



News Letter

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Vinyl is an integral part
of our day to day life



From the desk of Editor

Attacking competition is the best form of flattery.

Many of us shun plastic straws in restaurants or plastic bags while shopping. Now enlightened, most of us are taking action to protect our planet.

However, it is hard to beat plastic's cheapness, lightness, and versatility, making it economically irresistible.

By 2019, global plastic production reached 460 million tons. Of that, about 75 percent ended up as waste and in landfills. About 20 million tons leaked into the environment, including water bodies. It is almost equal to over 2,000 garbage trucks full of plastic being dumped into our oceans, rivers, and lakes daily.

The solution is obviously the circular economy. In this economy, what is produced needs to be reusable and recyclable. Recycling waste is what it boils down to in most cases.

This is where our PVC comes into the picture—snugly fitting into the concept of recyclability. PVC is not biodegradable, but that does not mean the commodity is dirty. Without PVC, how will all the water pipes reach our homes or the farmlands? If PVC wasn't there, how would we have tamperproof and safe packaging for our medicines in tablet and capsule form?

PVC immensely contributes to mankind's progress in the modern world, making us safer and healthier.

If each of us behaves responsibly and recycles plastic waste by adopting a suitable collecting mechanism, the world will continue to be a lovely place to live.

Wishing all the Vinyl value chain members a very Happy Diwali and a Prosperous New Year.

Robin Banerjee



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All about the Indian Vinyl Council



The Indian Vinyl Council is set up and exclusively dedicated to the cause of entire PVC value chain. The objective of the forum is to serve all the stakeholders of Vinyl Family, i.e. the resin producers, additives and related chemical producers, converters, processing and ancillary equipment manufacturers, recyclers of Vinyl products and the end users. With the active and harmonious participation; the members, end users and the public at large will all stand to reap considerable benefits.

The Council will play a pivotal role as the hub of advocacy between the government (state and central), policy makers, regulatory bodies and industry stakeholders to pave the way for the industry by eliminating obstacles and opening the doors to expand the market for the Vinyl industry.

Adding greater momentum to the growth of the Vinyl industry through networking will also be one of the core responsibilities of the Council. It will work towards increasing access to the industry's leaders and enabling them to connect seamlessly with suppliers, academia, regulators, scientists and experts through seminars, conferences, technical meetings and other events.

One of our top priorities is to ensure the efficient diffusion of knowledge to all our members, on the state of art technology, market perspectives, statistics & information and details of global initiatives on sustainability... all relevant to the Vinyl and allied industries.

Our focused approach is to work towards the welfare of mankind and encourage responsible care in an environmentally sustainable manner as practiced and specified in circular economy principles and models.

We strongly believe in supporting & encouraging innovation, and training & skill development within the Vinyl value chain, to facilitate raising the competency and the level of industry to global standards.

We are also committed to developing technical standards for maintaining quality and consistency to enhance the acceptance of Poly Vinyl Chloride and related products and multiply its application in all spheres of life.

IVC Objectives

- To promote and advocate all round development of the entire Vinyl industry comprising of all elements of the Vinyl value chain
- To build a positive image of Vinyl products in eyes of the end-users as well as society at large.
- To assist and collaborate with the government and non-government bodies and statutory authorities for formulating industry related policies including codes and standards and seek representations from such bodies.
- To promote and support standardisation and quality assurance programmes to encourage regulatory compliances.
- To create awareness and educate the end users of the value proposition of PVC products including energy conservation, eco-friendliness and sustainability.
- To support and encourage innovation, training and skill development within the Vinyl value chain and thereby raise the level of industry to global standards.
- To institute and/or fund scientific and economic research in the industry connected with PVC and its products.
- To provide a forum for member associations to collaborate for broadening the market for PVC products.

India Vinyl Industry -Unleashing the potential of PVC applications



Mr. Pulin S Rajyagor
Vinyl Segment Head
Reliance Industries

Introduction:

Infrastructure has been an integral element of human civilization since time immemorial. Development activities in this sector have contributed a lot to India's Growth story. The construction sector has ~ a 12% share of India's GDP. The critical sectors identified include water management (agriculture and water supply and sanitation), housing, energy, transportation, information and communication,

and healthcare.

India Infrastructure – Current Status:

Despite robust economic growth, India continues to face challenges in upgrading and modernizing its infrastructure at the desired rate. A major reason could be the inadequacy of Investments. Many times, our archaic processes, practices, and use of traditional materials as opposed to new-age materials could be held responsible.

