

Micro Welder Chemicals - Micro Welder Tips - Made in UK

Potassium Hydroxide Flakes

- 340g = 1 man operator
- 640g = 2 man operator

For Machines Micro Flame our codes MFUK30 (or Hydro Gem 1, Sherwood Micro Welder Model A and Aqua Flame 1 Man) and MFUK60 (Hydro Gem 2, Sherwood Micro Welder, Super Model A and Aqua Flame 2 Man).

Potassium Hydroxide Flakes are a recharging agent for the Micro Welding Machines. Mix 340g with one litre of De-Mineralised Water (code C4359) and 640g with 2 litres of C4359.

Guideline and useful tips for mixing Potassium Hydroxide Flakes in a micro weld.

Items needed:

- 1 x 1 litre beaker (code P6479) or 1 x 2 litre beaker (code P6479)
- 1 x funnel (code F32076)
- 1 x chemical resistant gloves (code G9905)
- 1 x safety glasses (code G31553)
- 1 x wooden stick (not available to purchase)

Put on the gloves and safety glasses.

Reserve an area in the work shop is well ventilated; even it is merely opening a window, as Potassium Hydroxide emits harmful odours.

Fill the sink with cold water and pour one litre of de mineralised water into the beaker and place in the sink creating a water jacket. The cold water around the beaker will cool the potassium hydroxide solution as you are mixing while stirring with a wooden stick. Ensure its contents are emptied.

Allow the solution to cool for around half an hour then pour into the machine's cell using the funnel. Often, the solution can be difficult to be seen when in the machine's sight tube, if this happens continue as instructed here to fill the litre of solution is in the machine.* To pressurise the machine turn it on and if necessary add a small amount to the cell to see the level on the cell's sight tube. A micro weld cell is hand made from steel so it is capable to hold slightly more solution so this is why a small, additional top up is required.

Maintain the effective running of the machine by gradually refilling the machine with de-mineralised water to the appropriate levels. This process is necessary however simply adding water will weaken the solution, ideally on occasion top the solution with 50g of Potassium Hydroxide to replenish its strength.

*Please note: If the machine is topped up too emphatically, overfilling will occur resulting in the solution emanating the Potassium Hydroxide and Water mix.

Weights including container:

- M4600 - 430g
- M4601 - 720g

SAFETY DATA SHEET

CAUSTIC POTASH FLAKE

mcpf100

1. Identification of the substance/preparation and of the company/undertaking

Product name : CAUSTIC POTASH FLAKE Supplier

Chemical product name : POTASSIUM HYDROXIDE

Synonyms : POTASSIUM HYDRATE

EMERGENCY ONLY TELEPHONE NUMBER : (N.C.E.C. CULHAM) 01865 407333 Telephone No. :
Fax No. :

Formula : KOH Molecular Mass : 56.11

2. Composition/information on ingredients

Substance/Preparation : Substance

Chemical name*	CAS No.	%	EC Number	Symbol	R-Phrases
1) POTASSIUM HYDROXIDE	1310-58-3	100	215-181-3	C	R22, R35

* Occupational Exposure Limit(s), if available, are listed in Section 8

CAS No. 1310-58-3
EINECS Number 215-181-3

3. Hazards identification

Human health hazards : Harmful if swallowed. Causes severe burns.

4. First-aid measures

First-Aid measures

Inhalation : Remove from exposure. Keep warm and at rest. If there is difficulty in breathing, give oxygen. If breathing stops or shows signs of failing, give artificial respiration. Do not use mouth to mouth ventilation. Obtain medical attention urgently.

Ingestion : Wash out mouth with water. Have victim drink 240-300ml of water to dilute stomach contents. Obtain medical attention. Do not induce vomiting.

Skin contact : Immediately flood the skin with large quantities of water, preferably under a shower. Boric saline solution should be used if available. Obtain medical attention if blistering occurs or redness persists. Remove contaminated clothing as washing proceeds. Contaminated clothing should be washed or dry-cleaned before re-use.

Eye Contact : Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention urgently.

Effects and symptoms

Inhalation : Exposure to mist at high concentrations may have the following effects:- bronchitis. pulmonary oedema.

Ingestion : Swallowing may have the following effects:- haematemesis. perforation of the oesophagus. gastric perforation. Aspiration during swallowing or vomiting may severely damage the lungs.

Skin contact : corrosive The amount of tissue damage depends upon length of contact. Skin contact can produce inflammation and blistering.

Eye Contact : Corrosive to eyes. Eye contact can result in corneal damage or blindness.

Aggravating conditions : Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction or dermatitis. Repeated inhalation of dust can produce varying degrees of respiratory irritation or lung damage.

Notes to physician : In the case where material has entered the eyes, a sterile pad and bandage should be applied.

