Safety Data Sheet

acc. to OSHA, Appendix D to § 1910.1200

Power Clean

Version number: GHS 1.0 Date of compilation: 2015-05-16

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

1.1 Product identifier

Trade name **Power Clean**

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

Relevant identified uses tire and engine degreaser

1.3 Details of the supplier of the safety data sheet

Auto Chem Systems
92-1358 Hunekai St
Kapolei, HI 96707
808-672-8958

Competent person responsible for the SDS Robert Blahnik

1.4 Emergency telephone number

Emergency information service **USA 1.800.535.5053, INTL 1.352.323.3500**
24 hour emergency telephone number.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Annex	- Hazard class and category	-		Hazard statement code(s)
B.16	corrosive to metals	Cat. 1	(Met. Corr. 1)	H290
A.2	skin corrosion/irritation	Cat. 2	(Skin Irrit. 2)	H315
A.3	serious eye damage/eye irritation	Cat. 1	(Eye Dam. 1)	H318

Remarks

For full text of H-phrases: see SECTION 16.

Hazards not otherwise classified

May be harmful if swallowed (GHS category 5: acutely toxic - oral).

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Signal word **danger**

Pictograms

GHS05

Hazard statements

H290 May be corrosive to metals.
H315 Causes skin irritation.
H318 Causes serious eye damage.

Precautionary statements

Precautionary statements - prevention

Keep only in original container.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements - response

IF ON SKIN: Wash with plenty of water.
IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor.
Specific treatment (see on this label).
Take off contaminated clothing and wash it before reuse.
Absorb spillage to prevent material damage.

Hazardous ingredients for labelling potassium hydroxide

2.3 Other hazards

There is no additional information.

SECTION 3: Composition/information on ingredients

3.1 Substances

not relevant (mixture)

3.2 Mixtures

Description of the mixture

Name of substance	Identifier	Wt%	Hazard class and category		Hazard state-ment
ethylene glycol monobutyl ether	CAS No 111-76-2	5 - < 10	B.6 A.1O A.1D A.1I A.2 A.3	Flam. Liq. 4 Acute Tox. 4 Acute Tox. 4 Acute Tox. 4 Skin Irrit. 2 Eye Irrit. 2A	H227 H302 H312 H332 H315 H319
potassium hydroxide	CAS No 1310-58-3	1 - < 5	B.16 A.1O A.2 A.3	Met. Corr. 1 Acute Tox. 4 Skin Corr. 1A Eye Dam. 1	H290 H302 H314 H318
sodium dodecylbenzenesulfonate	CAS No 25155-30-0	1 - < 5	A.1O	Acute Tox. 4	H302
sodium xylene sulfonate	CAS No 1300-72-7	1 - < 5	A.3	Eye Irrit. 2A	H319

Name of substance	Identifier	Wt%	Hazard class and category		Hazard state-ment
ethanol	CAS No 64-17-5	< 1	B.6 A.1O A.1D A.1I A.2 A.3 A.8	Flam. Liq. 2 Acute Tox. 3 Acute Tox. 4 Acute Tox. 3 Skin Irrit. 2 Eye Irrit. 2A STOT SE 1	H225 H301 H312 H331 H315 H319 H370

For full text of abbreviations: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

In case of respiratory tract irritation, consult a physician. Provide fresh air.

Following skin contact

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.

Following eye contact

Irrigate copiously with clean, fresh water, holding the eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

water, foam, alcohol resistant foam, ABC-powder

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Deposited combustible dust has considerable explosion potential. Explosive when mixed with combustible material. Corrosive to metals.

Hazardous combustion products

nitrogen oxides (NOx), carbon monoxide (CO), carbon dioxide (CO2)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose it.

6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill

Covering of drains. - Take up mechanically.

Advices on how to clean up a spill

Take up mechanically. Collect spillage (sawdust, kieselgur (diatomite), sand, universal binder).

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

Reference to other sections

Hazardous combustion products: see section 5. Personal precautions: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Take precautionary measures against static discharge. Use only in well-ventilated areas. Never add water to this product. Ground/bond container and receiving equipment.

Warning

Dust deposits may accumulate on all deposition surfaces in a technical room. The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

Handling of incompatible substances or mixtures

Do not mix with acids.

Advice on general occupational hygiene

Wash hands after use. Do not to eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

• Explosive atmospheres

Removal of dust deposits.

• Corrosive conditions

Store in corrosive resistant container with a resistant inner liner.

Incompatible substances or mixtures

Observe compatible storage of chemicals.

Control of the effects

Protect against external exposure, such as

frost

Consideration of other advice

Ventilation requirements

Use local and general ventilation.

Packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Coun-try	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m^3]	STEL [ppm]	STEL [mg/m^3]	Source
US	2-butoxyethanol	111-76-2	PEL	50	240			29 CFR OSHA
US	ethyl alcohol (ethanol)	64-17-5	PEL	1000	1900			29 CFR OSHA
US	particulates not otherwise regulated (PNOR)		PEL		15			29 CFR OSHA
US	particulates not otherwise regulated (PNOR)		PEL		5			29 CFR OSHA

Notation	
STEL	Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period unless otherwise specified.
TWA	Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average.

