Safety Data Sheet

PURE LYE FLAKES

SDS Revision Date: **12/12/2022**

1. Identification

1.1. Product identifier

Product Identity	COMSTAR PURE LYE FLAKES
Alternate Names	30-529, Blended Formula, Pure Lye Flakes for Soap Making- 400 lb. drum

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

For Intended Use	Flakes for soap making.
Application method	Read all precautions and instructions carefully before and after use.

1.3. Details of the supplier of the safety data sheet

Company Name	ComStar International Inc. 20-47 128th Street, College Point, NY 11356
Telephone No.	718-445-7900 800-328-0142 Fax: 718-353-5998

Emergency 24 HR response No: 1-800-424-9300 & 703-527-3887 CHEMTREC

Note: The CHEMTREC phone number is only for emergencies involving spills, leaks, fire, exposure, or accident. Please direct all other inquiries to our customer service phone number

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Skin corrosion/irritation, H314 Category 1A	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation, H318 Category 1	Causes serious eye damage.
Hazardous to the aquatic environment-Acute Hazard H402 Category 3	Harmful to aquatic life
Full text of H statements	See section 16

2.2. Label elements

Full text of H statements: See section 16

GHS05

Signal word **DANGER**

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H402 Harmful to aquatic life

[Prevention]:

P260 Do not breathe mist / vapors / spray.

P264 Wash exposed skin thoroughly after handling.

P273 Avoid release to the environment.

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

P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water / shower.

P304+P340 If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338 If in eyes: Rinse continuously with water for several minutes. Remove contact lenses, if present and easy to do - continue rinsing.

P310 Immediately call a poison center or doctor / physician.

P363 Wash contaminated clothing before reuse.

[Storage]:

P405 Store locked up.

[Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification: None under normal conditions.

2.4. Unknown acute toxicity (GHS US)

Not applicable

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

3.1. Substances

Substance type: Mono-constituent

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
SODIUM HYDROXIDE CAS #: 1310-73-2	99.9%	Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402	

*The full texts of the phrases are shown in Section 16.

4. First aid measures

4.1. Description of first aid measures

General Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with labored breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

Inhalation Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

Eyes Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist. service. If burned surface > 10%: take victim to hospital.

Skin Wipe off dry product from skin. Remove clothing before washing. Wash immediately with lots of water (15 minutes)/shower. Do not apply (chemical) neutralizing agents. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital.

Ingestion Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Do not give activated charcoal. Do not give chemical antidote. Immediately consult a doctor/medical service. Call Poison Information Centre (www.big.be/antigif.htm). Ingestion of large quantities: immediately to hospital. Take the container/vomit to the doctor/hospital.

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

Inhalation When processed: Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. On continuous exposure/contact: Respiratory difficulties. Following symptoms may appear later: Possible oedema of the upper respiratory tract. Possible laryngeal spasm/oedema. Risk of lung oedema.

Eyes Corrosion of the eye tissue. Permanent eye damage.

Skin	Blisters. Caustic burns/corrosion of the skin. Slow-healing wounds.
Symptoms/effects after ingestion	Dry/sore throat. Nausea. Abdominal pain. Blood in vomit. Difficulty in swallowing. Possible esophageal perforation. Burns to the gastric/intestinal mucosa. Bleeding of the gastrointestinal tract. Shock.
Chronic symptoms	On continuous/repeated exposure/contact: Dry skin. Skin rash/inflammation. Possible inflammation of the respiratory tract. Gastrointestinal complaints.
Immediate medical attention and special treatment, if necessary	Obtain medical assistance

5. Fire-fighting measures

5.1. Extinguishing media

Adapt extinguishing media to the environment for surrounding fires.

5.2. Special hazards arising from the substance or mixture

Fire hazard:

Direct fire hazard: Noncombustible. Indirect fire hazard: Reactions involving a fire hazard: see "Reactivity Hazard".

Explosion hazard

Indirect explosion hazard: Reactions with explosion hazards: see "Reactivity Hazard".

Reactivity

May be corrosive to metals. Absorbs the atmospheric CO2. Violent to explosive reaction with (some) acids. Reacts violently with many compounds: heat release resulting in increased fire or explosion risk. Violent exothermic reaction with water (moisture): release of corrosive mist. Reacts exothermically on exposure to water (moisture) with combustible materials: risk of spontaneous ignition

5.3. Advice for fire-fighters

Precautionary measures fire:

Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighborhood close doors and windows.

