# ITTEHAD CHEMICALS LIMITED

| Doc. # NaOH-TDS-01 | Rev. # 00 | Effective Date: 01.01.2023 |
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## TITLE: TECHNICAL DATA SHEET (TDS) FOR SODIUM HYDROXIDE

### SECTION ①: PRODUCT INFORMATION

| Name | CAS # | Chemical Formula | Molar Mass | Hazard Pictogram |
|---|---|---|---|---|
| Caustic Soda / Lye / Sodium Hydroxide | 1310-73-2 | NaOH | 40 g/mol |  |

### SECTION ②: SPECIFICATIONS

| Product | Appearance | NaOH % | NaCl % | $Na_2CO_3$ % | Fe ppm |
|---|---|---|---|---|---|
| Caustic Soda Liquid-50% | Colorless liquid | 50.0 ± 0.5 | Max. 0.02 | Max. 0.5 | Max. 10.0 |
| Caustic Soda Liquid-30% | Colorless liquid | Min. 30.0 | Max. 0.01 | Max. 0.1 | Max. 5.0 |
| Caustic Soda Flakes-98% | White deliquescent flakes | 98.0 ± 1.0 | Max. 0.05 | Max. 1.0 | Max. 15.0 |

### SECTION ③: APPLICATIONS

Caustic soda is used in textile industry to make rayon and mercerization of cotton. It is used as a reagent to treat wood, rice and fiber in paper industry. It is the raw material of soap, detergent and cleaners. In oil refining industry, it is used to remove the acids in the oil and improve the smell and color of the oil and petroleum products. It is used for water, waste water, process and cooling tower water treatment and also used for regeneration of ion exchangers. It is used as chemical intermediates in agriculture, pharmaceutical, printing and metal processing industries. It is used for the extraction and purification of aluminum. In food industries, it is used for purification of fats and oils and removal of fatty impurities. Other consumers are glass industry, beverages and dairies etc.

### SECTION ④: HAZARD CLASSIFICATION

According to ADR and RID sodium hydroxide is classified in Class 8 (corrosive substance) on the basis of its main hazardous properties. Sodium hydroxide, solid UN: 1823, Sodium hydroxide, solution UN: 1824. All further measures to be taken related to transportation can be determined in the knowledge of its hazard classification.

### SECTION ⑤: HANDLING AND SAFETY MEASURES

Caustic soda solution is chemically stable product. To extend the storage life of caustic soda solution, minimize its exposure to air and its direct contact with metals like aluminum, zinc and magnesium that cause formation of flammable hydrogen. Use care when diluting concentrated solutions of caustic soda. In addition, use proper personal protective equipment like face shield, protective suit, gloves and gum boots. Always add caustic soda to hardened water with constant agitation to minimize a rapid temperature increase and the potential for the solution to boil, splatter, or violently break out. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with skin and eyes. If contacted with caustic soda immediately remove all contaminated clothes and equipment, flush the exposed body thoroughly with water / if needed wash with 5 % ammonium chloride solution in water. Keep away from incompatibles such as oxidizing agents, reducing agents, acids, sodium oxide, and moisture. Keep container tightly closed. Keep container in a cool, well-ventilated area. If you feel unwell, seek medical attention and show the label when needed.

### SECTION ⑥: PACKING AND TRANSPORT INFORMATION

Caustic Soda Liquid (50 % or 30 %) is delivered in steel, alloyed steel (acid- proof steel) or rubber-lined steel tankers (Capacity: 10 -30 MT) which are appropriate from the aspect of corrosion protection. Caustic Soda Flakes is delivered in 25 kg bags.