

5797 POWERCLEAN INVERTIBLE



SAFETY DATA SHEET
(REACH regulation (EC) n° 1907/2006 - n° 2015/830)

SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name : DURABLE POWERCLEAN INVERTIBLE
Product code : 579719 Specification n° 005449-A

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

Provides quick and effective computer and electronic maintenance. Only use the product as directed on the aerosol.

1.3. Details of the supplier of the safety data sheet

Company name : Durable Hunke & Jochheim GmbH & Co. KG (Head Office)
Address : Westfalenstr. 77-79 D-58636 Iserlohn
Telephone : +49 (0) 2371 / 662-0 Fax : +49 (0) 2371 /662-221
E-mail: durable-clean@ durable.de
Internet: http://www.durable.de

1.4. Emergency telephone number : +49 (0) 2371 / 662-0

Association/Organisation : http://www.durable.de

SECTION 2 : HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

In compliance with EC regulation No. 1272/2008 and its amendments.

Aerosol, Category 1 (Aerosol 1, H222 - H229).

This mixture does not present a health hazard with the exception of possible occupational exposure thresholds (see paragraphs 3 and 8).

This mixture does not present an environmental hazard. No known or foreseeable environmental damage under standard conditions of use.

2.2. Label elements

Mixture for aerosol application.

In compliance with EC regulation No. 1272/2008 and its amendments.

Hazard pictograms :



GHS02

Signal Word :

DANGER

Hazard statements :

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

Precautionary statements - General :

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.

Precautionary statements - Prevention :

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.

Precautionary statements - Storage :

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C.

2.3. Other hazards

The mixture does not contain substances classified as 'Substances of Very High Concern' (SVHC) \geq 0.1% published by the European Chemicals Agency (ECHA) under article 57 of REACH: <http://echa.europa.eu/fr/candidate-list-table>

The mixture satisfies neither the PBT nor the vPvB criteria for mixtures in accordance with annex XIII of the REACH regulations EC 1907/2006.

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Intentional misuse of the preparation by concentrating and inhaling the vapours can be harmful or fatal.
Rapid evaporation of the liquid may cause frostbite.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Composition :

Identification	(EC) 1272/2008	Note	%
CAS: 106-97-8 EC: 203-448-7 REACH: 01-2119474691-32 BUTANE (<0,1 % 1,3-BUTADIENE)	GHS02 Dgr Flam. Gas 1, H220 Press. Gas, H280	C [1] [7]	25 <= x % < 50

Information on ingredients :

- [7] Propellant gas
- [1] Substance for which maximum workplace exposure limits are available.

SECTION 4 : FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor.
NEVER induce swallowing by an unconscious person.

4.1. Description of first aid measures

In the event of exposure by inhalation :

Remove the affected person to fresh air. If recovery is not rapid, obtain medical attention. If breathing has stopped, begin artificial respiration immediately. Obtain medical attention without delay.

In the event of splashes or contact with eyes :

Wash thoroughly with soft, clean water for 15 minutes holding the eyelids open.
In the case of cold burns involving the eye, obtain medical attention without delay.

In the event of splashes or contact with skin :

In the event of cold burns obtain medical advice. Cover the wounds with sterile dressings only. Do not apply ointments or powders.

In the event of swallowing :

As this product is a gas, refer to the inhalation section.

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

See section 11.

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

If you feel unwell, seek medical advice (show the label if possible). If symptoms persist, always call a doctor.

SECTION 5 : FIREFIGHTING MEASURES

Flammable.

Chemical powders, carbon dioxide and other extinguishing gas are suitable for small fires.

5.1. Extinguishing media

If the aerosols are exposed to a fire : keep containers cool by spraying with water from a protected position.

Suitable methods of extinction

In the event of a fire, use :

- sprayed water or water mist
- water with AFFF (Aqueous Film Forming Foam) additive
- foam
- multipurpose ABC powder
- BC powder
- carbon dioxide (CO₂)

Prevent the effluent of fire-fighting measures from entering drains or waterways.

Unsuitable methods of extinction

In the event of a fire, do not use :

- water jet

5.2. Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

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In the event of a fire, the following may be formed :

- carbon monoxide (CO)
- carbon dioxide (CO₂)

In a fire or if heated, a pressure increase will occur and the container may burst. Bursting aerosol containers may be propelled from a fire at high speed. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

5.3. Advice for firefighters

Fire-fighting personnel are to be equipped with autonomous insulating breathing apparatus.

If possible, stop the product stream. Spray from a protected position till the containers are cool. If possible, take the aerosols outside. Keep public on a distance.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Consult the safety measures listed under headings 7 and 8.

