



SAFETY DATA SHEET
CLEANING COMPOUND, SOLVENT(POWERSOLVE)
According to Regulation (EC) No 1907/2006, Annex II, as amended.

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

1.1. Product identifier

Product name CLEANING COMPOUND, SOLVENT(POWERSOLVE)

Internal identification C173

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

Identified uses Cleaning agent.

Uses advised against Use only for intended applications.

1.3. Details of the supplier of the safety data sheet

Supplier ARROW SOLUTIONS
RAWDON ROAD
MOIRA
SWADLINCOTE
DERBYSHIRE
DE12 6DA
TEL: +44 (0)1283 221044
FAX: +44 (0)1283 225731
sales@arrowchem.com

1.4. Emergency telephone number

Emergency telephone +44 (0) 777 8505 330 (24 hrs).

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Flam. Liq. 3 - H226

Health hazards STOT SE 3 - H336

Environmental hazards Not Classified

2.2. Label elements

Hazard pictograms



Signal word Warning

Hazard statements H226 Flammable liquid and vapour.
H336 May cause drowsiness or dizziness.

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Precautionary statements	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261 Avoid breathing vapour/ spray. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 Call a POISON CENTRE/doctor if you feel unwell. P501 Dispose of contents/ container in accordance with national regulations.
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UFI UFI: AMS4-00FX-V00W-F4MU

Contains 1-methoxy-2-propanol

Detergent labelling ≥ 30% aliphatic hydrocarbons

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

DIBASIC ESTER			30-60%
CAS number: —	EC number: 906-170-0	REACH registration number: 01-2119475445-32-XXXX	

Classification
Not Classified

1-methoxy-2-propanol			10-30%
CAS number: 107-98-2	EC number: 203-539-1	REACH registration number: 01-2119457435-35-XXXX	

Classification
Flam. Liq. 3 - H226
STOT SE 3 - H336

(2-methoxymethylethoxy) propanol			10-30%
CAS number: 34590-94-8	EC number: 252-104-2	REACH registration number: 01-2119450011-60-XXXX	

Classification
Not Classified

2-methoxypropanol			<1%
CAS number: 1589-47-5	EC number: 216-455-5		

Classification
Flam. Liq. 3 - H226
Skin Irrit. 2 - H315
Eye Dam. 1 - H318
Repr. 1B - H360D
STOT SE 3 - H336

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The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues. If medical advice is needed, have product container or label at hand. Show this Safety Data Sheet to the medical personnel.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.
Ingestion	Rinse mouth thoroughly with water. Do not induce vomiting. Get medical attention.
Skin contact	Wash skin thoroughly with soap and water.
Eye contact	Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if any discomfort continues.

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

Inhalation	May cause drowsiness or dizziness.
Ingestion	Gastrointestinal symptoms, including upset stomach.
Skin contact	Prolonged contact may cause dryness of the skin.
Eye contact	May cause discomfort.

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

Notes for the doctor	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use alcohol-resistant foam, carbon dioxide or dry powder to extinguish.
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5.2. Special hazards arising from the substance or mixture

Specific hazards	Flammable liquid and vapour.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Carbon monoxide (CO). Carbon dioxide (CO ₂).

5.3. Advice for firefighters

Protective actions during firefighting	Cool containers exposed to flames with water until well after the fire is out.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. No smoking, sparks, flames or other sources of ignition near spillage. Avoid contact with skin, eyes and clothing. Avoid inhalation of vapours. Provide adequate ventilation. Do not enter storage areas or confined spaces unless adequately ventilated. Use suitable respiratory protection if ventilation is inadequate. Take precautionary measures against static discharges. Avoid contact with contaminated tools and objects. Do not handle broken packages without protective equipment. Wash thoroughly after dealing with a spillage.
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6.2. Environmental precautions

Environmental precautions	Do not discharge into drains or watercourses or onto the ground.
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6.3. Methods and material for containment and cleaning up

Methods for cleaning up Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Eliminate all sources of ignition. Provide adequate ventilation. Contain spillage with sand, earth or other suitable non-combustible material. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Wash thoroughly after dealing with a spillage.

