



Section 1. Product and Company Identification.

1.1 Model Number; CC230V v1
1.2 Description; HHO Engine Carbon Cleaner 230V
Potassium Hydroxide

1.3 Manufacturer;
Sealey Group.
Kempson Way,
Bury St. Edmunds,
Suffolk.
IP32 7AR

1.4 Emergency telephone number; 44 (0) 1284 757 500 (Office Hours)

Date of source compilation; 17 January 2017



Section 2. Hazards Identification.

2.1 Classification of the substance or mixture.

Acute toxicity, oral - Category 4 [H302] GHS07

Skin corrosion - Category 1B [H314] GHS05

2.2 Label elements.

Hazard pictogram(s)



GHS05



GHS07

Signal Word.

Danger

Hazard statements;

Harmful if swallowed.

Causes severe skin burns and eye damage.

Precautionary statements;

Do not breathe vapour.

Wash hands and other skin areas exposed thoroughly after handling.

Do not eat, drink or smoke when using this product.

Wear protective gloves/protective clothing/eye protection/face protection.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse cautiously with water for several minutes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Wash contaminated clothing before reuse.

Specific treatment: Contact a POISON CENTER or doctor.

Store locked up.

Dispose of contents and containers in accordance with national and local regulations.

2.3 Other hazards.

None identified

**Section 3. Substances.**

3.1 Chemical Name (substance)	3.1 CAS No.	3.2 Concentration Weight	Classification	
			Hazard Class & Category Code	Hazard Statements ¹
Potassium Hydroxide	1310-58-3	90 – 95 %	Acute Tox. 4 Skin Corr. 1A	H302 H314

¹For full text of Statements, see Section 16.



Section 4. First Aid Measures.

4.1 Description of first aid measures

Inhalation

If breathing difficulties develop, remove the person to fresh air.
Ensure that person is warm. Loosen close fitting clothing.
Seek medical attention.

Skin Contact

Wash off immediately with soap and plenty of water.
Remove all contaminated clothes and shoes.
If symptoms persist, seek immediate medical attention.

Eye Contact

Immediately flush with plenty of water.
After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.
Keep eye wide open while rinsing.
Seek medical attention immediately.

Ingestion

Do not induce vomiting. Get medical attention immediately.
If the casualty is conscious, give large amounts of water.
Never give anything by mouth to an unconscious person.

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

Inhalation

Harmful, if inhaled.
Causes severe irritation – coughing, burns, difficulty breathing and possible coma.
Irritation may lead to chemical pneumonitis and pulmonary edema.

Skin Contact

Causes skin burns and tissue damage.
May cause deep, penetrating ulcers.
May cause permanent skin damage.
Prolonged or repeated skin contact may cause dermatitis.

Eye Contact

Causes severe eye burns. Damage may be delayed.
May cause irreversible eye injury.
May cause ulceration of the conjunctiva and cornea. Chronic eye contact may cause conjunctivitis.

Ingestion

Harmful if swallowed.
Causes severe burns to lips, mouth, throat and, if swallowed, gastrointestinal tract.
If swallowed, will cause abdominal pain, vomiting, diarrhea, shock and possible death.
May cause circulatory system failure and perforation of the digestive tract.
May cause severe and permanent damage to digestive tract.

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

Potassium Hydroxide is corrosive. May cause major burns to all surfaces contacted. Treat as for strong alkalis



Section 5. Fire Fighting Measures.

5.1. Extinguishing media

Any extinguishing media.

Use extinguishing media that is appropriate for the surrounding area.

5.2. Special hazards arising from the substance or mixture

When interacting with metals, hydrogen gas is released.

Hydrogen gas is flammable and, when confined, explosive.

Keep away from naked flames as will ignite the gas.

Solid products will react with water and will generate heat.

Hazardous thermal decomposition products include potassium oxides.

When closed containers are exposed to extreme heat, the container may explode due to the build up of pressure.