Firefighting instructions:

Cool tanks/drums with water spray/remove them into safety. When cooling/extinguishing: no water in the substance. Take account of toxic fire-fighting water. Use water moderately and if possible, collect or contain it

Protection during firefighting

Heat/fire exposure: compressed air/oxygen apparatus.

Wear self-contained breathing apparatus and protective clothing.

ERG Guide No. ---137

6. Accidental release measures

6.1. Personal precautions, protective equipment, and emergency procedures

General measures:

Absorb spillage to prevent material damage. Dike and contain spill.

For non-emergency personnel

Protective equipment

Gloves. Face-shield. Corrosion-proof suit. Dust cloud production: compressed air/oxygen apparatus. Contact with moisture/water: compressed air/oxygen apparatus. Contact with moisture/water: gas-tight suit.

Emergency procedures

Mark the danger area. Prevent dust cloud formation. Corrosion-proof appliances. Keep containers closed. Avoid ingress of water in the containers. Wash contaminated clothes. On contact with moisture/water: keep upwind. On contact with moisture/water: consider evacuation. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation.

Measures in case of dust release

In case of dust production: keep upwind. Dust production: have neighborhood close doors and windows.

For emergency responders

Protective equipment

Equip cleanup crew with proper protection. Do not breathe dust.

Emergency procedures

Stop release

6.2. Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

For containment

Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill. Hazardous reaction: measure explosive gas-air mixture. Reaction: dilute combustible gas/vapour with water curtain.

Methods for cleaning up

Collect the spill only if it is in a dry state. Wetted substance: cover with powdered limestone or dry sand, earth, vermiculite. Scoop solid spill into closing containers. Under controlled conditions: neutralize leftovers with dilute acid solution. Possible violent reaction if you neutralize. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. Reference to other sections

No additional information available

7. Handling and storage

7.1. Precautions for safe handling

Avoid raising dust. Avoid contact of substance with water. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Keep the substance free from contamination. Use corrosion proof equipment. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain.

Hygiene measures

Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and when leaving work. Wash contaminated clothing before reuse. Separate working clothes from town clothes. Launder separately.

7.2. Conditions for safe storage, including any incompatibilities

Incompatible products:

combustible materials. metals. Strong acids. Strong oxidizers. Protect from moisture.

Incompatible materials

incompatible materials. Moisture. Heat sources.

Storage temperature

20 °C

Heat and ignition sources

Keep substance away from: heat sources.

Prohibitions on mixed storage

Keep substance away from: combustible materials. oxidizing agents. (strong) acids. metals. organic materials. water/moisture

Storage area

Store in a dry area. Keep container in a well-ventilated place. Keep locked up. Unauthorized persons are not admitted. Store at ambient temperature. Keep only in the original container. Meet the legal requirements

Special rules on packaging

Special Requirements: hermetical. watertight. corrosion-proof. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packaging in solid containers.

Packaging materials

Suitable material: stainless steel. nickel. polyethylene. paper. Material to avoid: lead. aluminum. copper. tin. zinc. bronze. textile.

See section 2 for further details. - [Storage]:

7.3. Specific end use(s)

No data available.

8. Exposure controls and personal protection

8.1. Control parameters

Exposure

CAS No.	Ingredient	Source	Value
1310-73-2	SODIUM HYDROXIDE	OSHA PEL (TWA) (mg/m³)	2 mg/m³
		ACGIH Ceiling (mg/m3)	2 mg/m³
		NIOSH REL (ceiling) (mg/m³)	2 mg/m³
		US IDLH (mg/m³)	10 mg/m³

8.2. Appropriate engineering controls

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide adequate general and local exhaust ventilation.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Safety glasses. Protective clothing. Gloves. Dust/aerosol mask with filter type P3.

