmental Industrial Hygienists
  - NFPA: National Fire Protection Association (USA)
  - WHMIS: Workplace Hazardous Materials Information System (Canada)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent