

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 24.01.2013

Revision: 24.01.2013

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

- **1.1 Product identifier**
- **Trade name: AVThermclean**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation** Heat Transfer System Cleaner
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Anderson & Vreeland, Inc.
15348 US Route 127 E-W, P.O. Box 527
Bryan, OH 43506 USA
Tel 1-866-282-7697
- **1.4 Emergency telephone number:**
ChemTel Inc.
(800)255-3924, +1 (813)248-0585

2 Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H411.



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS08 health hazard

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Xn; Harmful

R20/21/22-65: Harmful by inhalation, in contact with skin and if swallowed. Harmful: may cause lung damage if swallowed.

(Contd. on page 2)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 24.01.2013

Revision: 24.01.2013

Trade name: AVThermclean

(Contd. of page 1)



Xi; Irritant

R36/38: Irritating to eyes and skin.



Xi; Sensitising

R43: May cause sensitisation by skin contact.



N; Dangerous for the environment

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R10: Flammable.

Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

2.2 Label elements**Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS02 GHS07 GHS08 GHS09

Signal word Danger**Hazard-determining components of labelling:**

Turpentine, oil
White Mineral Oil
Polyisobutyleneamine

Hazard statements

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H411.

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H304 May be fatal if swallowed and enters airways.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P280 Wear protective gloves and eye protection.

(Contd. on page 3)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 24.01.2013

Revision: 24.01.2013

Trade name: AVThermclean

(Contd. of page 2)

- P233 Keep container tightly closed.
 P261 Avoid breathing mist/vapours/spray.
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
 P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 P337+P313 If eye irritation persists: Get medical advice/attention.
 P331 Do NOT induce vomiting.
 P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
 P403+P235 Store in a well-ventilated place. Keep cool.

· **Additional information:** N/A· **Hazard description:**· **WHMIS-symbols:**

B3 - Combustible liquid

D2B - Toxic material causing other toxic effects

· **NFPA ratings (scale 0 - 4)**

Health = 2

Fire = 2

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = 2

Fire = 2

Reactivity = 0

· **HMIS Long Term Health Hazard Substances**

None of the ingredients is listed.

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

3 Composition/information on ingredients

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

(Contd. on page 4)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS













Printing date 24.01.2013

Revision: 24.01.2013

Trade name: AVThermclean

(Contd. of page 3)

· Dangerous components:

CAS: 8042-47-5 EINECS: 232-455-8	White Mineral Oil  Xn R65  Asp. Tox. 1, H304	50-100%
CAS: 8006-64-2 EINECS: 232-350-7 Index number: 650-002-00-6	Turpentine, oil  Xn R20/21/22-65;  Xi R36/38;  Xi R43;  N R51/53 R10  Flam. Liq. 3, H226  Asp. Tox. 1, H304  Aquatic Chronic 2, H411  Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	25-50%
	Polyisobutyleneamines  Xi R36  Eye Irrit. 2, H319 Aquatic Chronic 4, H413	<10%

· Additional information: For the wording of the listed risk phrases refer to section 16.**4 First aid measures****· 4.1 Description of first aid measures****· General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Take affected persons out into the fresh air.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· After inhalation:

Supply fresh air; consult doctor in case of complaints.

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

· After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

· After eye contact:

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

A person vomiting while laying on their back should be turned onto their side.

· 4.2 Most important symptoms and effects, both acute and delayed

Allergic reactions

Coughing

Dizziness

Breathing difficulty

Gastric or intestinal disorders

(Contd. on page 5)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 24.01.2013

Revision: 24.01.2013

Trade name: AVThermclean

(Contd. of page 4)

- **Hazards**

- Danger of pulmonary oedema.

- Danger of impaired breathing.

- **4.3 Indication of any immediate medical attention and special treatment needed**

- If swallowed, gastric irrigation with added, activated carbon.

- If swallowed or in case of vomiting, danger of entering the lungs.

- If necessary oxygen respiration treatment.

- Medical supervision for at least 48 hours.

- Later observation for pneumonia and pulmonary oedema.

- Treat skin and mucous membrane with antihistamine and corticoid preparations.

5 Firefighting measures

- **5.1 Extinguishing media**

- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.

- **For safety reasons unsuitable extinguishing agents:**

- Water spray

- Water with full jet

- **5.2 Special hazards arising from the substance or mixture**

- In case of fire, the following can be released:

- Carbon monoxide (CO)

- Nitrogen oxides (NO_x)

- Under certain fire conditions, traces of other toxic gases cannot be excluded.

