



SAFETY DATA SHEET

PW2 LEAD FREE FLUX REMOVER - POWERCLEAN II, BULK

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) No 453/2010

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

1.1. Product identifier

Product name	PW2 LEAD FREE FLUX REMOVER - POWERCLEAN II, BULK
Product number	PW201L, PW2G, PW201G, PW201D, PW201P, PW2L, PW2P, PW2D, PW2GG, PW2GL, PW20IGG, PW20IGL
Synonyms; trade names	PW2 POWERCLEAN II SOLVENT; POWERCLEAN ELECTRONIC CLEANER

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Cleaning agent.
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1.3. Details of the supplier of the safety data sheet

Supplier	MICROCARE EUROPE BVBA VEKESTRAAT 29 B11 INDUSTRIEZONE 'T SAS 1910 KAMPENHOUT, Belgium Phone +32.2.251.95.05 Fax +32.2.400.96.39
Manufacturer	MICROCARE CORPORATION 595 John Downey Drive New Britain, CT 06051 United States of America CAGE: OATV9 Tel: +1 800-638-0125, +1 860-827-0626 Fax: +1 860-827-8105 techsupport@microcare.com

1.4. Emergency telephone number

Emergency telephone	CHEMTREC UK (London) +(44)-870-8200418 +1 703-741-5970 (from anywhere in the world)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	Acute Tox. 4 - H332
Environmental hazards	Aquatic Chronic 3 - H412
Human health	Prolonged or repeated contact with skin may cause irritation, redness and dermatitis. Mild dermatitis, allergic skin rash.
Environmental	The product contains a substance which is harmful to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

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Physicochemical Vapours are heavier than air and may travel along the floor and accumulate in the bottom of containers. Gas or vapour displaces oxygen available for breathing (asphyxiant).

2.2. Label elements

Pictogram



Signal word Warning

Hazard statements H332 Harmful if inhaled.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements P261 Avoid breathing vapour/ spray.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P312 Call a POISON CENTER/ doctor if you feel unwell.
P501 Dispose of contents/ container in accordance with national regulations.

Supplemental label information EUH210 Safety data sheet available on request.
RCH001a For use in industrial installations only.

Contains trans-DICHLOROETHYLENE

Supplementary precautionary statements P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

trans-DICHLOROETHYLENE	60-100%
CAS number: 156-60-5	EC number: 205-860-2
	REACH registration number: 05-2114285321-54-0000

Classification

Flam. Liq. 2 - H225
Acute Tox. 4 - H332
Aquatic Chronic 3 - H412

1,1,1,2,2,3,4,5,5,5-decafluoropentane

10-30%

CAS number: 138495-42-8

EC number: 420-640-8

REACH registration number: 01-2119446695-28-0000

Classification

Aquatic Chronic 3 - H412

The full text for all hazard statements is displayed in Section 16.

Composition comments The data shown are in accordance with the latest EC Directives.

Composition

SECTION 4: First aid measures

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4.1. Description of first aid measures

General information	Never give anything by mouth to an unconscious person. Do not induce vomiting. Place unconscious person on the side in the recovery position and ensure breathing can take place. If breathing stops, provide artificial respiration.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen.
Ingestion	Do not induce vomiting. Rinse mouth thoroughly with water. Give plenty of water to drink. Consult a physician for specific advice.
Skin contact	Remove contaminated clothing and rinse skin thoroughly with water.
Eye contact	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Consult a physician for specific advice.

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

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Vapours may cause drowsiness and dizziness. Difficulty in breathing. Nausea, vomiting.
Ingestion	May cause stomach pain or vomiting. Congestion of the lungs may occur, producing severe shortness of breath. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation.
Skin contact	Prolonged or repeated contact with skin may cause irritation, redness and dermatitis.
Eye contact	Profuse watering of the eyes. Irritation and redness, followed by blurred vision.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	No specific recommendations. If in doubt, get medical attention promptly.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.
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5.2. Special hazards arising from the substance or mixture

