

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date: 05.04.2023

Version: 20 (replaces version 19)

Revision: 05.04.2023

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

- **Product identifier**
- **Trade name:** KLEAN WELD
- **Article number:** 632020001 UFI : 9HK5-D0NC-500C-1XQ8
- **Relevant identified uses of the substance or mixture and uses advised against -**
- **Application of the substance / the mixture** Metal surface treatment
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
- A.M.P.E.R.E. SYSTEM
3 rue Antoine Balard - Z.I. du Vert Galant
95310 Saint-Ouen-l'Aumône - FRANCE
Tel: + 33 1 34 64 72 72 / Fax: +33 1 30 37 55 17
fds@amperesystem.com
- **Emergency telephone number:** UK : National Poisons Information Service - 0344 892 0111
Ireland : National Poisons Information Centre - Beaumont Hospital - PO Box 1297 Beaumont Road 9 Dublin : +353 1 809 2566
(Healthcare professionals-24/7) - +353 1 809 2166 (public, 8am - 10pm, 7/7)

SECTION 2: Hazards identification

- **Classification of the substance or mixture**



flame

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



Skin Irrit. 2	H315	Causes skin irritation.
STOT SE 3	H336	May cause drowsiness or dizziness.
Asp. Tox. 1	H304	May be fatal if swallowed and enters airways.
Aquatic Chronic 3	H412	Harmful to aquatic life with long lasting effects.

- **Label elements**

- **GHS label elements**

The product is classified and labelled according to the Globally Harmonised System (GHS).

- **Hazard pictograms**



GHS02



GHS07

- **Signal word** Danger

- **Hazard-determining components of labelling:**

Pentane
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane

- **Hazard statements**

H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H412 Harmful to aquatic life with long lasting effects.

- **Precautionary statements**

P101 If medical advice is needed, have product container or label at hand.

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- P102 Keep out of reach of children.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P211 Do not spray on an open flame or other ignition source.
- P251 Do not pierce or burn, even after use.
- P260 Do not breathe mist/vapours/spray.
- P271 Use only outdoors or in a well-ventilated area.
- P273 Avoid release to the environment.
- P280 Wear protective gloves / eye protection.
- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P312 Call a POISON CENTER/doctor if you feel unwell.
- P403 Store in a well-ventilated place.
- P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Other hazards**
 - **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **Mixtures**
- **Description:** Active substance with propellant

- **Dangerous components:**

CAS: 106-97-8 EINECS: 203-448-7 Reg.nr.: 01-2119474691-32	butane (containing < 0.1% butadiene (203-450-8), Note K) Flam. Gas 1A, H220; Press. Gas (Comp.), H280	50-<75%
CAS: 74-98-6 EINECS: 200-827-9 Reg.nr.: 01-2119486944-21	propane Flam. Gas 1A, H220; Press. Gas (Comp.), H280	10-<25%
CAS: 109-66-0 EINECS: 203-692-4 Reg.nr.: 01-2119459286-30	Pentane Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; STOT SE 3, H336, EUH066	2.5-<10%
CAS: 75-28-5 EINECS: 200-857-2 Reg.nr.: 01-2119485395-27	isobutane (containing < 0,1 % butadiene (203-450-8), Note K) Flam. Gas 1A, H220; Press. Gas (Comp.), H280	2.5-<10%
EC number: 921-024-6 Reg.nr.: 01-2119475514-35	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; STOT SE 3, H336	2.5-<10%

- **Additional information:**
Aerosols and containers fitted with a solid atomizer containing substances or mixtures classified as hazardous by aspiration shall not be labelled for that hazard.
The text of the hazard statements mentioned here can be found in chapter 16.

SECTION 4: First aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** Do not induce vomiting; call for medical help immediately.
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.

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- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
 - Water haze
 - Fire-extinguishing powder
 - Carbon dioxide
 - Alcohol resistant foam
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mount respiratory protective device.

SECTION 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.

SECTION 7: Handling and storage

- **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:**
 - Do not spray onto a naked flame or any incandescent material.
 - Keep ignition sources away - Do not smoke.
 - Protect against electrostatic charges.
 - Pressurised 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.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
 - Store in a cool location.
 - Observe official regulations on storing packagings with pressurised containers.
- **Information about storage in one common storage facility:**
 - Observe official regulations on storing packagings with pressurised containers.
- **Further information about storage conditions:**
 - Store in cool, dry conditions in well sealed receptacles.
 - Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

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SECTION 8: Exposure controls/personal protection

· Control parameters

· Ingredients with limit values that require monitoring at the workplace:

106-97-8 butane (containing < 0.1% butadiene (203-450-8), Note K)

WEL	Short-term value: 1810 mg/m ³ , 750 ppm Long-term value: 1450 mg/m ³ , 600 ppm Carc (if more than 0.1% of buta-1.3-diene)
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74-98-6 propane

