

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form	: Substance
Substance name	: POTASSIUM HYDROXIDE Flakes
Chemical name	: potassium hydroxide; caustic potash
EC Index-No.	: 019-002-00-8
EC-No.	: 215-181-3
CAS-No.	: 1310-58-3
Product code	: 50412034
Formula	: HKO

**1.2. Relevant identified uses of the substance or mixture and uses advised against****1.2.1. Relevant identified uses**

Industrial/Professional use spec	: Industrial
Use of the substance/mixture	: Manufacturing of liquid KOH (ES01) Manufacturing of solid KOH (ES02) Industrial and professional use of solid and liquid KOH (ES1) Consumer use of solid and liquid KOH (excl. batteries) (ES2)  Consumer use, service life and waste stage of KOH in batteries (ES3)

**1.2.2. Uses advised against**

No additional information available

**1.3. Details of the supplier of the safety data sheet**

Bomar Ltd  
Sea Road  
Kilcoole  
Co. Wicklow  
Ireland A63TW67  
T +(0)1 287 5110 [info@bomar.ie](mailto:info@bomar.ie)

**1.4. Emergency telephone number**

Emergency number : 012875110

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Corrosive to metals, Category 1	H290
Acute toxicity (oral), Category 4	H302
Skin corrosion/irritation, Category 1	H314

Full text of H- and EUH-statements: see section 16

Specific concentration limits:

( 0.5 ≤C < 2)	Eye Irrit. 2, H319
( 0.5 ≤C < 2)	Skin Irrit. 2, H315
( 2 ≤C < 5)	Skin Corr. 1B, H314
( 5 ≤C < 100)	Skin Corr. 1A, H314

**Adverse physicochemical, human health and environmental effects**

No additional information available

# POTASSIUM HYDROXIDE Flakes

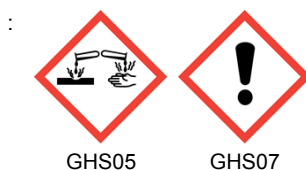
## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Contains

: potassium hydroxide; caustic potash

Hazard statements (CLP)

: H290 - May be corrosive to metals.

H302 - Harmful if swallowed.

H314 - Causes severe skin burns and eye damage.

Precautionary statements (CLP)

: P264 - Wash hands, forearms and face thoroughly after handling.

P280 - Wear eye protection, protective clothing, protective gloves.

P301+P330+P331+P310 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

Immediately call a POISON CENTER or doctor.

P303+P361+P353+P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor.

P305+P351+P338+P310 - 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 or doctor.

P321 - Specific treatment (see supplemental first aid instruction on this label).

### 2.3. Other hazards

Contains no PBT/vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Substance type

: Mono-constituent

Name

: POTASSIUM HYDROXIDE Flakes

CAS-No.

: 1310-58-3

EC-No.

: 215-181-3

EC Index-No.

: 019-002-00-8

Name	Product identifier	%
potassium hydroxide; caustic potash	CAS-No.: 1310-58-3 EC-No.: 215-181-3 EC Index-No.: 019-002-00-8 REACH-no: 01-2119487136-33-XXXX	$\geq 80$

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general

: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation

: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTRE or doctor/physician.

First-aid measures after skin contact

: Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTRE or doctor/physician.

First-aid measures after eye contact

: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE or doctor/physician.

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First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER/doctor if you feel unwell. Immediately call a POISON CENTRE or doctor/physician.

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

Symptoms/effects : Causes severe skin burns and eye damage.  
Symptoms/effects after inhalation : May cause irritation to the respiratory tract, sneezing, coughing, burning sensation of throat with constricting sensation of the larynx and difficulty in breathing.  
Symptoms/effects after skin contact : Causes severe burns.  
Symptoms/effects after eye contact : Direct contact may result in corneal injury. Risk of serious permanent damages to eyes if the product is not rapidly removed.  
Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.  
Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : No fire hazard.  
Explosion hazard : Product is not explosive.  
Reactivity in case of fire : Toxic fumes may be released.

### 5.3. Advice for firefighters

Precautionary measures fire : No special measures required.  
Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid fire-fighting water entering the environment.  
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area. Stop leak if safe to do so. Mark out the danger area with appropriate signs.

#### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.  
Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : On land, sweep or shovel into suitable containers. Minimise generation of dust. Store away from other materials.

### 6.4. Reference to other sections

See Section 8. Exposure controls and personal protection.