Materials for protective clothing:

Give good resistance: natural rubber. neoprene. nitrile rubber. Give less resistance: butyl rubber. polyethylene. PVA. Give poor resistance: natural fibers

8.2. Exposure controls

Respiratory	Dust production: dust mask with filter type P3. High dust production: self-contained breathing apparatus.
Eyes	Face shield. In case of dust production: protective goggles.
Skin and body protection	Corrosion-proof clothing. In case of dust production: head/neck protection.
Hand protection	Gloves

9. Physical and chemical properties

Physical state	Solid
Appearance	Crystalline solid. Crystalline powder. Little spheres. Lumps. Needles. Scales. Flakes.
Color	White
Odor	odorless
Odor threshold	No data available
pH	14 (5 %)
Melting point	323 °C
Freezing point	No data available
Boiling point	1388 °C (1013.25 hPa)
Flash Point	Not applicable
Evaporation rate (Ether = 1)	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	**Lower Explosive Limit:** 135C(275F): NA **Upper Explosive Limit:** 199C(390F): NA
Vapor pressure	< 0.1 hPa (20 °C)

Vapor Density at 20 °C	No data available
Relative density	2.13 (20 °C)
Density	2130 kg/m³
Molecular mass	40 g/mol
Solubility	Exothermically soluble in water. Soluble in ethanol. Soluble in methanol. Soluble in glycerol. Water: 100 g/100ml (25 °C) Ethanol: soluble
Partition coefficient n-octanol/water (Log Kow)	No data available
Auto-ignition temperature	Not applicable
Decomposition temperature	No data available
Viscosity, kinematic	0.53 mm²/s (25 °C, 1 mol/l)
Viscosity, dynamic	0.997 mPa.s (25 °C, Test data)
Explosive limits	No data available
Explosive properties	Not applicable
Oxidising properties	None

9.2. Other information

Minimum ignition energy	Not applicable
Saturation concentration	671 g/m³
VOC content	Not applicable (inorganic)
Other properties	Translucent. Hygroscopic. Substance has basic reaction.

No other relevant information.

10. Stability and reactivity

10.1. Reactivity

May be corrosive to metals. Absorbs the atmospheric CO2. Violent to explosive reaction with (some) acids. Reacts violently with many compounds: heat release resulting in increased fire or explosion risk. Violent exothermic reaction with water (moisture): release of corrosive mist. Reacts exothermically on exposure to water (moisture) with combustible materials: risk of spontaneous ignition.

10.2. Chemical stability

Hygroscopic. Unstable on exposure to air.

10.3. Possibility of hazardous reactions

Reacts violently with acids. Reacts violently with water.

10.4. Conditions to avoid

Moisture. Incompatible materials.

10.5. Incompatible materials

Water. Strong oxidizers. Strong acids. metals. combustible materials.

10.6. Hazardous decomposition products

Sodium oxide

11. Toxicological information

Classification	Category	Hazard Description
Likely routes of exposure		Skin and eyes contact
Acute toxicity (oral)	---	Not Applicable
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	1A	Causes severe eye damage pH: 14 (5%)
Serious eye damage/irritation	1	Causes serious eye damage. pH: 14 (5%)
Respiratory sensitization	---	Not classified
Skin sensitization	---	Not classified
Germ cell mutagenicity	---	Not classified
Carcinogenicity	---	Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	---	Not classified
STOT-single exposure	---	Not classified
STOT-repeated exposure	---	Not classified
Aspiration hazard	---	Not classified
Potential adverse human health effects and symptoms	---	Causes severe skin burns. Causes serious eye damage.
Symptoms/effects after inhalation	---	When Processed: Dry/sore throat. Coughing, Irritation of the respiratory track. Irritation of the nasal mucous membranes. On continuous/exposure contact: Respiratory difficulties. Following symptoms may appear later: Possible oedema of the upper respiratory tract. Possible laryngeal spasm/oedema. Risk of lung oedema.
Symptoms/effects after skin contact	---	Blisters. Caustic burns/corrosion of the skin. Slow-healing wounds.
Symptoms/effects after eye contact	---	Corrosion of the eye tissue. Permanent eye damage.
Symptoms/effects after ingestion	---	Dry/sore throat. Nausea. Abdominal pain. Blood in vomit. Difficulty in swallowing. Possible esophageal perforation. Burns to the gastric/intestinal mucosa. Bleeding of the gastrointestinal tract. Shock

Chronic symptoms	---	On continuous repeated exposure/contact: Dry skin. Skin rash/inflammation. Possible inflammation of the respiratory tract. Gastrointestinal complaints.

12. Ecological information

12.1. Toxicity

Ecology - general

Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.

