



The Andhra Sugars Limited.

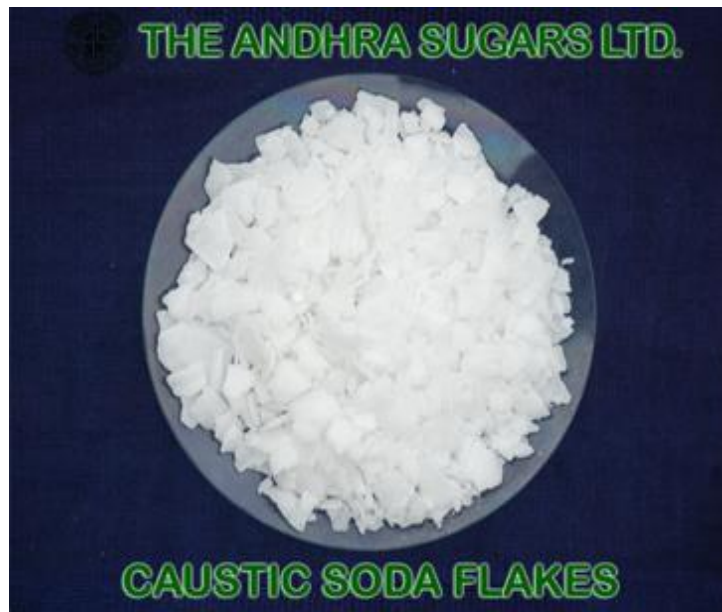
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CAUSTIC POTASH FLAKES



S No.	Characteristics	Description
1.	Technical Name	Potassium Hydroxide
2.	Chemical Formula	KOH
3.	Formation	Flakes/Lye
4.	CAS Registry No.	1310-58-3
5.	HSN	2815



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PRODUCT DESCRIPTION

Description	Caustic Potash Lye	Caustic Potash Flakes
Total Alkalinity as KOH	48.0 % (Min)	89.5 % (Min.)
Carbonates as K ₂ CO ₃	0.2 % (Max)	0.5 % (Max)
Chlorides as KCl	0.015 % (Max)(150 ppm)	0.026 % (Max)(260 ppm)
Sulphates as K ₂ SO ₄	0.002 % (Max)(20 ppm)	0.004 % (Max)(40 ppm)
Iron as Fe	0.0003 % (Max)(3 ppm)	0.006 % (Max)(6 ppm)
Sodium as Na	0.4 % (Max)	0.004 % (Max)(40 ppm)
Silicates as SiO ₂	0.002 % (Max)(20 ppm)	0.0001 % (Max)(1 ppm)
Sodium as Na	—	0.8 % (Max)

Technology

Membrane Cell Technology by UHDE, Germany and Caustic Potash Flakes is manufactured by Technology of Buflovak LLC, USA.

Exclusive Features

Mercury free and Low iron content



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Caution

Harmful to plants & animals tissues, corrosive.

Packing

C.P. Lye in Tankers and **C.P. Flakes** in 40/50 KG HDPE bags with inner alkathene liner.

Applications

Acid Neutralization, Drying agent for Sulphur dioxide, Carbon dioxide, Dye Stuff Industry, Extraction of Petroleum products

Nickel, Cadmium Batteries, Other Potassium based Chemicals, Pharmaceutical Industry, Potassium Carbonate manufacture, Potassium Permanganate manufacture, Rubber chemicals, Soft Soap Industries.

Advantages

- The Andhra Sugars Limited guarantees minimum **48%** purity of KOH for C.P. Lye and **89.5%** purity of KOH for C.P. Flakes (Dry Basis).
- Quality Control Lab is equipped with most modern instruments to analyze the product parameters.



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MATERIAL SAFETY DATA

Material Identification

Technical Name	POTASSIUM HYDROXIDE
Synonyms	CAUSTIC POTASH, POTASSIUM HYDRATE
Chemical Classification	INORGANIC ALKALI
Chemical Formula	KOH
Hazard Class	CORROSIVES-8
CAS Registry No.	1310-58-3
UN No.	1823
Hazchem Code	2R
Hazardous Waste Id No.	16

Product Use

Used in the manufacture of soft soap, nickel cadmium storage batteries, it is used as absorbing agent for sulphur-dioxide, carbon-dioxide etc.

Hazardous Ingredients

Hazardous Ingredient	Potassium Hydroxide
Concentration	-
CAS/UN No.	1310-58-3
LC50	-
LD50	-



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Physical and Chemical properties

State	SOLID FLAKES
Molecular Weight	56.11
Vapour Pressure	-
Melting Point	360 ⁰
Colour	WHITE
Specific gravity	2.C ⁴⁴
Vapour density	-
Boiling Point	1320 ⁰
Odour	Odorless
Water Solubility	SOLUBLE
pH	13.5
Freezing Point	-
Others	HYGROSCOPIC DELIQUESCENT

Fire/Explosion hazard data

Flammability	NON- FLAMMABLE
Auto Ignition temperature	-
Sensitivity to chemical impact	STABLE
TDG Flammability	-
Explosive range	-
Flash Points	-
Hazardous Combustion Products	TOXIC FUMES OF K ₂ O
Sensitivity to static discharge	STABLE



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Reactivity Data

Chemical Stability	STABLE
Reactivity	Exothermic reaction with water, violent reaction with acids and halogenated hydrocarbons, explosive reaction with ethers, nitrobenzene, nitromethene.
Incompatibility	Water, acids, combustible materials, metals like aluminium, tin, zinc, dangerous reaction products.