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Wear protective gloves. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Provide adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid inhalation of vapours. Use only outdoors or in a well-ventilated area. Keep away from flammable and combustible materials. Eliminate all sources of ignition. Avoid release to the environment. Container must be kept tightly closed when not in use. Do not reuse empty containers. Do not eat, drink or smoke when using this product. Do not empty into drains. Do not handle broken packages without protective equipment. Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry and cool place. Store at temperatures between 4°C and 40°C. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Storage class Flammable liquid storage.

7.3. Specific end use(s)

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

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

1-methoxy-2-propanol

Long-term exposure limit (8-hour TWA): WEL 100 ppm 375 mg/m³

Short-term exposure limit (15-minute): WEL 150 ppm 560 mg/m³

Sk

(2-methoxymethylethoxy) propanol

Long-term exposure limit (8-hour TWA): WEL 50 ppm 308 mg/m³

Sk

WEL = Workplace Exposure Limit

Sk = Can be absorbed through the skin.

DIBASIC ESTER

DNEL

Industry - Inhalation; Long term : 8.3 mg/m³

Consumer - Inhalation; Long term local effects: 5 mg/m³

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- PNEC**
- Fresh water; 0.018 mg/l
 - marine water; 0.0018 mg/l
 - Intermittent release; 0.18 mg/l
 - Sediment (Freshwater); 0.16 mg/kg
 - STP; 10 mg/l

1-methoxy-2-propanol (CAS: 107-98-2)

- DNEL**
- Industry - Inhalation; : 553.5 mg/m³
 - Industry - Inhalation; Long term : 369 mg/m³
 - Industry - Dermal; Long term : 50.6 mg/kg/day
 - Consumer - Dermal; Long term : 18.1 mg/kg/day
 - Consumer - Inhalation; Long term : 43.9 mg/m³
 - Consumer - Oral; Long term : 3.3 mg/kg/day

- PNEC**
- Fresh water; 10 mg/l
 - marine water; 1 mg/l
 - STP; 100 mg/l
 - Sediment (Freshwater); 41.6 mg/kg
 - Sediment (Marinewater); 4.17 mg/kg
 - Soil; 2.47 mg/kg

(2-methoxymethylethoxy) propanol (CAS: 34590-94-8)

- DNEL**
- Industry - Dermal; Long term : 65 mg/kg/day
 - Industry - Inhalation; Long term : 310 mg/m³
 - Consumer - Inhalation; Long term : 37.2 mg/m³
 - Consumer - Dermal; Long term : 15 mg/kg/day
 - Consumer - Oral; Long term : 1.67 mg/kg/day

- PNEC**
- Fresh water; 19 mg/l
 - marine water; 1.9 mg/l
 - Intermittent release; 19 mg/l
 - STP; 4168 mg/l
 - Sediment (Freshwater); 70.2 mg/kg
 - Sediment (Marinewater); 7.02 mg/kg
 - Soil; 2.74 mg/kg

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. The following protection should be worn: Tight-fitting safety glasses.

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Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. To protect hands from chemicals, gloves should comply with European Standard EN374. The selected gloves should have a breakthrough time of at least 4 hours. The breakthrough time for any glove material may be different for different glove manufacturers. When used with mixtures, the protection time of gloves cannot be accurately estimated. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. It should be noted that liquid may penetrate the gloves. Frequent changes are recommended. Protective gloves should have a minimum thickness of 0.15 mm. Glove thickness is not necessarily a good measure of glove resistance as the permeation rate will depend on the exact glove composition. The choice of protective gloves depends upon the chemicals being handled, and the conditions of work and use. Repeated exposure to chemicals will degrade the ability of the glove to provide resistance to chemicals. Specific work environments and material handling practices may vary, therefore safety procedures should be developed for each intended application. Gloves made from the following material may provide suitable chemical protection: Nitrile rubber. Butyl rubber.

