



ILLUMINATION

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Wishing you & your family
A Happy & Prosperous New Year 2026

*Delivering Trust to the
world of chemistry*





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In the Indian renewable energy and chemical sector, bio-diesel manufacturing relies heavily on specific chemicals that enable efficient conversion of vegetable oils, animal fats, and used cooking oil into clean-burning bio-diesel, supporting sustainable fuel initiatives.

Industry Applications:

Renewable Energy, Bio-fuels, Chemical Processing, Environmental Solutions

Primary Chemical Uses (Often in Combination):

Transesterification Process:

The core step in bio-diesel production is transesterification, where triglycerides react with alcohol in the presence of a catalyst to form Fatty Acid Methyl Esters (FAME) and glycerol.

Key chemicals used include:

- Methanol – Primary alcohol used for ester formation
- Caustic Soda (Sodium Hydroxide) – Common alkaline catalyst
- Potassium Hydroxide (KOH) – Alternative catalyst with higher solubility
- Sulfuric Acid / Hydrochloric Acid – Used for acid esterification and neutralization
- Phosphoric Acid – Helps in soap breaking and purification
- Water – Used in washing and purification stages

These chemicals ensure high conversion efficiency, improved fuel quality, and compliance with bio-diesel standards.

Market Growth and Potential:

With increasing focus on renewable fuels and carbon emission reduction, the bio-diesel industry is witnessing strong growth in India and globally. Chemical demand for bio-diesel manufacturing is growing in parallel, particularly for methanol and alkaline catalysts.

Government blending mandates and sustainability policies are expected to drive the bio-diesel chemicals market at a CAGR of 6–7% through 2030.

Indian Government Initiatives for Bio-diesel

1. National Policy on Bio-fuels (2018, amended): Promotes bio-diesel blending using non-edible oils, used cooking oil (UCO), and waste feed-stocks.
2. Bio-diesel Blending Target: Indicative target of ~5% bio-diesel blending by 2030 to reduce crude oil imports and emissions.
3. GST Reduction: GST on bio-diesel reduced to 5%, improving price competitiveness.
4. UCO to Bio-diesel Program (RUCO): Encourages collection of used cooking oil for bio-diesel production.
5. Guidelines for Sale of Bio-diesel (2019): Provides regulatory framework for procurement and blending with diesel.
6. Pradhan Mantri JI-VAN Yojana: Supports advanced bio-fuels and waste-based technologies.
7. State Bio-fuel Policies: States like MP, Rajasthan, and Karnataka offer subsidies and incentives for bio-diesel projects.
8. Global Bio-fuel Alliance: India co-leads global efforts to promote bio-fuels.

Mr. Nirav Mistry
Marketing Manager
Editor for the Month





Our MD Mr.Dilip Shah participated in the inauguration of ITF 200 International Tennis Tournament

Our MD was invited by Anand Ashram to give Scholarship cheques to needy students.



The team at PCAPL went on a memorable annual trip to Silvassa, filled with great moments and team bonding.



Our team celebrated Christmas with a fun Secret Santa event, spreading joy and festive cheer among everyone.



