



# Safety Data Sheet

acc. to OSHA HCS & WHMIS

Printing date 09/28/2015

Reviewed on 09/28/2015

## 1 Identification

- **Product identifier:** PENETRANT - SOLVENT
- **Trade name:** CANTESCO® VISIBLE DYE PENETRANT P101S – SOLVENT REMOVABLE
- **Code** P101S-A
- **Item number(s):** P101S-A
- **MSDS Number:** 36
- **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) 558-2971

**CANADIAN ADDRESS:**

KEMPER SYSTEM CANADA  
6345 NETHERHART ROAD  
MISSISSAUGA, ON L5T 1B8  
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: CANUTECH (Call collect) (613) 996-6666

## 2 Hazard(s) identification

- **Classification of the substance or mixture:**



GHS02 Flame

Flam. Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurized container: May burst if heated.



GHS08 Health hazard

Carc. 2            H351            Suspected of causing cancer.  
Asp. Tox. 1       H304            May be fatal if swallowed and enters airways.



GHS07

Acute Tox. 4       H302            Harmful if swallowed.

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

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· **Label elements**

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Signal word:** Danger

· **Hazard-determining components of labeling:**

Solvent naphtha (petroleum), heavy arom.

naphthalene

C.I. SOLVENT RED 164

cumene

· **Hazard statements:**

Extremely flammable aerosol. Pressurized container: May burst if heated.

Harmful if swallowed.

Suspected of causing cancer.

May be fatal if swallowed and enters airways.

· **Precautionary statements:**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Pressurized container: Do not pierce or burn, even after use.

Do not spray on an open flame or other ignition source.

Wear protective gloves / eye protection / face protection.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

If swallowed: Immediately call a poison center/doctor.

IF exposed or concerned: Get medical advice/attention.

Rinse mouth.

Do NOT induce vomiting.

Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **WHMIS-symbols:**

A - Compressed gas

B5 - Flammable aerosol

D2A - Very toxic material causing other toxic effects



· **NFPA ratings (scale 0 - 4):**



Health = 2

Fire = 4

Reactivity = 0

### 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

64742-94-5	Solvent naphtha (petroleum), heavy arom.	40-70%
68476-85-7	Petroleum gases, liquefied	25-30%

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91-20-3	naphthalene	3-5%
112-34-5	2-(2-butoxyethoxy)ethanol	3-5%
98-82-8	cumene	1-1.5%
95-63-6	1,2,4-trimethylbenzene	1-1.5%
71819-51-7	C.I. SOLVENT RED 164	0.3-<1%

· **Additional information:** Exact concentrations are being withheld as trade secrets.

## 4 First-aid measures

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** Rinse mouth, do not induce vomiting, Immediately call a poison center / 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 Fire-fighting 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.

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Protect 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.

· **Components with limit values that require monitoring at the workplace:**

**68476-85-7 Petroleum gases, liquefied**

EL (Canada)	Short-term value: 1250 ppm Long-term value: 1000 ppm
PEL (USA)	Long-term value: 1800 mg/m <sup>3</sup> , 1000 ppm
REL (USA)	Long-term value: 1800 mg/m <sup>3</sup> , 1000 ppm
TLV (USA)	refer to Appendix F: minimal oxygen content

**91-20-3 naphthalene**

EL (Canada)	Short-term value: 15 ppm Long-term value: 10 ppm Skin; IARC 2B
EV (Canada)	Short-term value: 78 mg/m <sup>3</sup> , 15 ppm Long-term value: 52 mg/m <sup>3</sup> , 10 ppm
PEL (USA)	Long-term value: 50 mg/m <sup>3</sup> , 10 ppm
REL (USA)	Short-term value: 75 mg/m <sup>3</sup> , 15 ppm Long-term value: 50 mg/m <sup>3</sup> , 10 ppm
TLV (USA)	Long-term value: 52 mg/m <sup>3</sup> , 10 ppm Skin; BEI

**112-34-5 2-(2-butoxyethoxy)ethanol**

TLV (USA)	Long-term value: 67.5* mg/m <sup>3</sup> , 10* ppm *Inhalable fraction and vapor
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**98-82-8 cumene**

EL (Canada)	Short-term value: 75 ppm Long-term value: 25 ppm IARC 2B
EV (Canada)	Long-term value: 245 mg/m <sup>3</sup> , 50 ppm Skin
PEL (USA)	Long-term value: 245 mg/m <sup>3</sup> , 50 ppm Skin

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REL (USA)	Long-term value: 245 mg/m <sup>3</sup> , 50 ppm Skin
TLV (USA)	Long-term value: 246 mg/m <sup>3</sup> , 50 ppm
<b>95-63-6 1,2,4-trimethylbenzene</b>	
REL (USA)	Long-term value: 125 mg/m <sup>3</sup> , 25 ppm
TLV (USA)	Long-term value: 123 mg/m <sup>3</sup> , 25 ppm

- **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:** Use suitable respiratory protective device in case of insufficient ventilation.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
- **Material of gloves:**  
Nitrile rubber, NBR  
Butyl rubber, BR
- **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