Hygiene measures

Wash hands thoroughly after handling. Wash contaminated clothing before reuse.

Respiratory protection

Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Respirator selection must be based on exposure levels, the hazards of the product and the safe working limits of the selected respirator. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. Gas and combination filter cartridges should comply with European Standard EN14387. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140. Particulate filters should comply with European Standard EN143. Disposable filtering half mask respirators should comply with European Standard EN149 or EN405. Check that the respirator fits tightly and the filter is changed regularly. Wear a respirator fitted with the following cartridge: Combination filter, type A2/P2.

Environmental exposure controls

Store in a demarcated bunded area to prevent release to drains and/or watercourses. Keep container tightly sealed when not in use. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Clear, yellowish liquid.
Colour	Colourless.
Odour	Characteristic. Ester.
pH	Not applicable.
Melting point	Not determined.
Initial boiling point and range	Not determined.
Flash point	40°C Setaflash closed cup.
Evaporation rate	Not determined.
Flammability (solid, gas)	Not relevant.
Upper/lower flammability or explosive limits	Not determined.

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Other flammability	Not relevant.
Vapour pressure	Not determined.
Relative density	1.01 @ 25°C
Solubility(ies)	Miscible with water.
Partition coefficient	Not determined.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not determined.
Viscosity	Not determined.
Explosive properties	Not considered to be explosive.
Oxidising properties	There are no chemical groups present in the product that are associated with oxidising properties.
Comments	Information declared as "Not available" or "Not applicable" is not considered to be relevant to the implementation of the proper control measures.

9.2. Other information

Other information Not determined.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

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 Not determined.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid Flammable/combustible materials.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion products may include the following substances:
Carbon monoxide (CO). Carbon dioxide (CO₂).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) Based on available data the classification criteria are not met. Read-across data.

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met. Read-across data.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met. Read-across data.

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Skin corrosion/irritation

Skin corrosion/irritation Based on available data the classification criteria are not met. Read-across data.

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met. Read-across data.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met. Read-across data.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met. Read-across data.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met. Read-across data.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met. Read-across data.

Reproductive toxicity

Reproductive toxicity - development Read-across data. Contains an ingredient listed as: Suspected reproductive toxicant based on limited evidence.

Specific target organ toxicity - single exposure

STOT - single exposure Read-across data. A single exposure may cause the following adverse effects: Central and/or peripheral nervous system damage.

Target organs Central nervous system

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met. Read-across data.

Aspiration hazard

Aspiration hazard Not anticipated to present an aspiration hazard, based on chemical structure.

Inhalation May cause drowsiness or dizziness.

Ingestion Gastrointestinal symptoms, including upset stomach.

Skin contact Prolonged contact may cause dryness of the skin.

Eye contact May cause discomfort.

Acute and chronic health hazards Vapour from this product may be hazardous by inhalation. Prolonged contact may cause dryness of the skin. Central nervous system depression.

Route of exposure Inhalation Dermal

Target organs Central nervous system Skin

Medical symptoms Central nervous system depression. Dizziness. Dry skin. Dryness and/or cracking. Drowsiness, dizziness, disorientation, vertigo.

Medical considerations The following pre-existing or historic medical conditions of the worker may lead to an increased risk of adverse health effects following exposure to this product: Central nervous system depression. Skin disorders and allergies.

Toxicological information on ingredients.

1-methoxy-2-propanol

Acute toxicity - inhalation

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Acute toxicity inhalation
(LC₅₀ dust/mist mg/l) 7,559.0

ATE inhalation
(dusts/mists mg/l) 7,559.0

(2-methoxymethylethoxy) propanol

Acute toxicity - oral

Acute toxicity oral (LD₅₀
mg/kg) 5,382.66

Species Rat

ATE oral (mg/kg) 5,382.66

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀
mg/kg) 5,001.0

Species Rabbit

ATE dermal (mg/kg) 5,001.0

Acute toxicity - inhalation

Acute toxicity inhalation
(LC₅₀ vapours mg/l) 3,080.0

Species Rat

ATE inhalation (vapours
mg/l) 3,080.0

SECTION 12: Ecological information

Ecotoxicity Not regarded as dangerous for the environment.