Infrastructure Development – Major Sectors:

Water Management—India is ranked 133rd in the world for the amount of water available per person annually. It is the world's second-largest water consumer, and its water usage accounts for 20 percent of global water consumption. India's per capita water supply is 298 cubic metres. The Government envisages investing Rs 230,000 Crs in water management and Rs 500,000 Crs in irrigation.

Housing is a basic requirement for human survival. The government of India is making ambitious plans to make India slum-free by 2030 by providing affordable housing for low-income groups and building 90 million additional houses by 2025.

Energy—India is not energy-independent. Achieving energy independence is crucial for India's development. With the country's rising needs, the energy demand is also increasing. Plans have been made to set up additional power generation.

Green Buildings:

The concept of 'Green Building' is being spread across the country to reduce the burden on scarce natural resources.

Role of Plastics in Infrastructure:

With natural resources becoming increasingly scarce, traditional products are becoming more expensive. At the same time, the requirement for construction materials is increasing manifold. Plastics have several essential characteristics that, when used alone or together, make a significant and ever-increasing contribution to Infrastructure needs.

Advantages of Plastics in Building & Construction include -

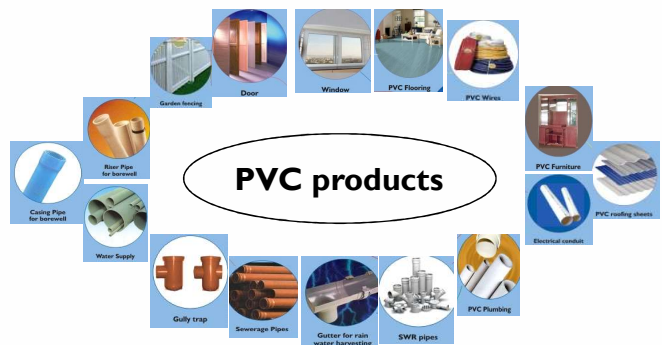
- Properties can be altered to suit needs.
- Good strength-to-weight ratio.
- Tough & durable.
- Easy processability.
- Chemical/moisture resistant.
- Do not rust/corrode.
- Resistant to termites, microbes, fungi
- Good weatherability.
- Practically maintenance-free
- Reusable/Recyclable.
- Attractive colors

Plastics have become indispensable in the construction industry, which is the second largest consumer of plastics after packaging. In the construction of all types of buildings, plastic products such as pipes, plumbing fixtures, sidings, flooring, windows and doors, gratings, railings, etc., are used for structural and decorative purposes.

India infrastructure – Advantage PVC :

Various plastic materials, such as Polyvinyl chloride (PVC), Polyethylene, Polypropylene, Polystyrene, and Polyurethanes, are used in Infrastructure applications. Out of the total plastics used in the world, 23% are used in the Infrastructure sector. PVC, with a major share of ~ 60%, is termed 'Infrastructure Plastic'. PVC finds applications in Pipes, conduits, ducts, windows and doors, roofing, etc.

PVC was effectively used by all Developed and Advanced nations after the Second World War, but its potential has not been fully utilized in the Indian Construction sector.



Indian PVC Scenario:

India's PVC manufacturing industry is over five decades old. The domestic PVC industry has come a long way from its modest beginnings with a capacity of 6 KTA to 4.1 MMTA. In the year 2023-24, PVC consumption in the country was close to 4 MMT. PVC demand in the country is increasing at ~ 8%, which is more than twice the world average of ~ 4%.

The major application sectors for PVC in India include:

- Pipes and Fittings
- Profiles
- Calendaring
- Wire and Cables

In India, Pipes remain the major sector with a share of ~75%.

Potential for PVC in Infrastructure:

It is estimated that 2 million housing units are built annually in urban areas, while 4.5 million units are built in rural areas. One typical urban unit consumes about 200 Kg of PVC in major applications like pipes, door and windows, conduits, wire & cable etc. while one rural unit consumes approximately 75 Kg of PVC for pipes, doors, roofing etc. Considering this and the projected construction activities, the potential for PVC in the Building and Construction sector is estimated to be at ~730 KTA annually, which is enormous.

Huge investments in Water and Sanitation infrastructure and Irrigation will generate a potential of 8.5 MMT for PVC Pipes in the coming years. The other flagship sector, Wire and Cables, will consume about 1 MMT of PVC in the next 5 years.

Time to adopt New Developments:

Advanced technologies in various end-use sectors, including pipe manufacturing, are being introduced in India. New products like Weldable PVC pipes have good potential, particularly for trenchless installations. The Pipe provides monolithic, fully restrained, leak-free piping systems.