· <b>Form:</b>	Liquid Under Pressure
· <b>Color:</b>	Dark red
· <b>Odor:</b>	Aromatic
· <b>Odour threshold:</b>	Not determined.
· <b>pH-value:</b>	Not determined.
· <b>Change in condition</b>	
<b>Melting point/Melting range:</b>	-68.3 °C
<b>Boiling point/Boiling range:</b>	132 °C
· <b>Flash point:</b>	-104 °C (Prop. (28.3°C liq.))
· <b>Flammability (solid, gaseous):</b>	Extremely flammable liquefied gas.
· <b>Ignition temperature:</b>	227.8 °C
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· <b>Explosion limits</b>	
<b>Lower:</b>	.85 Vol %
<b>Upper:</b>	24.6 Vol %
· <b>Vapor pressure at 20 °C:</b>	70 psig

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· <b>Density at 20 °C:</b>	0.775 g/cm <sup>3</sup>
· <b>Relative density:</b>	Not determined.
· <b>Vapour density at 20 °C:</b>	5.58 (AIR=1)
· <b>Evaporation rate:</b>	Not applicable.
· <b>Solubility in / Miscibility with Water:</b>	Not miscible or difficult to mix.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	6.9 %
· <b>Other information</b>	VOC Content: 763.954 g/l
	VOC %: 99% (Wt)
	HAP Content: 6.133 g/l
	MIR Value: 5.946 g O <sub>3</sub> /g

## 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.

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· **Additional toxicological information:**

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

91-20-3	naphthalene	2B
98-82-8	cumene	2B

· **NTP (National Toxicology Program)**

91-20-3	naphthalene	R
98-82-8	cumene	R

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## 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

- |                                |                     |
|--------------------------------|---------------------|
| <b>UN-Number</b>               | UN1950              |
| <b>DOT, TDG, IMDG, IATA</b>    | UN1950              |
| <b>UN proper shipping name</b> |                     |
| <b>DOT</b>                     | Aerosols, flammable |
| <b>TDG</b>                     | 1950 Aerosols       |
| <b>IMDG</b>                    | AEROSOLS            |
| <b>IATA</b>                    | AEROSOLS, flammable |

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· **Transport hazard class(es)**

· **DOT**



- **Class** 2.1  
 · **Label** 2.1

· **TDG (Transport dangerous goods):**



- **Class** 2 5F Gases  
 · **Label** 2.1

· **IMDG, IATA**



- **Class** 2.1  
 · **Label** 2.1

· **Packing group**

- **DOT, TDG, IMDG, IATA** Not regulated

· **Environmental hazards:**

- **Marine pollutant:** No  
 · **Special marking (TDG):** Symbol (fish and tree)

· **Special precautions for user:**

- **Danger code (Kemler):** Warning: Gases  
 -  
 · **EMS Number:** F-D,S-U

· **Transport in bulk according to Annex II of**

**MARPOL73/78 and the IBC Code:** Not applicable.

· **Transport/Additional information:**

· **DOT**

- **Quantity limitations** On passenger aircraft/rail: 75 kg  
 On cargo aircraft only: 150 kg

· **Remarks:** This product may be shipped according to the Limited Quantity Exceptions provided that all Limited Quantity shipping requirements are met.

· **TDG**

This product may be shipped according to the Limited Quantity Exceptions provided that all Limited Quantity shipping requirements are met.

· **Excepted quantities (EQ)**

Code: E0  
 Not permitted as Excepted Quantity

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· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E0
	Not permitted as Excepted Quantity
· <b>Remarks:</b>	This product may be shipped according to the Limited Quantity Exceptions provided that all Limited Quantity shipping requirements are met.
· <b>IATA</b>	
· <b>Remarks:</b>	This product may be shipped according to the Limited Quantity Exceptions provided that all Limited Quantity shipping requirements are met.
· <b>UN "Model Regulation":</b>	UN1950, Aerosols, 2.1

## 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.

· **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 or exempted

· **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:**

Exposure during foreseeable use has been determined to be below the Maximum Allowable Dose Level.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency):**

91-20-3 naphthalene

C, CBD

98-82-8 cumene

D, 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.

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· **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

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02    GHS07    GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**

Solvent naphtha (petroleum), heavy arom.

naphthalene

C.I. SOLVENT RED 164

cumene

· **Hazard statements**

Extremely flammable aerosol. Pressurized container: May burst if heated.

Harmful if swallowed.

Suspected of causing cancer.

May be fatal if swallowed and enters airways.

· **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Pressurized container: Do not pierce or burn, even after use.

Do not spray on an open flame or other ignition source.

Wear protective gloves / eye protection / face protection.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

If swallowed: Immediately call a poison center/doctor.

IF exposed or concerned: Get medical advice/attention.

Rinse mouth.

Do NOT induce vomiting.

Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Dispose of contents/container in accordance with local/regional/national/international regulations.

## 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.

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No other warranties, expressed or implied, are made. Kemper System America, Inc is an ISO 9001:2008 and ISO 14001:2004 registered company.

- **Department issuing MSDS:** Product safety department
- **Contact:** Stephen Nowicki
- **Date of preparation / last revision** 09/28/2015 / 1
- **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
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - NFPA: National Fire Protection Association (USA)
  - WHMIS: Workplace Hazardous Materials Information System (Canada)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - Flam. Aerosol 1: Flammable aerosols, Hazard Category 1
  - Acute Tox. 4: Acute toxicity, Hazard Category 4
  - Carc. 2: Carcinogenicity, Hazard Category 2
  - Asp. Tox. 1: Aspiration hazard, Hazard Category 1

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