Health hazard data

Route of entry	SKIN CONTACT, INGESTION, DUST INHALATION.
Effects on acute exposure	<u>VAPOUR</u> : PUNGENT, COUGH, LUNG EDEMA <u>SKIN CONTACT</u> : CORROSIVE, PAIN, BURNS. <u>INGESTION</u> : CORROSIVE, SCARS, PERFORATION.
Sensitization to Material	-
Permissible limits	TLV(C) = 2MG/M ³
Lethal dose	LD50 (ORAL - RAT) = 365 MG/KG.
Effects on Chronic exposure	DISTRUCTIVE EFFECT ON HUMAN TISSUE, DERMITITIS
Synergistic Materials	-



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Preventive Measures

Storage requirements	METAL DRUMS OR HEPE BAGS WITH ALKATHYNE LINERS. INDOOR STORAGE IN GODOWNS.
Engineering controls	Raised floors to avoid entry of rain water clean, dry and well-ventilated area.
Handling methods	Manual
Leak and spill handling	SPIILLED MATERIAL TO BE COLLECTED AS HEAP(S) AND KEPT COVERED UNTIL TRANSFERRED INTO NEW BAGS. AREA SHALL BE CLEANED AND THOROUGHLY WASHED WITH WATER.
Waste Disposal	Effluents should be treated before disposal.
Personal protective equipment	goggle/face shield, hand gloves, gum boot, protective clothing
Special shipping information	-



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Emergency / First-Aid measures

Fire extinguishment: Dry chemical powder, carbon dioxide.

Special procedure: large amounts of water shall not be used in fire-fighting.

First – Aid Antidotes

Skin: remove contaminated clothing. Thorough washing of affected area.

Eyes: wash thoroughly with running water for at least for 15 minutes.

Ingestion: rinse mouth, large intake of water, do not induce vomiting.

Additional information:

Drench water shower must be located near the chemical handling area.

MANUFACTURER / SUPPLIER / CONSUMER DATA

THE ANDHRA SUGARS LIMITED
Chemicals & Fertilizers Division.
KOVVUR - 534 350, A.P.

Phones:
231597,231598,231599

Grams : CHEMICALS

Fax: 08813 – 231218

Disclaimer

The information contained in this Material Safety Data Sheet is believed to be reliable but no representation, guarantee or warranties of any kind are made as its accuracy, suitability for a particular application or results to be obtained from them. It is however, ensured that the information contained in the material safety data sheet is relevant to the product manufactured/handled or sold as the case may be by us.



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ANALYSIS PROCEDURE

ANALYSIS PROCEDURE - CAUSTIC POTASH

- (1) S.Gr. Temp: Refer Chart to know the total alkalinity as KOH Concentration.
- (2) Determination of KOH and K₂CO₃: Weigh one empty dry weighing bottle with Lid. Take about 2 to 3 grams of flakes or 3 to 4 ml of lye by means of graduated pipette into the weighing bottle and weigh again. Transfer the sample into a conical flask, add about 50 ml distilled water and add 2 to 3 drops of Phenolphthalein indicator.

Weigh of sample = W grams

To know approximate volume of 1 N HCl

(Titer value)

Percentage/5.6 = vol. of 1N HCl for 1 gram sample.

Titrate it against standard 1 N Hydrochloric Acid solution up to a little before the end point. Take this reading on A. Further titrate it against 0.1 N Hydrochloric Acid solution till the pink color just disappears. Take this reading on B. Then add 2 to 3 drops of Methyl orange indicator and continue titration against 0.1N Hydrochloric Acid to a reddish orange colour. Take this reading as C.

Total Phenolphthalein T.V. = A + B/10 = X ml in 1 N

Methyl Orange T.V.in 1 N = C/10 = Y ML

Phenolphthalein end point = KOH + ½ K₂ Co₃

Methyl Orange end point = ½ K₂ Co₃ KOH%

$$= [(X-Y) \times 1 \text{ N} \times 56 \times 100]/(W \times 1000)$$

$$= [(X-Y) \times 5.6]/W \text{ K}_2 \text{ Co}_3$$

$$= (2Y \times 1 \text{ N} \times 69 \times 100)/(W \times 1000)$$

$$= (Y \times 13.8)/W$$



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- (3) Determination of Chlorides: - Weigh accurately about 10 grams of flakes or 20 grams of the lye. Transfer it into a 250 ml conical flask, add about 50 ml distilled water, neutralize it with concentrated Nitric Acid and then add about 5 ml of the acid in excess, cool to room temperature. Pipette out 10 ml of 0.05 N Ag No₃ into it. Add 5 ml of Nitro benzene or Carbon Tetrachloride. Shake well. Add Ferric Ammonium Sulphate indicator. Titrate it against 0.05 N Ammonium Thiocyanate solution. The end point being appearance of permanent red-brown colour.

10 ml of Silver Nitrate = 10 ml Ammonium Thiocyanate (Blank expt.)

Silver Nitrate consumed = (10-T.V) ml

Weight of the sample = W grams

Chloride (as KCl) percent by mass

$$= (AX0.05X74.5)X100/WX1000$$

$$= (A X 0.3725)/W.$$