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling	: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact during pregnancy/while nursing.
Hygiene measures	: Do not eat, drink or smoke when using this product. Wash hands, forearms and face thoroughly after handling.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Comply with applicable regulations.
Storage conditions	: Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.
Incompatible products	: Strong bases. Strong acids.
Incompatible materials	: Sources of ignition. Direct sunlight.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### 8.1.1 National occupational exposure and biological limit values

POTASSIUM HYDROXIDE Flakes (1310-58-3)	
Ireland - Occupational Exposure Limits	
Local name	Potassium hydroxide
OEL STEL	2 mg/m <sup>3</sup>
Regulatory reference	Code of Practice for the Chemical Agents Regulations 2018
potassium hydroxide; caustic potash (1310-58-3)	
Ireland - Occupational Exposure Limits	
Local name	Potassium hydroxide
OEL STEL	2 mg/m <sup>3</sup>
Regulatory reference	Chemical Agents Code of Practice 2021

##### 8.1.2. Recommended monitoring procedures

No additional information available

##### 8.1.3. Air contaminants formed

No additional information available

##### 8.1.4. DNEL and PNEC

POTASSIUM HYDROXIDE Flakes (1310-58-3)	
DNEL/DMEL (Workers)	
Long-term - local effects, inhalation	1 mg/m <sup>3</sup>
DNEL/DMEL (General population)	
Long-term - local effects, inhalation	1 mg/m <sup>3</sup>

##### 8.1.5. Control banding

No additional information available

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### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

No additional information available

#### 8.2.2. Personal protection equipment

##### Personal protective equipment:

Avoid all unnecessary exposure.

##### Personal protective equipment symbol(s):



#### 8.2.2.1. Eye and face protection

##### Eye protection:

Chemical goggles or face shield

Eye protection			
Type	Field of application	Characteristics	Standard
Safety glasses	Dust	Clear	EN 166

#### 8.2.2.2. Skin protection

##### Skin and body protection:

Wear suitable protective clothing

##### Hand protection:

Wear protective gloves.

#### 8.2.2.3. Respiratory protection

##### Respiratory protection:

Wear appropriate mask

#### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

##### Other information:

Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: White.
Appearance	: Flakes.
Odour	: Odourless.
Odour threshold	: Not available
Melting point	: 360 °C
Freezing point	: Not available
Boiling point	: 1327 °C
Flammability	: Non flammable.
Explosive limits	: Not applicable
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not available

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pH	: 14
pH solution	: Not available
Viscosity, kinematic	: Not applicable
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: 2044 g/m <sup>3</sup>
Relative density	: Not available
Relative vapour density at 20°C	: Not applicable
Particle size	: Not available
Particle size distribution	: Not available
Particle shape	: Not available
Particle aspect ratio	: Not available
Particle aggregation state	: Not available
Particle agglomeration state	: Not available
Particle specific surface area	: Not available
Particle dustiness	: Not available

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Highly reactive with acids. Reactive with organic materials, metals, moisture.

### 10.2. Chemical stability

Stable under normal conditions of use.

### 10.3. Possibility of hazardous reactions

Highly reactive material. The water forms a strong caustic solutions. It reacts with metals to produce hydrogen. Risk of explosion.

Reacts with: acid, water (exothermic reaction).

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Exposure to moisture - hygroscopic substance.

### 10.5. Incompatible materials

The product is highly reactive. The water forms a strong caustic solutions.

It reacts with metals to produce hydrogen. Risk of explosion.

Reacts with: acid, water (exothermic reaction).

### 10.6. Hazardous decomposition products

Attacks many metals forming flammable/explosive gas (HYDROGEN!).

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

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### POTASSIUM HYDROXIDE Flakes (1310-58-3)

LD50 oral rat	333 mg/kg (OECD 425 method)
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### potassium hydroxide; caustic potash (1310-58-3)

LD50 oral	333 mg/kg bodyweight
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Skin corrosion/irritation	: Causes severe skin burns. pH: 14
Additional information	: If affected skin is not treated promptly, badly healing blisters are formed which leave scars. Affection of hands and fingers with the weak solution may be dangerous, because of painful irritation with delayed appearance (even after some hours), where it may be too late to provide an effective aid.
Serious eye damage/irritation	: Assumed to cause serious eye damage pH: 14
Respiratory or skin sensitisation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-single exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-repeated exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified
Additional information	: Based on available data, the classification criteria are not met

## 11.2. Information on other hazards

### 11.2.1. Endocrine disrupting properties

No additional information available

### 11.2.2. Other information

Potential adverse human health effects and symptoms	: Harmful if swallowed.
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## SECTION 12: Ecological information

### 12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

### POTASSIUM HYDROXIDE Flakes (1310-58-3)

LC50 - Fish [1]	56 mg/l - 24 Hours (Gambusia affinis)
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### potassium hydroxide; caustic potash (1310-58-3)

LC50 - Fish [1]	80 mg/l
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## 12.2. Persistence and degradability

### POTASSIUM HYDROXIDE Flakes (1310-58-3)

Persistence and degradability	Not relevant for inorganic substances. Not established.
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### 12.3. Bioaccumulative potential

#### POTASSIUM HYDROXIDE Flakes (1310-58-3)

Bioaccumulative potential: Low bioaccumulation potential. Not established.