- **5.3 Advice for firefighters**

- **Protective equipment:**

- Wear self-contained respiratory protective device.

- Wear fully protective suit.

- **Additional information**

- Eliminate all ignition sources if safe to do so.

- Cool endangered receptacles with water fog or haze.

6 Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**

- Use respiratory protective device against the effects of fumes/dust/aerosol.

- Wear protective equipment. Keep unprotected persons away.

- Ensure adequate ventilation

- Keep away from ignition sources.

- Protect from heat.

- **6.2 Environmental precautions:**

- Inform respective authorities in case of seepage into water course or sewage system.

- 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.

- Send for recovery or disposal in suitable receptacles.

- Remove from the water surface (e.g. skim or suck off).

(Contd. on page 6)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 24.01.2013

Revision: 24.01.2013

Trade name: AVThermclean

(Contd. of page 5)

Ensure adequate ventilation.

- **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**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Avoid the formation of oil haze.

- **Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

- **7.2 Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:**

Provide ventilation for receptacles.

Avoid storage near extreme heat, ignition sources or open flame.

- **Information about storage in one common storage facility:**

Store away from foodstuffs.

Store away from oxidizing agents.

Do not store together with acids.

- **Further information about storage conditions:**

Store in cool, dry conditions in well sealed receptacles.

Keep container tightly sealed.

Store receptacle in a well ventilated area.

- **7.3 Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

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

- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

8006-64-2 Turpentine, oil

PEL (USA)	560 mg/m ³ , 100 ppm
REL (USA)	560 mg/m ³ , 100 ppm
TLV (USA)	112 mg/m ³ , 20 ppm
SEN	
EL (Canada)	20 ppm
S	
EV (Canada)	20 ppm

- **DNELs** No further relevant information available.

(Contd. on page 7)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 24.01.2013

Revision: 24.01.2013

Trade name: AVThermclean

(Contd. of page 6)

- **PNECs** No further relevant information available.
- **Additional information:** The lists valid during the making 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.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
Use suitable respiratory protective device in case of insufficient ventilation.
Use suitable respiratory protective device when aerosol or mist is formed.
For spills, respiratory protection may be advisable.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
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.
- **For the permanent contact gloves made of the following materials are suitable:**
Butyl rubber, BR
Nitrile rubber, NBR
Neoprene gloves
- **Eye protection:**
Contact lenses should not be worn.



Safety glasses

- **Body protection:** Solvent resistant protective clothing
- **Limitation and supervision of exposure into the environment**
No further relevant information available.
- **Risk management measures**
See Section 7 for additional information.

(Contd. on page 8)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 24.01.2013

Revision: 24.01.2013

Trade name: AVThermclean

(Contd. of page 7)

No further relevant information available.

9 Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Liquid
Colour:	Light brown
Odour:	Turpentine-like
Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.

· Flash point: 109 ° F / 43 ° C

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature: 428 ° F / 220 ° C

· Decomposition temperature: Not determined.

· Self-igniting: Product is not self-igniting.

· Danger of explosion: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower:	0,8 Vol %
Upper:	6,0 Vol %

· Vapour pressure at 20 °C: 5,4 hPa

· Density at 20 °C: 0,87 g/cm³

· 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:	Not determined.

· Solvent content:

Organic solvents: Not determined.

(Contd. on page 9)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 24.01.2013

Revision: 24.01.2013

Trade name: AVThermclean

(Contd. of page 8)

· **9.2 Other information**

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 and stored according to specifications.

· **10.3 Possibility of hazardous reactions**

Flammable.

Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomised.

Used empty containers may contain product gases which form explosive mixtures with air.

Reacts violently with oxidizing agents.

Reacts with acids.

Reacts with peroxides and other radical forming substances.

Toxic fumes may be released if heated above the decomposition point.

· **10.4 Conditions to avoid**

Keep ignition sources away - Do not smoke.

Store away from oxidizing agents.

· **10.5 Incompatible materials:** No further relevant information available.· **10.6 Hazardous decomposition products:**

Carbon monoxide and carbon dioxide

Nitrogen oxides

Hydrocarbons

11 Toxicological information

· **11.1 Information on toxicological effects**· **Acute toxicity:**· **Primary irritant effect:**· **on the skin:** Irritant to skin and mucous membranes.· **on the eye:** Irritating effect.· **Sensitization:** Sensitization possible through skin contact.· **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful

Irritant

Danger through skin adsorption.

