

# APTES ((3-Aminopropyl)triethoxysilane) Chemical Approval

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# Objective

APTES will be used in wet bench to treat the sample for 1 hour.

# Experimental Procedures

- APTES solution will be diluted by mixing 1mL APTES in 5mL DI water
- Sample will be dipped for 1 hour in above solution.

# Material Information

1. Name and Chemical Formula : (3-Aminopropyl)triethoxysilane) Chemical Approval C9 H23 N O3 Si
2. Molecular weight : 221.37 g/mol

## Physical and Chemical Properties :

- Appearance Form: liquid, clear, Colour: colourless
- Initial boiling point and boiling range: 217 °C at 1013 hPa - lit
- Flash point : 93 °C - closed cup
- Vapour pressure: < 10 mmHg at 100 °C 100 mmHg at 155 °C
- Vapour density: 7.64 - (Air = 1.0)
- Relative density: 0.946 g/cm<sup>3</sup> at 25 °C
- Partition coefficient n-octanol/water : log Pow: 1.7 at 20 °C
- Auto-ignition temperature : 270 °C

# Stability and reactivity

1. **Chemical stability** : May decompose on exposure to moist air or water. Stable under recommended storage conditions.
2. **Conditions to avoid** : Heat, flames and sparks.
3. **Incompatible materials** : Strong oxidizing agents, Acids

# Hazards identification

1. Classification of the substance or mixture
  - a. Classification according to Regulation (EC) No 1272/2008
    - i. Acute toxicity, Oral (Category 4), H302
    - ii. Skin corrosion (Category 1B), H314
    - iii. Skin sensitisation (Category 1), H317
2. Labelling according Regulation (EC) No 1272/2008
  - a. Signal word : Danger
  - b. Hazard statement(s)
    - i. H302 Harmful if swallowed.
    - ii. H314 Causes severe skin burns and eye damage.
    - iii. H317 May cause an allergic skin reaction
3. Precautionary statement(s)
  - a. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
  - b. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - c. P310 Immediately call a POISON CENTER/doctor.

# Firefighting measures

1. **Extinguishing media Suitable extinguishing media** : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
2. **Special hazards arising from the substance or mixture** : Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), silicon oxides
3. **Advice for firefighters**: Wear self-contained breathing apparatus for firefighting if necessary.

# First aid measures

1. **General advice** : Consult a physician. Show this safety data sheet to the doctor in attendance.
2. **If inhaled** : If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
3. **In case of skin contact** : Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.
4. **In case of eye contact** : Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
5. **If swallowed** : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
6. **Most important symptoms and effects, both acute and delayed** : The most important known symptoms and effects are described in the labelling (see section 2.2).

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Reference :

Safety Data Sheet

Link :

<https://www.sigmaaldrich.com/MSDS/MSDS/DisplayMSDSPage.do?country=IN&language=en&productNumber=440140&brand=ALDRICH&PageToGoToURL=https%3A%2F%2Fwww.sigmaaldrich.com%2Fcatalog%2Fproduct%2Faldrich%2F440140%3Flang%3Den>