Relevant DNELs/DMELs/PNECs and other threshold levels

No data available.

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

• hand protection

Wear protective gloves.

• other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

Particulate filter device (EN 143).

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	solid
Color	green
Odor	characteristic

Other physical and chemical parameters

pH (value)	>14 at 25 °C (base)
Melting point/freezing point	not determined
Initial boiling point and boiling range	100 °C
Flash point	>100 °C at 1013 hPa no flash (closed cup)
Evaporation rate	not determined

Flammability (solid, gas)	
Explosion limits of dust clouds	not determined
Vapor pressure	31.69 hPa at 25 °C
Density	1.124 $^{g}/_{cm^3}$ at 25 °C 9.36 lbs/US gal
Solubility(ies)	
Water solubility	miscible in any proportion
Partition coefficient	
n-octanol/water (log KOW)	This information is not available.
Auto-ignition temperature	230 °C
Viscosity	not relevant (solid matter)
Explosive properties	none
Oxidizing properties	none

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". corrosive to metals

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

Hints to prevent fire or explosion

The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

Physical stresses which might result in a hazardous situation and have to be avoided

strong shocks

10.5 Incompatible materials

There is no additional information.

Release of flammable materials with

light metals (due to the release of hydrogen in an acid/alkaline medium)

Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	ATE
ethylene glycol monobutyl ether	111-76-2	oral	1746
ethylene glycol monobutyl ether	111-76-2	dermal	1100
ethylene glycol monobutyl ether	111-76-2	inhalation: vapor	11
potassium hydroxide	1310-58-3	oral	333
sodium dodecylbenzenesulfonate	25155-30-0	oral	438
ethanol	64-17-5	oral	100
ethanol	64-17-5	dermal	1100
ethanol	64-17-5	inhalation: vapor	3

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

Summary of evaluation of the CMR properties

Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant.

Carcinogenicity

- National Toxicology Program (United States): none of the ingredients are listed
- IARC Monographs

Name of substance	Name acc. to inventory	CAS No	wt%	Classification	Remarks	Number
ethylene glycol monobutyl ether	2-Butoxyethanol	111-76-2	7.77	3		Volume 88
ethanol	Ethanol	64-17-5	0.8278	1	in alcoholic beverages	Volume 96, 100E

Legend

1	Carcinogenic to humans.
3	Not classifiable as to carcinogenicity in humans.

Specific target organ toxicity (STOT)

Shall not be classified as a specific target organ toxicant.

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)

Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
ethylene glycol monobutyl ether	111-76-2	LC50	1474 $^{mg}/_{l}$	fish	96 hours
ethylene glycol monobutyl ether	111-76-2	EC50	1550 $^{mg}/_{l}$	aquatic invertebrates	48 hours
ethylene glycol monobutyl ether	111-76-2	ErC50	1840 $^{mg}/_{l}$	algae	72 hours
ethanol	64-17-5	LC50	14.2 $^{g}/_{l}$	fish	96 hours
ethanol	64-17-5	EC50	12.9 $^{g}/_{l}$	fish	96 hours

Aquatic toxicity (chronic)

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
ethylene glycol monobutyl ether	111-76-2	EC50	297 $^{mg}/_{l}$	aquatic invertebrates	21 d
ethanol	64-17-5	LC50	>0.08 $^{mg}/_{l}$	fish	42 d
ethanol	64-17-5	EC50	22.6 $^{g}/_{l}$	algae	10 d
ethanol	64-17-5	ErC50	675 $^{mg}/_{l}$	algae	4 d

12.2 Process of degradability

Data are not available.

Degradability of components of the mixture

Name of substance	CAS No	Process	Degradation rate	Time
ethylene glycol monobutyl ether	111-76-2	carbon dioxide generation	18.3 %	3 d
ethanol	64-17-5	oxygen depletion	74 %	5 d

12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components of the mixture

Name of substance	CAS No	BCF	Log KOW	BOD5/COD
ethylene glycol monobutyl ether	111-76-2		0.81	
sodium xylene sulfonate	1300-72-7		-3.12	
ethanol	64-17-5		-0.35	

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

13.3 Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1	UN number	**1760**
14.2	UN proper shipping name	**CORROSIVE LIQUID, N.O.S.**
14.3	Transport hazard class(es)	
	Class	8 (corrosive substances)
14.4	Packing group	III (substance presenting low danger)
14.5	Environmental hazards	none (non-environmentally hazardous acc. to the dangerous goods regulations)

14.6 Special precautions for user

There is no additional information.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

• Transport of dangerous goods by road or rail (49 CFR US DOT)

Index number	1760
Proper shipping name	Corrosive liquid, n.o.s.
Class	8
Packing group	III
Danger label(s)	8