OEL	Long-term value: 1800 mg/m ³ , 1000 ppm Additioneel ingevuld tbv klant voor Hfdst3 SDS
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109-66-0 Pentane

WEL	Long-term value: 1800 mg/m ³ , 600 ppm
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75-28-5 isobutane (containing < 0,1 % butadiene (203-450-8), Note K)

OEL	Long-term value: 2400 mg/m ³ , 1000 ppm Additioneel ingevuld obv klant voor Hfdst 3 SDS
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· DNELs

109-66-0 Pentane

Oral	DNEL Long term-systemic	214 mg/kg bw/day (Consumer)
Dermal	DNEL Long term-systemic	214 mg/kg bw/day (Consumer) 432 mg/kg bw/day (Worker)
Inhalative	DNEL Long term-systemic	643 mg/m ³ (Consumer) 3000 mg/m ³ (Worker)

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane

Oral	DNEL Long term-systemic	699 mg/kg bw/day (Consumer)
Dermal	DNEL Long term-systemic	699 mg/kg bw/day (Consumer) 773 mg/kg bw/day (Worker)
Inhalative	DNEL Long term-systemic	608 mg/m ³ (Consumer) 2035 mg/m ³ (Worker)

· **Additional information:** The lists valid during the making were used as basis.

· Exposure controls

· **Appropriate engineering controls** No further data; see section 7.

· **Individual protection measures, such as personal protective equipment**

· **General protective and hygienic measures:**

Wash hands before breaks and at the end of work.

General ventilation

· **Respiratory protection:**

Use suitable respiratory protective device in case of insufficient ventilation.

Filter A2/P2

· **Hand protection**

Wear gloves for the protection against chemicals according to EN 374

Solvent resistant gloves

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.

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.5 mm

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- **Penetration time of glove material**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye/face protection**
Safety glasses



Tightly sealed goggles

- **Body protection:**
Use protective suit. (EN-13034/6)
Full skin covering antistatic, chemical and oil resistant clothing and safety shoes are recommended. (EN1149; EN340&EN ISO 13688; EN13034-6).
- **Environmental exposure controls** Use a suitable container to prevent environmental contamination.

SECTION 9: Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

- | | |
|--|------------------------------------|
| · Physical state | Aerosol |
| · Colour: | According to product specification |
| · Odour: | Characteristic |
| · Odour threshold: | Not determined. |
| · Melting point/freezing point: | Undetermined. |
| · Boiling point or initial boiling point and boiling range | -44.5 °C |
| · Flammability | Not applicable. |
| · Lower and upper explosion limit | |
| · Lower: | 0.8 Vol % |
| · Upper: | 10.9 Vol % |
| · Flash point: | -97 °C |
| · Ignition Temperature | 285 °C |
| · pH | Mixture is non-polar/aprotic. |
| · Viscosity: | |
| · Kinematic viscosity | Not determined. |
| · Kinematic viscosity | |
| · Dynamic: | Not determined |
| · Solubility | |
| · water: | Not miscible or difficult to mix. |
| · Partition coefficient n-octanol/water (log value) | Not determined. |
| · Vapour pressure at 20 °C: | 8300 hPa |
| · Vapor Pressure: | |
| · Density and/or relative density | |
| · Density at 20 °C: | 0.584 g/cm ³ |
| · Relative density | Not determined. |
| · Vapour density | Not determined. |

· Other information

- **Appearance:**
- **Form:** Aerosol
- **Important information on protection of health and environment, and on safety.**
- **Ignition temperature:** Product is not selfigniting.
- **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
- **Solvent content:**
- **Organic solvents:** 95.1 %

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· Solids content:	0.0 %
· Change in condition	
· Evaporation rate	Not applicable.
Information with regard to physical hazard classes	
· Explosives	Void
· Flammable gases	Void
· Aerosols	Extremely flammable aerosol. Pressurised container: May burst if heated.
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void

SECTION 10: Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **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.

SECTION 11: Toxicological information

- **Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.

LD/LC50 values relevant for classification:

109-66-0 Pentane

Oral	LD50	>5000 mg/kg (Rat)
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Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane

Oral	LD50	>5840 mg/kg (Rat)
Dermal	LD50	>2920 mg/kg (Rabbit)
Inhalative	LC50 (4h)	>25 mg/l (Rat)

- **Skin corrosion/irritation** Causes skin irritation.
- **STOT-single exposure** May cause drowsiness or dizziness.
- **Aspiration hazard** May be fatal if swallowed and enters airways.

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· Information on other hazards**· Endocrine disrupting properties**

None of the ingredients is listed.