· **Sensitisation:** Sensitization possible by inhalation and/or dermal contact.· **Repeated dose toxicity:** Repeated exposures may result in skin and/or respiratory sensitivity.

(Contd. on page 10)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 24.01.2013

Revision: 24.01.2013

Trade name: AVThermclean

(Contd. of page 9)

12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** The material is harmful to the environment.
- **12.2 Persistence and degradability** The product is partly biodegradable. Significant residuals remain.
- **12.3 Bioaccumulative potential** Does not accumulate in organisms
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:**
Toxic for fish
Due to mechanical actions of the product (e.g. agglutinations) damages may occur.
The product is oxygen-consuming. The declared action may be partly caused by lack of oxygen.
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
This statement was deduced from products with a similar structure or composition.
Avoid transfer into the environment.
Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
- **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 together with household garbage. Do not allow product to reach sewage system.
Contact waste processors for recycling information.
Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **14.1 UN-Number**
- **DOT** N/A
- **ADR, IMDG, IATA** UN1993

(Contd. on page 11)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 24.01.2013

Revision: 24.01.2013

Trade name: AVThermclean

(Contd. of page 10)

· 14.2 UN proper shipping name

· DOT N/A
 · ADR 1993 FLAMMABLE LIQUID, N.O.S. (TURPENTINE),
 ENVIRONMENTALLY HAZARDOUS
 · IMDG FLAMMABLE LIQUID, N.O.S. (TURPENTINE),
 MARINE POLLUTANT
 · IATA FLAMMABLE LIQUID, N.O.S. (TURPENTINE)

· 14.3 Transport hazard class(es)

· DOT
 · Class N/A

· ADR



· Class 3 (F1) Flammable liquids.
 · Label 3

· IMDG



· Class 3 Flammable liquids.
 · Label 3

· IATA



· Class 3 Flammable liquids.
 · Label 3

· 14.4 Packing group

· DOT N/A
 · ADR, IMDG, IATA III

· 14.5 Environmental hazards:

· Marine pollutant: Yes
 Symbol (fish and tree)

· 14.6 Special precautions for user

· Danger code (Kemler): Warning: Flammable liquids.
 30
 · EMS Number: F-E,S-E

· 14.7 Transport in bulk according to Annex II of
MARPOL73/78 and the IBC Code

Not applicable.

(Contd. on page 12)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 24.01.2013

Revision: 24.01.2013

Trade name: AVThermclean

(Contd. of page 11)

· **Transport/Additional information:**· **ADR**

- | | |
|---------------------------|-----|
| · Limited quantities (LQ) | 5L |
| · Transport category | 3 |
| · Tunnel restriction code | D/E |

- | | |
|--------------------------|--|
| · UN "Model Regulation": | UN1993, FLAMMABLE LIQUID, N.O.S.
(TURPENTINE), ENVIRONMENTALLY HAZARDOUS,
3, III |
|--------------------------|--|

15 Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**
- **SARA**

· **Section 355 (extremely hazardous substances):**

None of the ingredients 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 (California):**· **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.

· **Carcinogenic Categories**· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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

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.

(Contd. on page 13)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 24.01.2013

Revision: 24.01.2013

Trade name: AVThermclean

(Contd. of page 12)

· OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients is listed.
· Canada
· Canadian Domestic Substances List (DSL)
All ingredients are listed.
· Canadian Ingredient Disclosure list (limit 0.1%)
None of the ingredients is listed.
· Canadian Ingredient Disclosure list (limit 1%)
8006-64-2 Turpentine, oil
· 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**

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

R10	Flammable.
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R36	Irritating to eyes.
R36/38	Irritating to eyes and skin.
R43	May cause sensitisation by skin contact.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.

· **Abbreviations and acronyms:**

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 Harmonized System of Classification and Labelling of Chemicals
 ACGIH: American Conference of Governmental Industrial Hygienists
 NFPA: National Fire Protection Association (USA)
 HMIS: Hazardous Materials Identification System (USA)
 WHMIS: Workplace Hazardous Materials Information System (Canada)
 DNEL: Derived No-Effect Level (REACH)
 PNEC: Predicted No-Effect Concentration (REACH)

(Contd. on page 14)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Printing date 24.01.2013

Revision: 24.01.2013

Trade name: AVThermclean

(Contd. of page 13)

· Sources

SDS Prepared by:

ChemTel Inc.

1305 North Florida Avenue

Tampa, Florida USA 33602-2902

Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573

Website: www.chemtelinc.com