Photo Courtesy: Underground Solutions Inc. USA

Spiral Wound Pipe Renewal (SPR) technology, on the other hand, utilizes steel-reinforced interlocking PVC Profile strips in place of high-compressive grout. This system can be used for large diameter pipes, while for smaller diameters, fold-and-form PVC pipes can be used. These pipes are inserted into an old pipe to make the damaged system functional at a much lower cost than total replacement of the system. These technologies are particularly useful for rehabilitating aged sewer pipelines in busy metros with heavy traffic density.

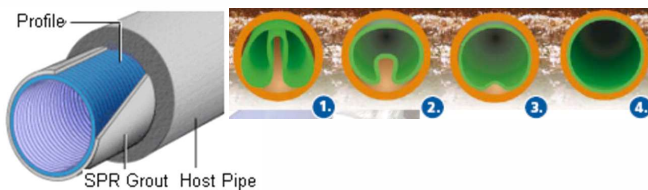
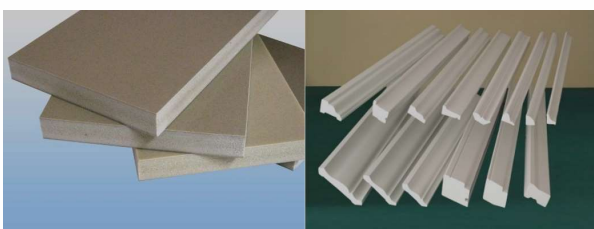


Photo Courtesy: Sekisui Chemical Company, Japan

PVC Prefabricated houses have huge potential in the country as the government is focusing on a low-cost housing concept for economically weaker sections. These houses not only save time during installation but also conserve energy due to the insulating nature of PVC. Due to their lightweight structures, they are safe in earthquake-prone areas.



In the situations of scarcity of wood and threats of deforestation products like Wood PVC Composites and PVC trim boards are suitable materials for decorative applications, railings, decking, construction boards etc. Due to their light weight, resistance to termite and water and ease for tailor made structures, these products are popular in many countries across the world and certainly have huge potential in India in Green Building projects.



Products like PVC Roofing membranes and PVC Geo membranes can be manufactured on the calendering machines. These products have proven themselves superior - technically as well as in Green aspects - compared to the traditionally available materials.



Photo Courtesy: Sika India Ltd.

Some innovative products, like shading systems, are manufactured using recycled PVC. Due to insulating nature of PVC and artificial forest like grating system, this product provides shade with substantial temperature difference. The grating works like leaves of trees to provide protection from direct sun while letting light and air pass through. This saves energy from artificial lighting as well as helps remove heat by circulating air around the fractal-shaped pieces.



Photo Courtesy: Vinyl Environmental Council, Japan

Conclusion:

The overall scenario in the PVC sector encourages and provides excellent opportunities to existing and new entrepreneurs to diversify businesses and invest in new developments. Yet many applications of PVC still need to be explored in the country, which, when explored, will open the floodgates for PVC consumption in India.

As a mature polymer with voluntary commitments, PVC has always met all the challenges. Worldwide, vinyl associations are working to remove myths and misunderstandings and bring the versatility of this wonder material to the forefront. All the stakeholders in India's total vinyl value chain should unite on a common platform for sustainable growth.

Indian Vinyl Council's launch is a welcome step in this direction.

Importance of PVC Pipes in the Infrastructure Sector



Ajay Shand
Director
Shand Group

PVC (Polyvinyl Chloride) pipes are essential to the infrastructure sector due to their versatility, durability, and cost-effectiveness. These pipes are widely used in various applications, including water supply, sewage systems, irrigation, and electrical conduits, making them essential for both urban and rural infrastructure development.

1.0 Key Benefits of PVC Pipes in Infrastructure:

1.1 Durability and Longevity:

PVC pipes have a long lifespan, often exceeding 50 years, making them ideal for long-term infrastructure projects. They resist corrosion, chemical degradation, and environmental stress, reducing the need for frequent replacements and maintenance.



**UNITED KINGDOM
& EUROPEAN STUDIES
RESULT IN PIPE LIFE
IN EXCESS OF
100 YEARS**

In 1985, Lancashire [11] investigated whether the performance of PVC-U pipe is affected by time in service. Lancashire studied PVC water pipes exhumed after 4 to 16 years' service and concluded that ageing was not a significant factor influencing the performance of the pipes. Material quality, particularly good gelation and small size of inclusions, was found to have the overwhelming influence on performance. The pipes were 4 inch, Class C (operating pressure 9 bar) from a single manufacturer. They performed stress regression testing and concluded that initial pipe quality is the overriding influence in determining pipe performance. All of the pipes tested would be expected to exceed a 100 year life under normal operating conditions.