For non first aid worker

Because of the organic solvents contained in the mixture, eliminate sources of ignition and ventilate the area.

For first aid worker

First aid workers will be equipped with suitable personal protective equipment (See section 8).

6.2. Environmental precautions

Evacuate area. Stop flow. Eliminate all sources of ignition.

6.3. Methods and material for containment and cleaning up

Not applicable.

6.4. Reference to other sections

No data available.

SECTION 7 : HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the mixture is handled.

7.1. Precautions for safe handling

Always wash hands after handling.

Ensure that there is adequate ventilation, especially in confined areas.

Fire prevention :

Handle in well-ventilated areas.

Vapours are heavier than air. They can spread along the ground and form mixtures that are explosive with air.

Prevent the formation of flammable or explosive concentrations in air and avoid vapor concentrations higher than the occupational exposure limits.

Do not spray on a naked flame or any incandescent material.

Do not pierce or burn, even after use.

Use the mixture in premises free of naked flames or other sources of ignition and ensure that electrical equipment is suitably protected.

Keep packages tightly closed and away from sources of heat, sparks and naked flames.

Do not use tools which may produce sparks. Do not smoke.

Prevent access by unauthorised personnel.

Recommended equipment and procedures :

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

Do not breathe in aerosols.

Packages which have been opened must be reclosed carefully and stored in an upright position.

Prohibited equipment and procedures :

No smoking, eating or drinking in areas where the mixture is used.

7.2. Conditions for safe storage, including any incompatibilities

No data available.

Storage

Keep out of reach of children.

Keep away from all sources of ignition - do not smoke.

Keep well away from all sources of ignition, heat and direct sunlight.

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The floor must be impermeable and form a collecting basin so that, in the event of an accidental spillage, the liquid cannot spread beyond this area.

Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C.

Storage in a dry, frost-free and well ventilated place.

Packaging

Always keep in packaging made of an identical material to the original.

7.3. Specific end use(s)

No data available.

SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits :

- UK / WEL (Workplace exposure limits, EH40/2005, 2007) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
106-97-8	600 ppm	750 ppm	-	-	-

- Ireland (Code of practice for the safety, Health and Welfare at Work, 2010) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
106-97-8	600 ppm	750 ppm	-	-	-

8.2. Exposure controls

Personal protection measures, such as personal protective equipment

Pictogram(s) indicating the obligation of wearing personal protective equipment (PPE) :



Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

- Eye / face protection

Avoid contact with eyes.

Use eye protectors designed to protect against liquid splashes

Before handling, wear safety goggles in accordance with standard EN166.

Do not spray in the direction of the eyes.

- Hand protection

Wear suitable protective gloves in the event of prolonged or repeated skin contact.

Type of gloves recommended :

- Nitrile rubber (butadiene-acrylonitrile copolymer rubber (NBR))

- PVA (Polyvinyl alcohol)

Not necessary at efficient use. Wash your hands after contact with skin.

- Body protection

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

Not necessary at efficient use. Product in contact with skin may cause frostbite. Wash skin that has been in contact with the product, with water and soap.

- Respiratory protection

Anti-gas and vapour filter(s) (Combined filters) in accordance with standard EN14387 :

- A1 (Brown)

Do not breathe spray. Use only in well-ventilated areas.

Exposure controls linked to environmental protection

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

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SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

General information :

Physical state :	Fluid liquid. Spray.
Color :	Colourless, clear
Odour :	Specific

Important health, safety and environmental information

pH :	Not relevant.
Vapour pressure (50°C) :	Not relevant.
Density :	0.545
Water solubility :	Insoluble.
Chemical combustion heat :	≥ 30 kJ/g.
Flash point :	< 0 °C
Flammability :	Extremely flammable

9.2. Other information

VOC (g/l) :	545.00
Pressure at 20°C :	± 5.0 bar
Pressure at 50°C :	< 10 bar
Water content :	< 0.3 % w/w

SECTION 10 : STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

This mixture is stable under the recommended handling and storage conditions in section 7.

10.3. Possibility of hazardous reactions

When exposed to high temperatures, the mixture can release hazardous decomposition products, such as carbon monoxide and dioxide, fumes and nitrogen oxide.

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4. Conditions to avoid

Any apparatus likely to produce a flame or to have a metallic surface at high temperature (burners, electric arcs, furnaces etc.) must not be allowed on the premises.

Avoid :

- heat
- flames and hot surfaces
- frost

Protect from sunlight and do not expose to temperatures exceeding 50°C. Keep away from heat and sources of ignition. Storage in a dry, frost-free and well ventilated place.