Mr. Meet Parikh



Mr. Thakur



Mr. Vinay Ahuja



Ms. Khushi Panchal



Mr. Kiran Sindha

Ms. Jigisha Macewen



Nutrition Kit Distribution with HIV Patients



Nutrition Kit Distribution with TB Patients



Christmas Day celebration with Specially-abled children at Sankalp



Blanket Donation in Association with Rotary Club of Vadodara Jawahar Nagar





MARKET UPDATES

- Swiss-Dutch Nutrition and beauty company DSM-Firmenich recently opened its expanded Perfumery & Beauty Creative Centre in Mumbai.
- A-I Ltd.(Formerly A-I Acid) a Gujarat based Chemicals Trading Firm, has entered into a tripartite supply arrangement with Gujarat Narmada Valley Fertilizers & Chemicals (GNFC) and Solar Industries for the supply of 10,000 tonnes of concentrated Nitric Acid. & Chemicals (GNFC) and Solar Industries for the supply of 10,000 tonnes of concentrated Nitric Acid.
- Gem Aromatics begins production of Cooling Agents & Clove products at Dahej.
- Enlight Metals Pvt. Ltd and AI-driven Metal Aggregator, is diversifying into Chemicals Trading with the launch of a new Subsidiary, Enlight Trade Hub Pvt.Ltd.
- Improvements in energy efficiency efforts in India's Industry have significant impact on curbing energy usage with attendant benefits to the environment.
- Leading Chemicals Firm - Deepak Nitrite Ltd. has said it's material wholly-owned Subsidiary Deepak Chem Tech. Ltd. has commenced manufacturing operations at its Nitric Acid Plant in Nandesari, Vadodara Dist. On December 04, 2025.
- Archroma a Global leader in Speciality Chemicals focussed on sustainable solutions, has supported the Institute of Chemical Technology (ICT) Mumbai, in the Renovation and Development of a sustainable Laboratory facility as part of its CSR Programme.
- Hydrogen Peroxide Specialist Indian Peroxide Ltd (IPL), A Subsidiary of Noida based Industrial Conglomerate Nuberg, has announced plans to set up a 400 tpd Chlor Alkali Plant at its Dahej Manufacturing Complex in Gujarat
- The Indian Govt has set a minimum Import price (MIP) for certain Key Pharmaceutical Inputs.
- UK based Speciality Ingredients Firm has announced the opening of its new manufacturing Site in Dahej, Gujarat.
- Several Pharma Industry experts have raised concerns over the Government's move to set minimum Import Prices (MIP) for some Key Pharmaceutical Inputs.
- Gujarat Narmada Valley Fertilizers and Chemicals (GNFC) has announced Board approval for a significant expansion in its Industrial Explosive Segment.
- IIM Calcutta Innovation Park and Plasti India Foundation are seeking winning ideas from startups across the Country that could drive sustainability and circularity in Plastics.
- Tata Chemicals said it's Board has approved investment plans for expansion of its manufacturing capacities at two plants.
- Sterling Speciality Chemicals, a part of the Mumbai based Praana Group has agreed to acquire a portion of US Oilfield Services Provider Halliburton's Multi-chem Business.

WHAT IS 10-10-10 COMMUNICATION AND ITS BENEFITS

MANAGEMENT TIPS

10-10-10 Communication Rule is a simple practice to strengthen the Clarity, Confidence and Productivity in the Work Place.

Before sending any message, instruction or feedback, Manager to check the following 10-10-10 Rules, as under:

- 1) 10 Seconds to Clarity - It reduces misunderstandings and prevent mistakes, improve Team Alignment and decrease errors.
- 2) 10 Seconds to confirm - It saves time by avoiding long threads of clarification and also it saves time for both Managers and Employees.
- 3). 10 Seconds to consider Impact - It ensures healthier Team relations and positive Office atmosphere.

BENEFITS

- It reduces misunderstandings and prevents mistakes.
- It saves time by avoiding long threads of clarification.
- It improves Team work by creating a shared communication standard.
- It builds trust as Team Members feel guided rather than pressured.
- It makes the Manager appear organized, Thoughtful and Professional.

10-10-10 Communication Rule is a small habit with a big impact. By practicing it consistently, Manager can create a Workplace where clear clarity replaces confusion, confidence, replaces hesitation and productivity rises naturally. A thoughtful seconds before communicating can save hours later and lead to a more harmonious and efficient Office.



GROWTH IS A CHOICE WE MAKE EVERYDAY

MORAL
STORY

In a peaceful Valley, there stood a Tiny Sapling named Toru. All round him were tall and strong trees that had stood there for many years. Toru admired them and dreamed of becoming just like them some day.

But growing was not easy. Every morning, strong winds pushed Toru back and forth. Heavy rains washed away the soil around his roots. And often, birds landed on him, making his thin branches bend painfully.

One day Toru sighed, "May be I am too small. May be I will never grow tall like the others.

Hearing this, an old banyan tree nearby spoke gently. "Growth is not something that happens to you. It is something you choose everyday". Toru asked but how can I choose to grow when everything is so difficult?". The old tree replied - Choose to stand again after every storm, Choose to hold on a little longer & Choose Sunlight even when clouds hide it.