Specific hazards	Keep away from heat, sparks and open flame. Thermal decomposition or combustion products may include the following substances: Toxic and corrosive gases or vapours. Closed containers can burst violently when heated, due to excess pressure build-up.
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5.3. Advice for firefighters

Protective actions during firefighting	Containers close to fire should be removed or cooled with water.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Warn everybody of potential hazards and evacuate if necessary. Provide adequate ventilation. Avoid inhalation of vapours. Use approved respirator if air contamination is above an acceptable level.
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6.2. Environmental precautions

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Environmental precautions Contain spillage with sand, earth or other suitable non-combustible material. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Absorb spillage with non-combustible, absorbent material. Do not discharge into drains or watercourses or onto the ground. Contain and absorb spillage with sand, earth or other non-combustible material. Collect spillage with a shovel and broom, or similar and reuse, if possible. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Provide adequate ventilation. Avoid inhalation of vapours/spray and contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place.

Storage class The product is non-combustible.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

Reference to other sections. Store away from incompatible materials (see Section 10).

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

trans-DICHLOROETHYLENE

Long-term exposure limit (8-hour TWA): ACGIH

Short-term exposure limit (15-minute): ACGIH 200 ppm

1,1,1,2,2,3,4,5,5,5-decafluoropentane

No information available that would effect occupational exposure limit values.

ACGIH = American Conference of Governmental Industrial Hygienists.

Additional Occupational Exposure Limits

Ingredient comments ACGIH = US Standard.

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

No specific ventilation requirements. This product must not be handled in a confined space without adequate ventilation.

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Eye/face protection	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses. Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles or face shield.
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible.
Other skin and body protection	Wear suitable protective clothing as protection against splashing or contamination. Wear apron or protective clothing in case of contact.
Hygiene measures	No specific hygiene procedures recommended but good personal hygiene practices should always be observed when working with chemical products. When using do not eat, drink or smoke.
Respiratory protection	Vapours are heavier than air and may travel along the floor and accumulate in the bottom of containers. In confined or poorly-ventilated spaces, a supplied-air respirator must be worn. Wear self-contained breathing apparatus with full facepiece.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Clear liquid.
Colour	Colourless.
Odour	Slight. Ether.
Odour threshold	No information available.
pH	No information available.
Melting point	No information available.
Initial boiling point and range	39°C/102°F @ 101.3 kPa
Flash point	The product is not flammable.
Evaporation rate	No information available.
Evaporation factor	No information available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 5.5 %(V) Upper flammable/explosive limit: 13 %(V)
Other flammability	The product is not flammable.
Vapour pressure	55.3 kPa @ 25°C/77°F
Vapour density	No information available.
Relative density	1.27 g/cm ³ @ 25°C/77°F
Bulk density	No information available.
Solubility(ies)	No information available.
Partition coefficient	No information available.
Auto-ignition temperature	No information available.
Decomposition Temperature	No information available.

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Viscosity No information available.

Explosive properties No information available.

9.2. Other information

Refractive index No information available.

Particle size Not applicable.

Molecular weight Not applicable.

Volatility 100%

Saturation concentration No information available.

Critical temperature No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity The following materials may react with the product: Strong alkalis.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Will not polymerise.

10.4. Conditions to avoid

Conditions to avoid Keep away from heat, sparks and open flame. Thermal decomposition or combustion products may include the following substances: Toxic and corrosive gases or vapours.

10.5. Incompatible materials

Materials to avoid Alkali metals. Alkaline earth metals. Powdered metal.

10.6. Hazardous decomposition products

Hazardous decomposition products Heating may generate the following products: Toxic and corrosive gases or vapours. Halogenated hydrocarbons. Hydrogen fluoride (HF). Carbon dioxide (CO₂). Carbon monoxide (CO).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 12.94

Inhalation Vapours may irritate throat/respiratory system. A single exposure may cause the following adverse effects: Coughing. Difficulty in breathing.

Ingestion May cause stomach pain or vomiting. May cause nausea, headache, dizziness and intoxication.

Skin contact Product has a defatting effect on skin. May cause allergic contact eczema.

Eye contact May cause temporary eye irritation.

Medical symptoms Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following overexposure may include the following: Headache. Fatigue. Nausea, vomiting.