10.5. Incompatible materials

Keep away from :

- oxidising agents

10.6. Hazardous decomposition products

The thermal decomposition may release/form :

- carbon monoxide (CO)
- carbon dioxide (CO₂)

The product is stable. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11 : TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Splashes in the eyes may cause irritation and reversible damage

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11.1.1. Substances

Acute toxicity :

BUTANE (< 0,1 % 1,3-BUTADIENE) (CAS: 106-97-8)
Inhalation route : LC50 > 10 mg/l

Germ cell mutagenicity :

BUTANE (< 0,1 % 1,3-BUTADIENE) (CAS: 106-97-8)
No mutagenic effect.

Carcinogenicity :

BUTANE (< 0,1 % 1,3-BUTADIENE) (CAS: 106-97-8)
Carcinogenicity Test : Negative.
No carcinogenic effect.

Reproductive toxicant :

BUTANE (< 0,1 % 1,3-BUTADIENE) (CAS: 106-97-8)
No toxic effect for reproduction

11.1.2. Mixture

Skin corrosion/skin irritation :

Unlikely to cause skin irritation. Rapid evaporation of the liquid may cause frostbite.

Serious damage to eyes/eye irritation :

Unlikely to cause eye irritation. Rapid evaporation of the liquid may cause frostbite.

Aspiration hazard :

The vapours can be absorbed into the body through inhalation and at high concentrations may cause dizziness, drowsiness and headache.

Other information

Information published in the literature shows a very low order of toxicity. Exposures to very high concentrations have an anaesthetic effect.

SECTION 12 : ECOLOGICAL INFORMATION

12.1. Toxicity

12.1.2. Mixtures

Not expected to be dangerous for the aquatic environment.

12.2. Persistence and degradability

Butane/Isobutane/Propane : Expected to be readily biodegradable.

12.2.1. Substances

BUTANE (< 0,1 % 1,3-BUTADIENE) (CAS: 106-97-8)
Biodegradability : Rapidly degradable.

12.3. Bioaccumulative potential

Butane/Isobutane/Propane : Not expected to be dangerous for the aquatic environment.

12.4. Mobility in soil

Butane/Isobutane/Propane : If released into the environment, the product will rapidly disperse into the atmosphere where it will undergo photochemical degradation.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

No data available.

SECTION 13 : DISPOSAL CONSIDERATIONS

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

13.1. Waste treatment methods

Do not pour into drains or waterways.

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Waste :

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Soiled packaging :

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

SECTION 14 : TRANSPORT INFORMATION

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2015 - IMDG 2014 - ICAO/IATA 2015).

14.1. UN number

1950

14.2. UN proper shipping name

UN1950=AEROSOLS, flammable

14.3. Transport hazard class(es)

- Classification :

2.1

ADR/RID Label : Limited Quantity : 2.1 is not applicable.

14.4. Packing group

-

14.5. Environmental hazards

-

14.6. Special precautions for user

ADR/RID	Class	Code	Pack gr.	Label	Ident.	LQ	Provis.	EQ	Cat.	Tunnel
	2	5F	-	2.1	-	1 L	190 327 344 625	E0	2	D
IMDG	Class	2°Label	Pack gr.	LQ	EMS	Provis.	EQ			
	2.1	See SP63	-	SP277	F-D,S-U	63 190 277 327 344 959	E0			
IATA	Class	2°Label	Pack gr.	Passager	Passager	Cargo	Cargo	note	EQ	
	2.1	-	-	203	75 kg	203	150 kg	A145 A167 A802	E0	
	2.1	-	-	Y203	30 kg G	-	-	A145 A167 A802	E0	

For limited quantities, see part 2.7 of the OACI/IATA and chapter 3.4 of the ADR and IMDG.

For excepted quantities, see part 2.6 of the OACI/IATA and chapter 3.5 of the ADR and IMDG.

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

No data available.

SECTION 15 : REGULATORY INFORMATION

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

- Classification and labelling information included in section 2:

The following regulations have been used:

- Directive 75/734/CEE modified by directive 2013/10/UE
- EU Regulation No. 1272/2008 amended by EU Regulation No. 487/2013.
- EU Regulation No. 1272/2008 amended by EU Regulation No. 758/2013.
- EU Regulation No. 1272/2008 amended by EU Regulation No. 944/2013.
- EU Regulation No. 1272/2008 amended by EU Regulation No. 605/2014.

- Container information:

No data available.

- Particular provisions :

No data available.