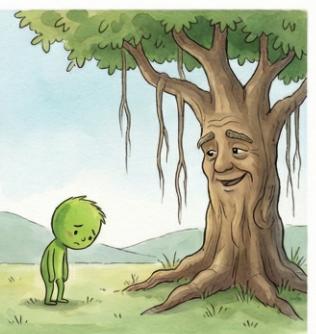
Toru listened and from that day he made a promise : I will choose to grow.

So whenever the wind tried to push him down, Toru pushed back harder. When the soil washed away, he dug his roots deeper and even on cloudy days, he stretched his leaves towards the faintest light.

Seasons passed, little by little, inch by inch, Toru grew. One day he noticed that birds now rested comfortably on his branches - branches that were strong and steady.

The old Banyan Tree looked at him proudly and said, "you see, Toru - You did not just grow, you choose to grow.

Moral : Growth is a choice we make everyday by staying strong, staying hopeful and trying again even when life gets difficult.





PUZZLE YOUR MIND

Q1- A father has 17 camels. In his WILL He wrote 1/2 of them to his First Son, 1/3 of 17 camels to his Second Son and 1/9th of 17 camels to his Third Son. How can you divide as per his WILL and how much each Son will get?

Q2- What comes down but never go up?

Q3- JUG = IKTVFH :: POT = ?

Q4- I can cover the world. I can bend but do not break and can move silently. What am I ?

Q5- $43 \times 39 = 63$
 $64 \times 37 = 92$
 $95 \times 47 = 183$
 $75 \times 68 = ???$

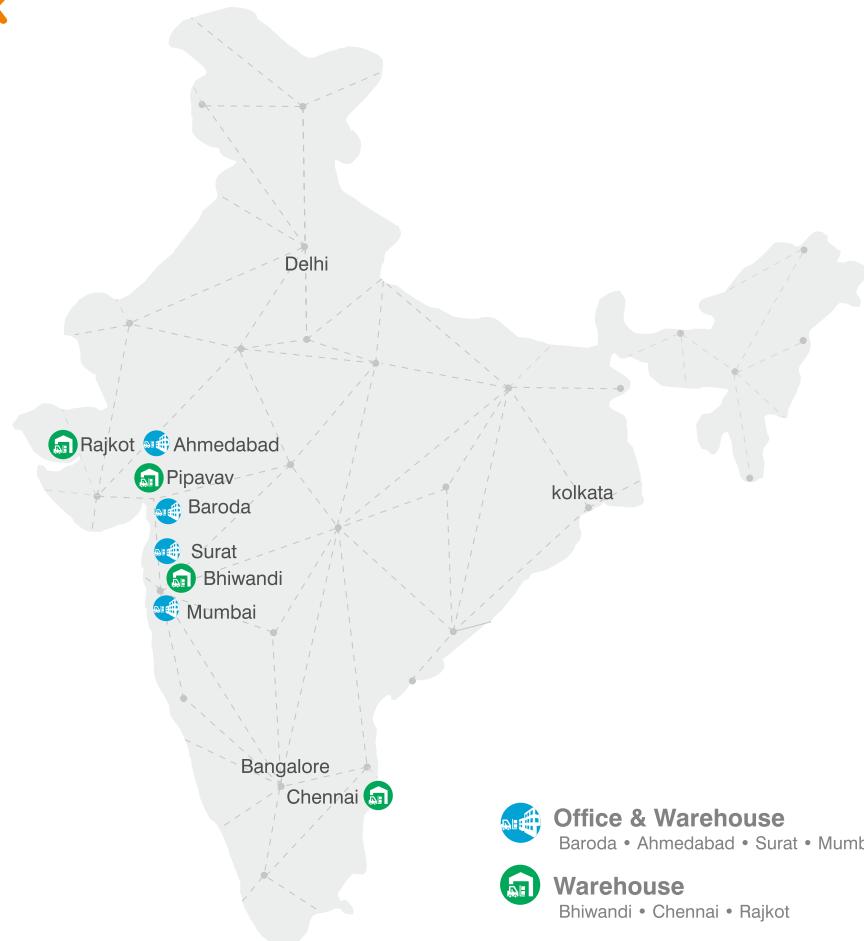


Answer to
the Puzzles of
Nov 2025

Q.1. A Joke
Q.2. A Key
Q.3. 10
Q.4. 84
Q.5. Breath

*"Success is not final;
failure is not fatal:
it is the courage to
continue that counts."*

Our Network



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