

**Safety Data Sheet**
acc. to OSHA HCS



Printing date 06/04/2015

Reviewed on 01/08/2015

1: Identification

- **1.1 Product identifier**
- **Trade name: Penetrant VP-31A**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture**
NDT Inspection penetrant "Type 2 Methods "B & C" per AMS-2644/ ASTM E-1417
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Met-L-Chek Company
1639 Euclid Street
Santa Monica, California, 90404, U.S.A.
Phone: 1-310-450-1111
Fax: 1-310-452-4046
E-mail: info@met-l-chek.com
http://www.met-l-chek.com
- **Information department:** Product safety department
- **1.4 Emergency telephone number:** Chemtrec +1-800-424-9300 in U.S.A.; outside U.S.A. 001-703-527-3887

2: Hazard(s) identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Carc. 2 H351 Suspected of causing cancer.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
STOT SE 3 H335 May cause respiratory irritation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labeled according to the CLP regulation.
- **Hazard pictograms**

GHS07 GHS08
- **Signal word** Warning
- **Hazard-determining components of labeling:**
butyl stearate
C.I.Solvent Red 164 (eq)
- **Hazard statements**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H351 Suspected of causing cancer.
H335 May cause respiratory irritation.
- **Precautionary statements**
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P280 Wear protective gloves.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 Specific treatment (see on this label).

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P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 1
Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = *0
Fire = 1
Reactivity = 0

- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3: Composition/information on ingredients

- **3.2 Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

Dangerous components:

CAS: 123-95-5 EINECS: 204-666-5	butyl stearate	10-25%
CAS: 92257-31-3 EINECS: 296-120-8	C.I.Solvent Red 164 (eq)	1-10%
CAS: 64742-94-5 EC number: 926-273-4	Solvent naphtha (petroleum), heavy arom.	1-10%

Most important ingredients

CAS: 64742-53-6	Distillates (petroleum), hydrotreated light naphthenic	50-100%
CAS: 123-95-5 EINECS: 204-666-5	butyl stearate	10-25%
CAS: 64742-53-6	Distillates (petroleum), hydrotreated light naphthenic	1-10%

Additional information:

Note L:

The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3 % DMSO extract as measured by IP 346.

Metabolic studies on some Azo-dyes have detected reduction of azo bonds to aromatic amines. It is prudent to assume that the product could metabolise to o-toluidine, which have been identified as animal carcinogens.

4: First-aid measures

- **4.1 Description of first aid measures**

After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

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- Take affected persons into fresh air and keep quiet.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Do not induce vomiting; immediately call for medical help.
A person vomiting while lying on their back should be turned onto their side.
- **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5: Fire-fighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
Water haze
Foam
ABC powder
- **For safety reasons unsuitable extinguishing agents:** Water spray
- **5.2 Special hazards arising from the substance or mixture** Carbon monoxide and carbon dioxide
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Collect liquid in an appropriate container or absorb with an inert material such as vermiculite, dry sand, or earth;
DO NOT use combustible materials.
Place in a chemical waste container.
- **6.4 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

- **7.1 Precautions for safe handling**
Store in cool, dry place in tightly closed receptacles.
Work only in fume cabinet.
Prevent formation of aerosols.

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- **Information about protection against explosions and fires:**
Use explosion-proof apparatus / fittings and spark-proof tools.
Containers may be hazardous when empty since residue liquid and vapors may be present
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Store receptacle in fume compartment.
- **7.3 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.
- **8.1 Control parameters**

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

123-95-5 butyl stearate

TLV Long-term value: 10 mg/m³

- **Additional information:** The lists that were valid during the creation were used as basis.
- **8.2 Exposure controls**
- **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:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.



Ventilation System: A system of local or general exhaust is recommended to keep employee exposure below the airborne exposure limits. If exposure limit is exceeded use organic vapor respirator (type A), or self contained breathing apparatus. For dry powder nuisance exposure use type P96(US) or type Pi(EU EN143 particle respirator. For higher level protection use type OV/AG/P99(US or ABEK-P2(EU EN 143) respirator cartridges.