5.3. Advice for fire-fighters

Fire Fighters shall wear self-contained breathing apparatus and appropriate Personal Protective Equipment.

Any contaminated water, must be contained from being discharged to any waterway, sewer or drain to prevent environmental contamination.

Section 6. Accidental Release Measures.

6.1. Personal precautions, protective equipment and emergency procedures

Wear appropriate protective clothing, see section 8.

If a spillage occurs, clean immediately and approach spill from upwind.

Remove all sources of ignition and ventilate the area.

6.2. Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas.

Do not flush into surface water or sewer system.

6.3. Methods and material for containment and cleaning up

Prevent further leakage or spillage if safe to do so.

Do not return solid to original container.

Clean contaminated surface thoroughly.

6.4. Reference to other sections

See Section 7 for information on Safe Handling

See Section 8 for information of Personal Protective Equipment.

See Section 13 for information on disposal.



Section 7. Handling and Storage.

7.1. Precautions for safe handling

Wear appropriate protective clothing, see section 8

7.2. Conditions for safe storage, including any incompatibilities

Store in original container in a dry, cool, tightly closed and in a well ventilated area.

DO NOT store in a metal container.

Keep away from strong acids, metals, flammable liquids and organic halogens.

Avoid environmental contamination.

7.3. Specific end use(s)

Intended for use as Engine Carbon Cleaner for the Model Number identified in 1.1 with Description stated in 1.2.



Section 8. Exposure Controls/Personal Protection.

8.1. Control parameters

In the event of a spillage or leakage:

Ventilate the area.

Remove sources of ignition.

Workplace Exposure Limits

Substance	CAS number	Workplace exposure limit.			
		Long term.		Short term.	
		ppm	mg.m ³	ppm	mg.m ³
Potassium Hydroxide	1310-58-3	-	-	-	2

8.2. Exposure controls

Appropriate Engineering Controls

The use of Personal Protective Equipment (PPE) is not necessary under ventilated condition.

If prolonged and repeated contact with product, use Personal Protective Equipment (PPE)

Eye/Face Protection

Chemical grade full face shield

Skin Protection

Appropriate Personal Protection with long sleeves and long trousers.

Wear gloves recommended for protection against materials in section 3, impermeable to chemicals and oil.

Wear protective boots if the situation requires.

Respiratory Protection

Always use an approved respirator when vapours are generated.

If the respirator is the sole means of protection, use a full-face supplied air respirator.



Section 9. Physical and Chemical Properties.

9.1. Information on basic physical and chemical properties

The following information is not a technical specification or sales specification.

(a) Appearance:	White Flakes
(b) Odour:	Odourless
(c) Odour threshold;	No data available
(d) pH:	13.5
(e) Melting point/freezing point;	380 °C
(f) Initial boiling point and boiling range;	1,320 °C
(g) Flash point;	Non-Flammable (in solid state)
(h) Evaporation rate;	No data available
(i) Flammability (solid, gas);	Not applicable to product stated in 1.1
(j) Upper/lower flammability or explosive limits;	No data available
(k) Vapour pressure;	1 mm Hg @ 719 °C
(l) Vapour density;	<1 (Air = 1)
(m) Relative density;	2.044 g/ml @ 25 °C
(n) Solubility(ies);	Soluble in water
(o) Partition coefficient: n-octanol/water;	Not applicable to product stated in 1.1
(p) Auto-ignition temperature;	No data available
(q) Decomposition temperature;	>100 °C (>212 °F)
(r) Viscosity;	No data available
(s) Explosive properties;	Not applicable to product stated in 1.1
(t) Oxidising properties.	Not applicable to product stated in 1.1

9.2 Other information No data available



Section 10. Stability and Reactivity.

10.1. Reactivity

Reacts vigorously, violently and exothermically with water.

10.2. Chemical stability

Reactions with metals produce flammable hydrogen gas
Stable under recommended storage conditions, handling and use. Readily absorbs moisture and carbon dioxide from the air and deliquesces.