1.2 Cost-Effective: Compared to traditional materials like steel or concrete, PVC pipes are more affordable in production, transportation, and installation. This cost-effectiveness helps in reducing the overall expenditure on infrastructure projects.

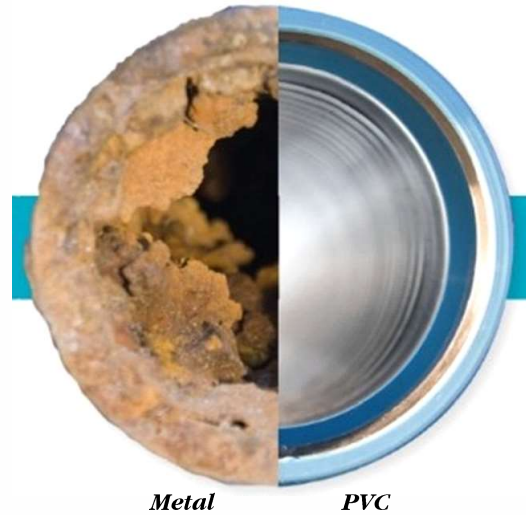
1.3 Lightweight and Easy to Install: PVC pipes' lightweight nature makes them easier to handle, transport, and install, reducing labor costs and project completion times. Their flexibility also allows for easier adjustments on-site.



1.4. Leak-Proof and Efficient: PVC pipes offer excellent sealing capabilities, minimizing water supply and sewage system leakage. This efficiency helps conserve water resources and reduce water loss, which is crucial for sustainable infrastructure.

1.5. Environmental Benefits: PVC is a recyclable material, and the production of PVC pipes has a lower carbon footprint than that of other piping materials. This makes them an environmentally friendly choice for modern infrastructure development.

1.6. Resistance to Corrosion and Chemicals: PVC pipes are highly resistant to chemical reactions, making them suitable for carrying a variety of substances, including acids, alkalis, and salts. This property makes them ideal for industrial applications and areas with aggressive soil conditions.



Metal

PVC

2.0. Technical Advancements in PVC Pipes:

2.1 Chlorinated PVC (CPVC): CPVC pipes are an advanced version of PVC that can handle higher temperatures, making them suitable for hot water and industrial applications.

2.2 Molecularly Oriented PVC (PVC-O): PVC-O pipes are manufactured using a process that stretches the PVC molecules, resulting in a stronger, more flexible, and lightweight pipe. This technology enhances the pipe's impact resistance and durability, making it ideal for high-pressure water distribution systems.



IS 16647:2017

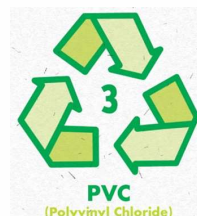
ISO

"Oriented unplasticized polyvinyl chloride (PVC-O) Pipes for water"

2.3 Lead-Free Formulations: Advancements in the formulation of PVC pipes have led to the development of lead-free alternatives. This ensures that PVC pipes are safer for the environment and more suitable for drinking water systems.

3.0 Sustainability Aspects of PVC Pipes:

3.1 Recyclability: PVC pipes are highly recyclable, making them a sustainable choice in the long run. At the end of their lifecycle, they can be reprocessed and reused in new products.



3.2 Energy-Efficient Production: Studies have shown that PVC pipe manufacturing consumes about 60-70% less energy than steel and 40% less energy than concrete.

3.3 Low Carbon Footprint: PVC pipes have a smaller carbon footprint due to their lightweight nature (5-6 times compared to steel), which reduces emissions during transportation and installation.

3.4 Operational energy savings: The smooth inner surface of PVC reduces friction loss in fluid flow, which can save up to 30-40% in pumping costs.

3.5 Life cycle energy efficiency: PVC's embodied energy (energy to produce and transport pipes) is very low. For example, steel has an embodied energy of 24-35MJ/kg, while PVC is about 70-80% lower, at about 9-14MJ/kg.

4.0 Regulatory and Quality Standards governing PVC Pipes:

Various regulatory and quality standards are followed globally to ensure that PVC pipes meet specific safety, quality, and performance criteria. These standards help maintain consistency in production and ensure that PVC pipes are suitable for their intended applications. Some essential standards include:

4.1 ISO Standards (International Organization for Standardization): ISO standards for PVC pipes, such as ISO 4422 (for pipes used in water supply) and ISO 1452 (for pressure water distribution systems), set global benchmarks for the dimensions, mechanical properties, and performance requirements of PVC pipes. These standards help maintain high-quality production practices across different countries.