• **Protection of hands:**



Protective gloves

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.

• **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· Eye protection:

Safety glasses

· Body protection:Protective work clothing
Use protective suit.**9: Physical and chemical properties****· 9.1 Information on basic physical and chemical properties****· General Information****· Appearance:****Form:** Liquid**Color:** Red**· Odor:** Characteristic**· Odour threshold:** Not determined.**· pH-value:** Not determined.**· Change in condition****Melting point/Melting range:** Undetermined.**Boiling point/Boiling range:** 281 °C (538 °F)**Flash point:** >93 °C (>199 °F) (ASTM D-93)**· Flammability (solid, gaseous):** Not applicable.**· Ignition temperature:** > 204 °C (> 399 °F)**· Decomposition temperature:** Not determined.**· Auto igniting:** Product is not selfigniting.**· Danger of explosion:** Product does not present an explosion hazard.**· Explosion limits:****Lower:** 0.9 Vol %**Upper:** 7.0 Vol %**· Vapor pressure:** Not determined.**· Density at 20 °C (68 °F):** 0.882 g/cm³ (7.36 lbs/gal) (ASTM D-1298)**· Relative density** Not determined.**· Vapour density** Not determined.**· Evaporation rate** Not determined.**· Solubility in / Miscibility with****Water:** Not miscible or difficult to mix.**· Partition coefficient (n-octanol/water):** Not determined.**· Viscosity:****Dynamic:** Not determined.**Kinematic at 40 °C (104 °F):** 6.3 mm²/s (ASTM D-445)

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- **Solvent content:**
 - Organic solvents:** 75.7 %
 - VOC content:** 1.1 %
- **9.2 Other information** 9.7 g/l / 0.08 lb/gl
No further relevant information available.

10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:**
Avoid contact with acetaldehyde, acids, chlorine, ethylene oxide, isocyanate and strong oxidizing agents
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:** Information on hazardous ingredients
- **Primary irritant effect:**
 - **on the skin:** No irritant effect.
 - **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:

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

Group 1	Carcinogenic to humans
Group 2A	Probably carcinogenic to humans
Group 2B	Possibly carcinogenic to humans
Group 3	Not classifiable as to its carcinogenicity to humans
Group 4	Probably not carcinogenic to humans

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** Information on hazardous ingredients
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.

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- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Waste/ unused products
Collect all waste in suitable and labelled containers and dispose according to local legislation.
- **Uncleaned packagings:**
- **Recommendation:**
Waste / used products
Waste products and empty packages dispose of in accordance with local regulations.
Empty containers may contain flammable residue and vapors.

14: Transport information

· 14.1 UN-Number	
· DOT, ADR, IMDG, IATA	not applicable
· 14.2 UN proper shipping name	
· DOT, ADR, IMDG, IATA	not applicable
· 14.3 Transport hazard class(es)	
· DOT, ADR, IMDG, IATA	
· Class	not applicable
· 14.4 Packing group	
· DOT, ADR, IMDG, IATA	not applicable
· 14.5 Environmental hazards:	
· Marine pollutant:	No
· 14.6 Special precautions for user	Not applicable.
· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN "Model Regulation":	-

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15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

• Section 355 (extremely hazardous substances):

None of the ingredient is listed.

• Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

• TSCA (Toxic Substances Control Act):

All ingredients are listed.

• Proposition 65**• Chemicals known to cause cancer:**

None of the ingredients is listed.

• 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.

• Cancerogenity categories**• EPA (Environmental Protection Agency)**

None of the ingredients is listed.

• TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

• NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Product safety department

- **Contact:** Met-L-Chek Company

- **Date of preparation / last revision** 06/04/2015 / -

• Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
Carc. 2: Carcinogenicity, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

· *** Data compared to the previous version altered.**

USA