#### potassium hydroxide; caustic potash (1310-58-3)

Partition coefficient n-octanol/water (Log Pow): 0.75

### 12.4. Mobility in soil

#### POTASSIUM HYDROXIDE Flakes (1310-58-3)

Mobility in soil: Not expected to adsorb to soil

Ecology - soil: Potassium hydroxide is readily soluble in water and dissociates completely to K<sup>+</sup> and OH<sup>-</sup>. If emitted to surface water, sorption to particulate matter and sediment will be negligible.

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Endocrine disrupting properties

No additional information available

### 12.7. Other adverse effects

Additional information: Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods: Neutralise with diluted sulphuric acid or hydrochloric acid and then rinse with plenty of water. Properly emptied metal packagings may be used like secondary raw material, remaining packagings should be buried in a landfill or disposed of by incineration in suitable incinerator units for hazardous waste.

Product/Packaging disposal recommendations: Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials: Avoid release to the environment.

## SECTION 14: Transport information






ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
UN 1813	UN 1813	UN 1813	UN 1813	UN 1813
<b>14.2. UN proper shipping name</b>				
POTASSIUM HYDROXIDE, SOLID	POTASSIUM HYDROXIDE, SOLID	Potassium hydroxide, solid	POTASSIUM HYDROXIDE, SOLID	POTASSIUM HYDROXIDE, SOLID
<b>Transport document description (ADR)</b>				
UN 1813 POTASSIUM HYDROXIDE, SOLID, 8, II, (E)	UN 1813 POTASSIUM HYDROXIDE, SOLID, 8, II	UN 1813 Potassium hydroxide, solid, 8, II	UN 1813 POTASSIUM HYDROXIDE, SOLID, 8, II	UN 1813 POTASSIUM HYDROXIDE, SOLID, 8, II
<b>14.3. Transport hazard class(es)</b>				
8	8	8	8	8



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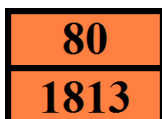
according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

ADR	IMDG	IATA	ADN	RID
				
<b>14.4. Packing group</b>				
II	II	II	II	II
<b>14.5. Environmental hazards</b>				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

### 14.6. Special precautions for user

#### Overland transport

Classification code (ADR)	: C6
Limited quantities (ADR)	: 1kg
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P002, IBC08
Special packing provisions (ADR)	: B4
Mixed packing provisions (ADR)	: MP10
Portable tank and bulk container instructions (ADR)	: T3
Portable tank and bulk container special provisions (ADR)	: TP33
Tank code (ADR)	: SGAN
Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Special provisions for carriage - Packages (ADR)	: V11
Hazard identification number (Kemler No.)	: 80
Orange plates	:



Tunnel restriction code (ADR) : E

#### Transport by sea

Limited quantities (IMDG)	: 1 kg
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P002
IBC packing instructions (IMDG)	: IBC08
IBC special provisions (IMDG)	: B21, B4
Tank instructions (IMDG)	: T3
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-B
Stowage category (IMDG)	: A
Segregation (IMDG)	: SGG18, SG35
Properties and observations (IMDG)	: White pellets, flakes, lumps or solid blocks, deliquescent. Reacts with ammonium salts, evolving ammonia gas. In the presence of moisture, corrosive to aluminium, zinc and tin. Causes burns to skin, eyes and mucous membranes. Reacts violently with acids.

#### Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y844
PCA limited quantity max net quantity (IATA)	: 5kg
PCA packing instructions (IATA)	: 859
PCA max net quantity (IATA)	: 15kg

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CAO packing instructions (IATA) : 863  
CAO max net quantity (IATA) : 50kg  
ERG code (IATA) : 8L

### Inland waterway transport

Classification code (ADN) : C6  
Limited quantities (ADN) : 1 kg  
Excepted quantities (ADN) : E2  
Equipment required (ADN) : PP, EP  
Number of blue cones/lights (ADN) : 0

### Rail transport

Classification code (RID) : C6  
Limited quantities (RID) : 1kg  
Excepted quantities (RID) : E2  
Packing instructions (RID) : P002, IBC08  
Special packing provisions (RID) : B4  
Mixed packing provisions (RID) : MP10  
Portable tank and bulk container instructions (RID) : T3  
Portable tank and bulk container special provisions (RID) : TP33  
Tank codes for RID tanks (RID) : SGAN  
Transport category (RID) : 2  
Special provisions for carriage – Packages (RID) : W11  
Colis express (express parcels) (RID) : CE10  
Hazard identification number (RID) : 80

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

Not listed on REACH Annex XVII  
Not listed on the REACH Candidate List  
Not listed on REACH Annex XIV (Authorisation List)  
Not listed on the PIC list (Regulation EU 649/2012)  
Not listed on the POP list (Regulation EU 2019/1021)  
Not listed on the Ozone Depletion list (Regulation EU 1005/2009)  
Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)  
Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

#### 15.1.2. National regulations

Listed on the United States TSCA (Toxic Substances Control Act) inventory  
Not subject to reporting requirements of the United States SARA Section 313  
Listed on the Canadian DSL (Domestic Substances List)

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Data sources : 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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.  
Other information : None.

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### Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1	Skin corrosion/irritation, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.