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish Not determined.

Chronic aquatic toxicity

Chronic toxicity - fish early life stage Not determined.

Ecological information on ingredients.

1-methoxy-2-propanol

Acute aquatic toxicity

Acute toxicity - fish LC50, 96 hours: 6812 mg/l, Leuciscus idus (Golden orfe)
, 96 hours: > 1000 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 21,100 - 25,900 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, >: > 1000 mg/l, Selenastrum capricornutum

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(2-methoxymethylethoxy) propanol

Acute aquatic toxicity

Acute toxicity - fish	LC50, 96 hours: > 1000 mg/l, Poecilia reticulata (Guppy)
Acute toxicity - aquatic invertebrates	NOEC, >: > 0.5 mg/l, Daphnia magna EC ₅₀ , 48 hours: 1919 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 96 hours: > 969 mg/l, Selenastrum capricornutum

12.2. Persistence and degradability

Persistence and degradability The product is expected to be biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating.

Partition coefficient Not determined.

12.4. Mobility in soil

Mobility The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces.

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 Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.

SECTION 14: Transport information

General For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.

Special Provisions note

14.1. UN number

UN No. (ADR/RID)	1993
UN No. (IMDG)	1993
UN No. (ICAO)	1993

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	FLAMMABLE LIQUID, N.O.S.(1-methoxy-2-propanol)
Proper shipping name (IMDG)	FLAMMABLE LIQUID, N.O.S.(1-methoxy-2-propanol)
Proper shipping name (ICAO)	FLAMMABLE LIQUID, N.O.S.(1-methoxy-2-propanol)

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14.3. Transport hazard class(es)

ADR/RID class	3
ADR/RID classification code	F1
ADR/RID label	3
IMDG class	3
ICAO class/division	3

Transport labels



14.4. Packing group

ADR/RID packing group	III
IMDG packing group	III
ICAO packing group	III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

EmS	F-E, S-E
ADR transport category	3
Emergency Action Code	•3Y
Hazard Identification Number (ADR/RID)	30
Tunnel restriction code	(D/E)

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.

Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information

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

UFI	UFI: AMS4-00FX-V00W-F4MU
National regulations	Control of Substances Hazardous to Health Regulations 2002 (as amended). Dangerous Substances and Explosive Atmospheres Regulations 2002.
EU legislation	Regulation (EC) No 648/2004 of the European Parliament and of the Council of 31 March 2004 on detergents (as amended). 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). Commission Regulation (EU) No 2015/830 of 28 May 2015.

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Guidance Workplace Exposure Limits EH40.
Introduction to Local Exhaust Ventilation HS(G)37.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet	<p>ATE: Acute Toxicity Estimate. ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road. CAS: Chemical Abstracts Service. DNEL: Derived No Effect Level. EC₅₀: 50% of maximal Effective Concentration. IATA: International Air Transport Association. IMDG: International Maritime Dangerous Goods. LC₅₀: Lethal Concentration to 50 % of a test population. LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose). NOEC: No Observed Effect Concentration. PBT: Persistent, Bioaccumulative and Toxic substance. PNEC: Predicted No Effect Concentration. REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006. UN: United Nations. vPvB: Very Persistent and Very Bioaccumulative.</p>
Classification abbreviations and acronyms	<p>Eye Dam. = Serious eye damage Flam. Liq. = Flammable liquid Repr. = Reproductive toxicity Skin Irrit. = Skin irritation STOT SE = Specific target organ toxicity-single exposure</p>
Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Revision date	03/09/2019
Revision	3.0
Supersedes date	06/08/2018
SDS number	25755
Hazard statements in full	<p>H226 Flammable liquid and vapour. H315 Causes skin irritation. H318 Causes serious eye damage. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. H360D May damage the unborn child.</p>

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.