Ecology - air

Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).

Ecology - water

Harmful to crustacea. Harmful to fishes. Groundwater pollutant. pH shift.

Sodium Hydroxide

LC50 fish 1	45.4 mg/l (Other, 96 h, Salmo gairdneri, Static system, Fresh water, Experimental value)		
EC50 Daphnia 1	40.4 mg/l (Other, 48 h, Ceriodaphnia sp., Experimental value)		

12.2. Persistence and degradability

Biodegradability: not applicable

Biochemical oxygen demand (BOD)

Not applicable (inorganic)

Chemical oxygen demand (COD)

Not applicable (inorganic)

ThOD

Not applicable (inorganic)

12.3. Bioaccumulative potential

Not bioaccumulative

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

Do not discharge into drains or the environment. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed with other waste. Different types of hazardous waste shall not be mixed if this

may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Should not be landfilled with household waste. Recycle/reuse. Dilute. Neutralize.

Additional information

Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

14. Transport information

NOTE: Containers holding less than 1 kilo (2.2 lbs.) are shipped as non-hazardous LTD QTY. Below data is for containers holding greater than 2.2 lbs.

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	UN 1823	UN 1823	UN 1823
14.2. UN proper shipping name	UN 1823, Sodium Hydroxide, Solid, limited quantity (each not exceeding 2.2 lbs capacity).	UN 1823, Sodium Hydroxide, Solid limited quantity (each not exceeding 2.2 lbs capacity).	UN 1823, Sodium Hydroxide, Solid limited quantity (each not exceeding 2.2 lbs capacity).
14.3. Transport hazard class(es)	**DOT Hazard Class: 8**	**IMDG:** 8 **Sub Class:** Not Applicable	**Air Class: 8**
14.4. Packing group	II-Medium danger	II	II

14.5. Hazard label 8- corrosive

IMDG Marine Pollutant: No

14.6. Special precautions for user

No further information

Corrosive 8

DOT Packaging Non Bulk (49 CFR 173.xxx) 212

DOT Packaging Bulk (49 CFR 173.xxx) 240

DOT Special Provisions (49 CFR 172.102)

IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2). IP2 -When IBCs other than metal or rigid plastics IBCs are used, they must be offered for transportation in a closed freight container or a closed transport vehicle. IP4 - Flexible, fiberboard or wooden IBCs must be sift-proof and water-resistant or be fitted with a sift-proof and water-resistant liner. T3 - 2.65 178.274(d)(2) Normal..... 178.275(d)(2)

TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.

DOT Packaging Exceptions (49 CFR 173.xxx) 154

DOT Quantity Limitations Passenger aircraft/rai 15 kg

(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) 50 kg

DOT Vessel Stowage Location A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.

DOT Vessel Stowage Other 52 - Stow ‘‘separated from’’ acids

Other information No supplementary information available.

15. Regulatory information

15.1. US Federal regulations

Sodium Hydroxide (1310-73-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Not subject to reporting requirements of the United States SARA Section 313	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	1000lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

CANADA

Sodium Hydroxide (1310-73-2)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations
No additional information available

National regulations
No additional information available

15.3. US State regulations
California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H314 Causes severe skin burns and eye damage.

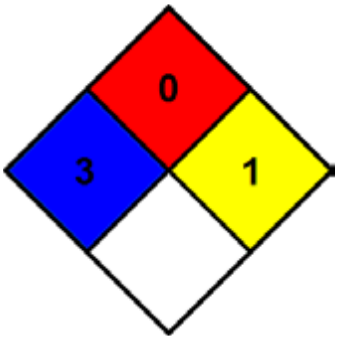
H318 Causes serious eye damage.

H402 Harmful to aquatic life.

NFPA health hazard 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard 0 - Materials that will not burn under typical dire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.



Hazard Rating
Health 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability 0 Minimal Hazard - Materials that will not burn

Physical 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

Personal protection F
F-Safety glasses, Gloves, Synthetic apron, Dust respirator

The opinions expressed are those of qualified experts within ComStar International Inc. We believe that the information contained is current as of the date of the Safety Data Sheet. Since the use of this information and of these opinions and the conditions of the use of the product are not within the control of ComStar International Inc., it is the user's obligation to determine the conditions of safe use of the product.

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