5. Fire-fighting measures

Extinguishing Media

- Suitable : Select extinguishing agent appropriate to other materials involved. Use water spray, fog or alcohol resistant foam. Do not use dry extinguishers containing ammonium compounds- see stability and reactivity.
- Unusual fire/explosion Hazards : The product reacts with water to generate heat which may be sufficient to ignite nearby combustible materials. This product may give rise to hazardous fumes in a fire.
- Hazardous thermal (de)composition products : Attacks many metals liberating hydrogen gas.
- Special fire-fighting procedures : Fire fighters should wear self-contained positive pressure breathing apparatus (SCBA) and full turnout gear.
- Protection of fire-fighters : Wear full protective clothing and self-contained breathing apparatus.

6. Accidental release measures

- Personal Precautions : Wear appropriate protective clothing. Wear respiratory protection.
- Environmental precautions and cleanup methods : Small spillages may be flushed with large quantities of water. Large spillages should be collected for disposal. Finally flush area with plenty of water.
: Advise Authorities if spillage has entered water course or sewer or has contaminated soil or vegetation.

7. Handling and storage

- Handling : Use in well ventilated area. Avoid contact with eyes, skin and clothing. Emergency shower and eye wash facilities should be readily available.
- Storage : Storage area should be: dry, cool, under cover, well ventilated. Keep containers closed to prevent ingress of moisture. If outdoor storage of solid caustic is unavoidable, pallets should be protected by black sheets to prevent extremes of weather. Suitable storage materials are:- stainless steel, polyethylene. Do not store in:- aluminium and its alloys, brass, tin, zinc.

Packaging materials

- Recommended use : Use original container.

8. Exposure controls/personal protection

- Engineering measures : Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
- Hygiene measures : Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.

<u>Ingredient Name</u>	<u>Workplace Exposure Limits</u>
1) POTASSIUM HYDROXIDE	STEL: 2 mg/m ³

Personal protective equipment

- Respiratory system : Dust respirator.
- Skin and body : Wear: dust-proof overall with hood, rubber apron, rubber boots.
- Hands : PVC or rubber gloves.
- Eyes : Chemical goggles.

9. Physical and chemical properties

- Physical state : Solid. Flakes.
- Colour : White. - Yellow.
- Odour : Odourless.
- Boiling point : 1320
- Melting point : 320
- Density : 700. (bulk)
- Solubility : 111% 20°C
- pH : >11.5 at 1% w/w in water.
14 at 20°C, 100g/l
- Flash point : Not available.

10. Stability and reactivity

Stability	: The product is stable.
Conditions to Avoid	: Exposure to water or moisture. Exposure to direct sunlight.
Materials to avoid	: Acids. Ammonium salts. Halogenated solvents. Nitroalkanes. Acid anhydrides. Aluminium. Magnesium. Zinc. Tin. Brass.
Hazardous decomposition products	: Attacks many metals liberating hydrogen gas.

11. Toxicological information

Local effects

Skin irritation	: Extremely hazardous in case of skin contact (corrosive).
Eye irritation	: Extremely hazardous in case of eye contact (irritant).
Acute toxicity	: Oral LD50 (rat) 273mg/kg. Estimated fatal dose for adults is 5g.
Chronic toxicity	: Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction or dermatitis. Repeated inhalation of dust can produce varying degrees of respiratory irritation or lung damage.

12. Ecological information

Ecotoxicity	: The product is rated as slightly toxic to aquatic species. High concentrations injure aquatic life by effect on pH.
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13. Disposal considerations

Methods of disposal ; Waste of residues ; Contaminated packaging	: Dispose of in accordance with all applicable local and national regulations.
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Waste Classification	: Not applicable.
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14. Transport information

International transport regulations

UN :	UN number	1813
UN :	Proper shipping name	Potassium hydroxide, solid
UN :	Class	8
UN :	Packing group	II
UN :	Label	



ADR/RID :	Class	8
ADR/RID :	Item Number	41(b)
ADR/RID :	Hazard identification number	80
TREMCARD	TEC(R)	TEC(R)-123

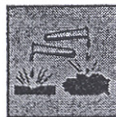
IMDG :	Proper shipping name	(POTASSIUM HYDROXIDE)
IMDG :	Packing group	II
IMDG :	Class	8

IATA :	Proper shipping name	(POTASSIUM HYDROXIDE)
IATA :	Packing group	II
IATA :	Class	8
IATA :	Additional Information	-

15. Regulatory information

EU Regulations

Hazard symbol(s)



Classification : Corrosive

CAUSTIC POTASH FLAKE

Risk Phrases	: R35 Causes severe burns. R22 Harmful if swallowed.
Safety Phrases	: S1/2 Keep locked up and out of reach of children. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36/37/39 Wear suitable protective clothing, gloves and eye/face protection. S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
Contains	: - POTASSIUM HYDROXIDE
Product Use	: Classification and labelling have been performed according to EU directives 67/548/EEC, 88/379/EEC, including amendments and the intended use. - Consumer applications.

16. Other information

HISTORY

(Please note that dates are in American format [month/day/year])

Date of printing	: 25/05/2005.
Date of issue	: 01/02/2002.
Date of previous issue	: 17/04/2001.
Version	: 2.01
Prepared by	: Michael Hale / Alistair Hunter

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