15.2. Chemical safety assessment

The product does not contain substances for which a chemical safety assessment has been performed.

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SECTION 16 : OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

Wording of the phrases mentioned in section 3 :

- H220 Extremely flammable gas.
- H280 Contains gas under pressure; may explode if heated.

Abbreviations :

- ADR : European agreement concerning the international carriage of dangerous goods by Road.
- IMDG : International Maritime Dangerous Goods.
- IATA : International Air Transport Association.
- ICAO : International Civil Aviation Organisation
- RID : Regulations concerning the International carriage of Dangerous goods by rail.
- WGK : Wassergefährdungsklasse (Water Hazard Class).
- GHS02 : Flame

Difference Report

Revision: N°4 (01/04/2015) / Version: N°3 (03/08/2015)
(REACH regulation (EC) n° 1907/2006 - n° 2015/830)

~~Revision: N°2 (02/09/2013) / Version: N°1 (02/09/2013)~~

SAFETY DATA SHEET

~~(REACH regulation (EC) n° 1907/2006 - n° 453/2010)~~

SECTION 2 : HAZARDS IDENTIFICATION

In compliance with directives 67/548/EEC, 1999/45/EC and their amendments.

~~Extremely flammable (F+, R 12).~~

~~This mixture does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.~~

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

Composition :

Identification	(EC) 1272/2008	67/548/EEC	Note	%
INDEX: 601-004-00-0 CAS: 106-97-8 EC: 203-448-7 REACH: 01-2119474691-32 BUTANE (< 0,1 % 1,3-BUTADIENE)	GHS02, GHS04 Dgr Flam. Gas 1, H220	F+ F+, R12	C [1] [7]	25 <= x % < 50
Identification	(EC) 1272/2008		Note	%
CAS: 106-97-8 EC: 203-448-7 REACH: 01-2119474691-32 BUTANE (< 0,1 % 1,3-BUTADIENE)	GHS02 Dgr Flam. Gas 1, H220 Press. Gas, H280		C [1] [7]	25 <= x % < 50

SECTION 10 : STABILITY AND REACTIVITY

10.5. Incompatible materials

- ~~May react with strong oxidizing agents.~~
- oxidising agents

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SECTION 11 : TOXICOLOGICAL INFORMATION

11.1.1. Substances

~~No toxicological data available for the substances.~~

Acute toxicity :

BUTANE (< 0,1 % 1,3-BUTADIENE) (CAS: 106-97-8)
Inhalation route : LC50 > 10 mg/l

Germ cell mutagenicity :

BUTANE (< 0,1 % 1,3-BUTADIENE) (CAS: 106-97-8)
No mutagenic effect.

Carcinogenicity :

BUTANE (< 0,1 % 1,3-BUTADIENE) (CAS: 106-97-8)
Carcinogenicity Test : Negative.

No carcinogenic effect.

Reproductive toxicant :

BUTANE (< 0,1 % 1,3-BUTADIENE) (CAS: 106-97-8)
No toxic effect for reproduction

SECTION 12 : ECOLOGICAL INFORMATION

12.2.1. Substances

BUTANE (< 0,1 % 1,3-BUTADIENE) (CAS: 106-97-8)
Biodegradability : Rapidly degradable.

SECTION 14 : TRANSPORT INFORMATION

~~Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2013 - IMDG 2012 - ICAO/IATA 2013).~~

IMDG	Class	2°Label	Pack gr.	LQ	EMS	Provis.	EQ		
	2.1	-	-	203	75 kg	203	150 kg	A145- A167- A145- A167- A802	E0

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2015 - IMDG 2014 - ICAO/IATA 2015).

	2.1	-	-	203	75 kg	203	150 kg	A145 A167 A802	E0
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SECTION 15 : REGULATORY INFORMATION

- Classification and labelling information included in section 2:

- ~~Directive 67/548/EEC and its adaptations~~
- ~~Directive 1999/45/EC and its adaptations~~
- ~~Regulation EC 1272/2008 modified by regulation EC 618/2012~~
 - EU Regulation No. 1272/2008 amended by EU Regulation No. 487/2013.
 - EU Regulation No. 1272/2008 amended by EU Regulation No. 758/2013.
 - EU Regulation No. 1272/2008 amended by EU Regulation No. 944/2013.
 - EU Regulation No. 1272/2008 amended by EU Regulation No. 605/2014.

SECTION 16 : OTHER INFORMATION

Wording of the phrases mentioned in section 3 :

R-12 ~~Extremely flammable.~~
H280 Contains gas under pressure; may explode if heated.