

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

Printing date 12/04/2015

Reviewed on 07/06/2015

**1: Identification**

- **1.1 Product identifier**
- **Trade name: Penetrant VP-31A spraycan**
- **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**  
Flam. Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurized container: May burst if heated.  
Skin Irrit. 2 H315 Causes skin irritation.  
Carc. 2 H351 Suspected of causing cancer.

- **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**



GHS02 GHS07 GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**  
C.I.Solvent Red 164 (eq)
- **Hazard statements**  
H222-H229 Extremely flammable aerosol. Pressurized container: May burst if heated.  
H315 Causes skin irritation.  
H351 Suspected of causing cancer.
- **Precautionary statements**  
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P251 Do not pierce or burn, even after use.  
P211 Do not spray on an open flame or other ignition source.  
P405 Store locked up.  
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.  
P501 Dispose of contents/container in accordance with local regulations.

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

Health = 1  
Fire = 4  
Reactivity = 3

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

Health = \*1  
Fire = 4  
Reactivity = 3

- **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: 64742-53-6	Distillates (petroleum), hydrotreated light naphthenic Skin Irrit. 2, H315; Eye Irrit. 2A, H319	25-50%
CAS: 68476-85-7 EINECS: 270-704-2	Petroleum gases, liquefied Flam. Gas 1, H220; Press. Gas, H280	25-50%
CAS: 123-95-5 EINECS: 204-666-5	butyl stearate Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	10-25%
CAS: 92257-31-3 EINECS: 296-120-8	C.I.Solvent Red 164 (eq) Carc. 2, H351	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**
- **General information:** Immediately remove any clothing soiled by the product.
- **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.  
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.

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- **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:**  
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** 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.  
Keep respiratory protective device available.  
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.  
Use explosion-proof apparatus / fittings and spark-proof tools.  
Containers may be hazardous when empty since residue liquid and vapors may be present

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- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
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.
- **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/m <sup>3</sup>
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- **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.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Avoid contact with the skin.
- Avoid contact with the eyes and skin.

· **Breathing equipment:**



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:** Use protective suit.

### 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

**Form:** Aerosol

**Color:** Red

· **Odor:** Characteristic

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** -40 °C (-40 °F)

**Flash point:** < -50 °C (< -58 °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 is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Explosion limits:**

**Lower:** 0.9 Vol %

**Upper:** 7.0 Vol %

· **Vapor pressure:** Not determined.

· **Density:** Not determined.

· **Relative density:** Not determined.

· **Vapor density:** Not determined.

· **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.

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- **Solvent content:**
  - Organic solvents:** 47.4 %
  - VOC content:** 0.4 %
  - 4.1 g/l / 0.03 lb/gl
- **9.2 Other information** No further relevant information available.

**10: Stability and reactivity**

- **10.1 Reactivity** No further relevant information available.
- **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:**  
Causes skin irritation.
  - **on the eye:** Based on available data, the classification criteria are not met.
- **Sensitization:** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **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

• <b>14.1 UN-Number</b>	
• <b>DOT, ADR, IMDG, IATA</b>	UN1950
• <b>14.2 UN proper shipping name</b>	
• <b>DOT, IATA</b>	Aerosols, flammable
• <b>ADR</b>	1950 Aerosols
• <b>IMDG</b>	AEROSOLS
• <b>14.3 Transport hazard class(es)</b>	
• <b>DOT</b>	
	
• <b>Class</b>	2.1
• <b>Label</b>	2.1
• <b>ADR</b>	
	
• <b>Class</b>	2 5F Gases

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· **Label** 2.1

· **IMDG, IATA**



· **Class** 2.1  
· **Label** 2.1

· **14.4 Packing group**  
· **DOT, ADR, IMDG, IATA** not applicable

· **14.5 Environmental hazards:**  
· **Marine pollutant:** No

· **14.6 Special precautions for user** Warning: Gases  
· **Danger code (Kemler):** -  
· **EMS Number:** F-D,S-U  
· **Stowage Code** SW1 Protected from sources of heat.  
SW22 For AEROSOLS with a maximum capacity of 1 litre:  
Category A. For AEROSOLS with a capacity above 1 litre:  
Category B. For WASTE AEROSOLS: Category C, Clear  
of living quarters.  
· **Segregation Code** SG69 For AEROSOLS with a maximum capacity of 1 litre:  
Segregation as for class 9. Stow "separated from" class 1  
except for division 1.4. For AEROSOLS with a capacity  
above 1 litre: Segregation as for the appropriate  
subdivision of class 2. For WASTE AEROSOLS:  
Segregation as for the appropriate subdivision of class 2.

· **14.7 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:** Aersols can be transported under LIMITED QUANTITIES  
(LQ). That means no label 2.

· **ADR**  
· **Excepted quantities (EQ)** Code: E0  
Not permitted as Excepted Quantity

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· <b>Remarks:</b>	Aerosols can be transported under LIMITED QUANTITIES (LQ). See ADR 3.4 - LQ2. That means no label 2.
· <b>IMDG</b>	1L
· <b>Limited quantities (LQ)</b>	Code: E0
· <b>Excepted quantities (EQ)</b>	Not permitted as Excepted Quantity
· <b>Remarks:</b>	Aerosols can be transported under LIMITED QUANTITIES (LQ). See IMDG 3.4 - LQ2. That means no label 2.
· <b>IATA</b>	
· <b>Remarks:</b>	Quantity Limitation - Passenger Aircraft 75 kg Quantity Limitation - Cargo Aircraft 150 kg Quantity Limitation - Limited quantities 30 kg G Packaging Instruction: Passenger Aircraft - PI 203 Cargo aircraft - PI 203 Limited quantities - PI Y203
· <b>UN "Model Regulation":</b>	UN 1950 AEROSOLS, 2.1

### 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.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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**• 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.

**• Relevant phrases**

H220 Extremely flammable gas.  
H280 Contains gas under pressure; may explode if heated.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H351 Suspected of causing cancer.

- Department issuing SDS:**
- Product safety department

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

- Date of preparation / last revision**
- 12/04/2015 / -

**• 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)  
ICAO: International Civil Aviation Organisation  
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  
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)  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
NIOSH: National Institute for Occupational Safety and Health  
OSHA: Occupational Safety & Health  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit  
Flam. Gas 1: Flammable gases, Hazard Category 1  
Flam. Aerosol 1: Flammable aerosols, Hazard Category 1  
Press. Gas: Gases under pressure: Compressed gas  
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.**