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Toxicological information on ingredients.

trans-DICHLOROETHYLENE

Other health effects There is no evidence that the product can cause cancer.

1,1,1,2,2,3,4,5,5,5-decafluoropentane

Acute toxicity - oral

**Acute toxicity oral (LD₅₀
mg/kg)** 5,000.0

Species Rat

ATE oral (mg/kg) 5,000.0

Acute toxicity - dermal

**Acute toxicity dermal (LD₅₀
mg/kg)** 5,000.0

Species Rat

ATE dermal (mg/kg) 5,000.0

Acute toxicity - inhalation

**Acute toxicity inhalation
(LC₅₀ vapours mg/l)** 114.0

Species Rat

**ATE inhalation (vapours
mg/l)** 114.0

Skin corrosion/irritation

Animal data Not irritating. Rabbit

Human skin model test Data lacking.

Extreme pH Not applicable. Not corrosive to skin.

Serious eye damage/irritation

**Serious eye
damage/irritation** Not irritating. Rabbit

Respiratory sensitisation

Respiratory sensitisation Data lacking.

Skin sensitisation

Skin sensitisation Not sensitising. - Guinea pig: Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro This substance has no evidence of mutagenic properties.

Genotoxicity - in vivo This substance has no evidence of mutagenic properties.

Carcinogenicity

Carcinogenicity Does not contain any substances known to be carcinogenic.

IARC carcinogenicity Not listed.

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Reproductive toxicity

Reproductive toxicity - fertility No evidence of reproductive toxicity in animal studies.

Skin contact Skin irritation should not occur when used as recommended. May cause defatting of the skin but is not an irritant.

Eye contact May cause eye irritation.

Acute and chronic health hazards There is no evidence that the product can cause cancer.

SECTION 12: Ecological Information

Ecotoxicity The product contains volatile organic compounds (VOCs) which have a photochemical ozone creation potential. The product contains a substance or substances that will contribute to global warming (greenhouse effect).

Ecological information on ingredients.

trans-DICHLOROETHYLENE

Ecotoxicity Low acute toxicity to aquatic organisms.

1,1,1,2,2,3,4,5,5,5-decafluoropentane

Ecotoxicity It is unlikely that the substance will dissolve in water in amounts big enough to have a toxic effect on fish and daphnies.

12.1. Toxicity

Ecological information on ingredients.

trans-DICHLOROETHYLENE

Acute toxicity - fish LC₅₀, 96 hours: 1350 mg/l, Algae

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 220 mg/l, Daphnia magna

1,1,1,2,2,3,4,5,5,5-decafluoropentane

Acute toxicity - fish LC₅₀, 96 hours: 13.9 mg/l, Onchorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates LC₅₀, 48 hours: 11.7 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: >120 mg/l, Fish

12.2. Persistence and degradability

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient No information available.

Ecological information on ingredients.

trans-DICHLOROETHYLENE

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Bioaccumulative potential Bioaccumulation is unlikely to be significant because of the low water-solubility of this product.

1,1,1,2,2,3,4,5,5,5-decafluoropentane

Bioaccumulative potential Bioaccumulation is unlikely to be significant because of the low water-solubility of this product.

Partition coefficient Pow: 2.7

12.4. Mobility in soil

Mobility The product contains volatile substances which may spread in the atmosphere.

Ecological information on ingredients.

trans-DICHLOROETHYLENE

Mobility The product has poor water-solubility.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects The product contains a substance or substances that will contribute to global warming (greenhouse effect).

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General Not regulated. The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

14.2. UN proper shipping name

Not applicable. No information required.

14.3. Transport hazard class(es)

Not applicable. No information required.

14.4. Packing group

Not applicable. No information required.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable. No information required.

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14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable. No information required.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU legislation Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Revision date	28/07/2017
Revision	20
Supersedes date	28/07/2017
SDS number	BULK - PW2
SDS status	Approved.
Hazard statements in full	H225 Highly flammable liquid and vapour. H332 Harmful if inhaled. H412 Harmful to aquatic life with long lasting effects.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.