

Sodium Diisobutyl Dithiophosphate

Water-soluble selective collector for copper, zinc, nickel and precious-metal-bearing sulfide flotation.

CAS No. 53378-51-1	EC / List No. 258-508-5	Transport Class 8 — Corrosive
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Product Information

Sodium Diisobutyl Dithiophosphate is an organosulfur collector supplied as faint yellow to yellow-brown liquid at 49–53% active content. Its active component has CAS 53378-51-1, formula C₈H₁₈NaO₂PS₂ and molecular weight 264.32 g/mol. It is a distinct substance from sodium diisobutyl dithiophosphinate (CAS 13360-78-6); their specifications and safety data must be kept separate.

Specifications

Parameter	Specification
Appearance	Faint yellow to yellow-brown liquid
Active / mineral substance content	49–53 % wt
pH	10–13
Specific gravity at 20°C	1.10 ±0.05
Water solubility	Soluble

Supply specification and 200 kg / 1,100 kg packing are taken from the actual legacy product page. The local folder containing the phosphinate TDS is a different CAS and is not used for this phosphate.

Typical Properties

Property	Typical Value
Molecular formula	C ₈ H ₁₈ NaO ₂ PS ₂
Molecular weight	264.32 g/mol

Applications

Copper and zinc sulfide flotation: Selective collector for suitable copper and zinc sulfide feeds. Test mineral activation, pH, collector blend and iron-sulfide depression to obtain the required balance of recovery and concentrate quality.

Lead and complex polymetallic circuits: Collector option for complex lead-zinc and other polymetallic sulfide feeds. Confirm mineral association and competing sulfide recovery at each flotation stage before defining the reagent scheme.

Precious-metal-bearing sulfide recovery: Used where valuable gold or silver is associated with recoverable sulfide mineral phases. Evaluate the specific ore, liberation and collector combination through bench and plant trials; no universal recovery improvement is claimed.

Packaging / Storage

Item	Information
Packing	200 kg drums / 1,100 kg IBC
Storage	Keep tightly closed in a cool, dry, well-ventilated area away from acids, strong oxidizers and heat. Use compatible containers, protect closures from damage and prevent release to acidic drains.
Handling	Use closed transfer or local extraction where practicable. Wear chemical-resistant gloves, protective clothing, splash goggles and face protection. Avoid mist and skin contact; acid contamination can generate toxic hydrogen sulfide, so never rely on odour to detect a release.

Company Contact

Supplier	Hainan Zhongxin Chemical Co., Ltd. (ZXCHEM)
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