SECTION 12: Ecological information**· Toxicity****· Aquatic toxicity:****109-66-0 Pentane**

NOEC (72h)	7.51 mg/l (Pseudokirchneriella subcapitata)
EC50 (72h)	10.7 mg/l (Pseudokirchneriella subcapitata)
LC50 (96h)	4.26 mg/l (Oncorhynchus mykiss)
EC50 (48h)	2.7 mg/l (Daphnia magna)

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane

NOELR (72h)	3 mg/l (Pseudokirchneriella subcapitata)
EL50 (48h)	3 mg/l (Daphnia magna)
EL50 (72h)	30-100 mg/l (Pseudokirchneriella subcapitata)
LL50 (96h)	11.4 mg/l (Oncorhynchus mykiss)
NOEC (21 days)	0.17 mg/l (Daphnia magna)
LOEC (21 days)	0.32 mg/l (Daphnia magna)

- **Persistence and degradability** Not easily biodegradable
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
- **Other adverse effects**
- **Remark:** Harmful to fish
- **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.
Danger to drinking water if even small quantities leak into the ground.
Harmful to aquatic organisms

SECTION 13: Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- **UN number or ID number**
- **ADR, ADN, IMDG, IATA** UN1950

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· UN proper shipping name	
· ADR, ADN	UN1950 AEROSOLS
· IMDG	AEROSOLS
· IATA	AEROSOLS, flammable

· **Transport hazard class(es)**· **ADR**

· Class	2.5F Gases.
· Label	2.1

· **ADN**· **ADN/R Class:** 2.5F· **IMDG, IATA**

· Class	2.1 Gases.
· Label	2.1

· **Packing group**· **ADR, IMDG, IATA** Void· **Environmental hazards:**· **Marine pollutant:** No· **Special precautions for user** Warning: Gases.· **Hazard identification number (Kemler code):** -· **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.
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· **Maritime transport in bulk according to IMO instruments**

Not applicable.

· **Transport/Additional information:**· **ADR**· **Limited quantities (LQ)** 1L· **Excepted quantities (EQ)** Code: E0

Not permitted as Excepted Quantity

· **Transport category** 2· **Tunnel restriction code** D

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- | | |
|--|---|
| <ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) | <p>1L
Code: E0
Not permitted as Excepted Quantity</p> |
| <ul style="list-style-type: none"> · UN "Model Regulation": | <p>UN 1950 AEROSOLS, 2.1</p> |

SECTION 15: Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
 - **Directive 2012/18/EU**
 - **Named dangerous substances - ANNEX I** None of the ingredients is listed.
 - **Seveso category P3a** FLAMMABLE AEROSOLS
 - **Qualifying quantity (tonnes) for the application of lower-tier requirements** 150 t
 - **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
 - **National regulations:**
 - **Breakdown regulations:**
- | Class | Share in % |
|-------|------------|
| NK | 75-<100 |
- **VOC-CH** 95.10 %
 - **VOC-EU** 555.4 g/l
 - **Danish MAL Code** 3-1
 - **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 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.
H225 Highly flammable liquid and vapour.
H280 Contains gas under pressure; may explode if heated.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.
EUH066 Repeated exposure may cause skin dryness or cracking.
- **Classification according to Regulation (EC) No 1272/2008**
- Physical and chemical properties: The classification is based on the results of the mixtures tested. Health hazards, Environmental hazards: The method of classification of mixtures based on the constituents of the mixture (sum formula).
- **Department issuing SDS:** Research & Development
 - **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 relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
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)
MAL-Code: Måleteknisk Arbejdshygiejnisk Luftbehov (Regulation for the labeling concerning inhalation hazards, Denmark)

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DNEL: Derived No-Effect Level (UK REACH)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Flam. Gas 1A: Flammable gases – Category 1A
 Aerosol 1: Aerosols – Category 1
 Press. Gas (Comp.): Gases under pressure – Compressed gas
 Flam. Liq. 2: Flammable liquids – Category 2
 Skin Irrit. 2: Skin corrosion/irritation – Category 2
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 Asp. Tox. 1: Aspiration hazard – Category 1
 Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
 Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3
 · *** Data compared to the previous version altered. ***

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DISCLAIMER

The information contained in this sheet comes from reliable sources. It has been drawn up based on our knowledge at the time of the most recent update, as indicated. This information is intended as an aid to the user and should not be considered as a guarantee.

Conditions or methods of handling, storage, use or disposal of the product are outside our control, and we may not be held responsible for any loss, damage or expenses incurred as a result of, or in connection with, the latter.

All substances or mixtures can present unknown dangers and must be used with caution. We cannot guarantee that all dangers have been set out in an exhaustive manner.

This sheet has been drawn up for, and must be used for, this product only. If the product is used as a component in another product, the information given with it may not be applicable.

This sheet does not under any circumstances exempt the user from complying with all laws, regulations and administrative requirements related to the product, health and safety, and the protection of human health and the environment.