Special provisions (SP)	IB3, T7, TP1, TP28
ERG No	154

• International Maritime Dangerous Goods Code (IMDG)

UN number	1760
Proper shipping name	CORROSIVE LIQUID, N.O.S.
Class	8
Packing group	III
Danger label(s)	8

Special provisions (SP)	223, 274
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-A, S-B
Stowage category	B

• International Civil Aviation Organization (ICAO-IATA/DGR)

UN number	1760
Proper shipping name	Corrosive liquid, n.o.s.
Class	8
Packing group	III
Danger label(s)	8

Special provisions (SP)	A3
Excepted quantities (EQ)	E1
Limited quantities (LQ)	1 L

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

SARA TITLE III (Superfund Amendment and Reauthorization Act)

List of Extremely Hazardous Substances (40 CFR 355) (EPCRA Section 302 and 304) none of the ingredients are listed

Specific Toxic Chemical Listings (40 CFR 372) (EPCRA Section 313) none of the ingredients are listed

Industry or sector specific available guidance(s)

NPCA-HMIS® III

Hazardous Materials Identification System (American Coatings Association)

Category	Rating	Description
Chronic	*	Chronic (long-term) health effects may result from repeated overexposure.
Health	3	Major injury likely unless prompt action is taken and medical treatment is given.
Flammability	3	Materials that can be ignited under almost all ambient temperature conditions.
Physical hazard	0	Materials that are normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosives.
Personal protective equipment	-	

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States) - National Fire Protection Association (United States)

Category	Degree of hazard	Description
Flammability	3	Materials that can be ignited under almost all ambient temperature conditions.
Health	3	Materials that, under emergency conditions, can cause serious or permanent injury.
Instability	0	Materials that are normally stable, even under fire conditions.
Special hazard		

Right to Know Hazardous Substance List

Name of substance	CAS No	Remarks	Classifications
ethylene glycol monobutyl ether	111-76-2		CA F2
potassium hydroxide	1310-58-3		CO R1
sodium dodecylbenzenesulfonate	25155-30-0		
ethanol	64-17-5		CA MU TE F3

Legend

CA	Carcinogenic.
CO	Corrosive.
F2	Flammable - Second Degree.
F3	Flammable - Third Degree.
MU	Mutagenic.
R1	Reactive - First Degree.
TE	Teratogenic.

Proposition 65 List of chemicals

Name of substance	CAS No	Remarks	Type of to toxicity	Remarks	NSRL or MADL (µg/day)
sodium xylene sulfonate	1300-72-7		cancer		
ethanol	64-17-5	in alcoholic beverages	cancer		
ethanol	64-17-5	in alcoholic beverages	developmental		

Relevant European Union (EU) safety, health and environmental provisions

Classification according to GHS (1272/2008/EC, CLP)

Hazard class	Category	Hazard class and category
corrosive to metals	1	(Met. Corr. 1)
skin corrosion/irritation	1B	(Skin Corr. 1B)
serious eye damage/eye irritation	1	(Eye Dam. 1)

SECTION 16: Other information

16.2 Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
29 CFR OSHA	29 CFR §1910.1001 - Occupational Safety and Health Standards: Toxic and Hazardous Substances (permissible exposure limits)
49 CFR US DOT	49 CFR § 40 U.S. Department of Transportation
Acute Tox.	acute toxicity
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
ATE	Acute Toxicity Estimate
BCF	BioConcentration Factor
BOD	Biochemical Oxygen Demand
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
COD	chemical oxygen demand
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EmS	Emergency Schedule
ERG No	Emergency Response Guidebook - Number
Eye Dam.	seriously damaging to the eye
Eye Irrit.	irritant to the eye
Flam. Liq.	flammable liquid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IARC Monographs	IARC Monographs on the Evaluation of Carcinogenic Risks to Humans
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
log KOW	n-octanol/water
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant)
Met. Corr.	corrosive to metals
NFPA® 704	National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States)

Abbr.	Descriptions of used abbreviations
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	parts per million
Skin Corr.	corrosive to skin
Skin Irrit.	irritant to skin
STOT SE	specific target organ toxicity - single exposure
vPvB	very Persistent and very Bioaccumulative

16.3 Key literature references and sources for data

- OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200
- 49 CFR § 172.101 Hazardous Materials Table (DOT)

16.4 Classification procedure

Physical and chemical properties: The classification is based on tested mixture.
Health hazards/Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

16.5 List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H225	highly flammable liquid and vapor
H227	combustible liquid
H290	may be corrosive to metals
H301	toxic if swallowed
H302	harmful if swallowed
H312	harmful in contact with skin
H314	causes severe skin burns and eye damage
H315	causes skin irritation
H318	causes serious eye damage
H319	causes serious eye irritation
H331	toxic if inhaled
H332	harmful if inhaled
H370	causes damage to organs

16.7 **Disclaimer**

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.