10.3. Possibility of hazardous reactions

Reacts violently, exothermically and explosively with water, strong acids, flammable liquids, organohalogens, nitro compounds

10.4. Conditions to avoid

Hazardous polymerization will not occur.

10.5. Incompatible materials

Extreme heat, incompatible materials, moisture. Contact with most metals generates flammable hydrogen gas.

Metals, acids, flammable liquids, nitromethane, nitro compounds, halogenated organics, chlorinated solvents, chlorine dioxide, peroxised tetrahydrofuran, nitrogen trichloride, alcohols and sugars

10.6. Hazardous decomposition products

Thermal decomposition products include potassium oxides.

Section 11. Toxicological Information.

11.1. Information on toxicological effects

Acute Oral Toxicity

LD50, rat: 273 mg/kg

Acute inhalation toxicity

LC50, rat: 7.1 mg/m³, 4 h

Acute dermal toxicity

No data available

Skin irritation/corrosion

Corrosive to skin

Eye irritation/corrosion

Causes burns and eye damage. Risk of blindness.

Sensitization

No data available

Genotoxicity in vitro

No data available

Mutagenicity

No data available

Specific organ toxicity - single exposure

No data available

Specific organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Further information

No data is available regarding the mutagenicity or teratogenicity of this product, nor is there any available data that indicates it causes adverse developmental or fertility effects.



Section 12. Ecological Information.

12.1. Toxicity	Potassium Hydroxide is toxic to aquatic organisms on an acute basis. Large discharges to the environment increase the pH of aquatic systems to a pH > 10, which may be fatal to aquatic life and soil micro-organisms.
12.2. Persistence and degradability	Inorganic substances are not biodegradable. Methods for the determination of biodegradability are not applicable to inorganic substances.
12.3. Bioaccumulative potential	Product will not bioaccumulate.
12.4. Mobility in soil	Expected to have high mobility in soil.
12.5. Results of PBT and vPvB assessment	Not applicable for inorganic substances
12.6. Other adverse effects	Do not allow material to run into surface waters, wastewater or soil. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13. Disposal Considerations.

13.1. Waste treatment methods

Minimise waste where possible.

This material and its container must be disposed of in accordance with local authority regulations.



Section 14. Transport Information.

ADR. International Carriage of Dangerous Goods by Road.

14.1. UN number	UN 1813
14.2. Name and Description	Potassium Hydroxide, Solid
14.3. Class	8
14.4. Packing group	II
14.5. Environmental hazards	Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sewer system.
14.6. Special precautions for user	-

IATA. International Air Transport Association.

14.1. UN number	UN 1813
14.2. UN Proper Shipping Name/Description	Potassium Hydroxide, Solid
14.3. Class or Division	8
14.4. Packing group	II
14.5. Environmental hazards	Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sewer system.
14.6. Special precautions for user	-

IMDG. International Maritime Dangerous Goods.

14.1. UN number	UN 1813
14.2. UN proper shipping name	Potassium Hydroxide, Solid
14.3. Class	8
14.4. Packing group	II
14.5. Environmental hazards	Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sewer system.
14.6. Special precautions for user	-
14.7. Transport in bulk – Maritime only.	Bulk transport is not applicable to this product



Section 15. Regulatory Information.

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
 No data available.

15.2. Chemical safety assessment
 No data available.

Section 16. Additional Information.

H302 – Harmful if swallowed

H314 - Causes severe skin burns and eye damage

Full text of Phrases and Statements used in Section 3;

The above information is believed to be accurate and represents the best information currently available.

No warranty is expressed or implied by the above information.

We assume no liability resulting from use of the above information.

The end user would conduct their own investigations to determine the suitability of the above information for their particular purpose.

Issue level	Date	Revisions
1	05/03/2020	First issue.

End of Safety Data Sheet.