4.2 ASTM Standards (American Society for Testing and Materials): ASTM standards like ASTM D1785 and ASTM D2241 specify the requirements for rigid PVC pipes used in pressure applications. These standards ensure the pipes have adequate pressure-bearing capacity and resist environmental and chemical degradation.

4.3 NSF/ANSI Standards: The NSF/ANSI standards focus on the health effects of PVC pipes used in potable water systems. These standards ensure that the materials used in PVC pipes do not leach harmful substances into drinking water, maintaining public health and safety.

4.4 BIS Standards (Bureau of Indian Standards): In India, the BIS standards, like IS 4985, specify the requirements for unplasticized PVC pipes for potable water supplies. These standards help regulate the production and quality of PVC pipes, ensuring their suitability for various water distribution systems in the country.

4.5 Local and National Building Codes: Many countries have building codes and regulations that dictate the use of PVC pipes in construction and infrastructure projects. These codes ensure that PVC pipes meet each region's safety, environmental, and performance requirements.

5.0 Usage of PVC in Infrastructure in India and the World:

PVC pipes are widely used in infrastructure projects globally, with significant applications in various sectors. Here is an overview of the usage of PVC pipes, both in India and worldwide, application-wise:

5.1 India:

- **Agricultural Irrigation:** Around 40% of PVC pipes are utilized in the agricultural sector;
- **Water Supply and Distribution:** Approximately 15% of PVC pipes in India are used in water supply systems;
- **Plumbing pipes:** About 15% of PVC pipes are used in the plumbing sector;
- **Sewage and Drainage Systems:** About 15% of PVC pipes are employed in sewage and drainage infrastructure;
- **Casing and Column pipes:** Around 10% of the PVC pipes are used in casing and column pipe applications;
- **Electrical Conduits:** Nearly 5% of PVC pipes are used for electrical conduit systems, which provide protection and insulation for electrical wiring.

5.2. Global Scenario:

- **Water Distribution Systems:** Globally, more than 40% of PVC pipes are used in water distribution networks due to their corrosion resistance and long lifespan, making them suitable for drinking water and wastewater systems.
- **Agriculture and Irrigation:** Approximately 30% of PVC pipes are utilized in the agricultural sector worldwide. They are extensively used in irrigation systems, enhancing water efficiency in farming practices.
- **Sewage and Wastewater Management:** Around 20% of PVC pipes are dedicated to sewage and wastewater management systems. Their ability to handle chemicals and corrosive materials makes them ideal for these applications.
- **Industrial and Chemical Applications:** PVC pipes also have significant use in industrial applications, comprising about 5% of the total usage. Their resistance to chemicals makes them suitable for transporting industrial liquids, gases, and hazardous substances.
- **Construction and Electrical Conduits:** The remaining 5% of PVC pipes are used in the construction sector for electrical conduits, ducting, and plumbing systems in commercial and residential buildings.

6.0 Conclusion

PVC pipes have become a backbone of the infrastructure sector due to their durability, cost-effectiveness, ease of installation, and versatility. Recent technical advancements like CPVC, PVC-O, and lead-free formulations have enhanced their performance. Additionally, the sustainability aspects of PVC pipes, such as their recyclability, low carbon footprint, and energy-efficient production, make them an environmentally responsible choice for modern infrastructure projects. Compliance with regulatory and quality standards ensures that PVC pipes are safe, reliable, and suitable for various applications, making them a trusted solution in the global infrastructure industry. The widespread usage of PVC pipes in water supply, agriculture, sewage management, and industrial applications highlights their crucial role in supporting sustainable and efficient infrastructure development worldwide.

PVC - a Sustainable Polymer



Vivek Kale
SBU Head, PVC additives
Baerlocher India

Introduction

Polyvinyl chloride (PVC) has long been recognized as one of the world's most versatile and widely used polymers. PVC has gained a prominent position in various industries with applications ranging from construction materials to healthcare, packaging, and consumer products. Beyond its versatility, PVC is a sustainable polymer due to its energy-efficient production, durability, and recyclability. As the global focus shifts toward

environmentally responsible materials, PVC's role in sustainable development has gained significant attention.

The Sustainability of PVC: Key Attributes

PVC exhibits several characteristics that contribute to its sustainability. These attributes make it an environmentally responsible choice compared to most competing materials.

Energy-Efficient Production: PVC's production process requires less energy than many other commonly used plastics and materials. The polymerization of vinyl chloride monomer (VCM) into PVC is highly energy-efficient, and salt, one of the raw materials, is abundant and accessible. On average, producing PVC requires 57% less fossil fuel input than competing polymeric materials, translating into a lower carbon footprint during manufacturing.

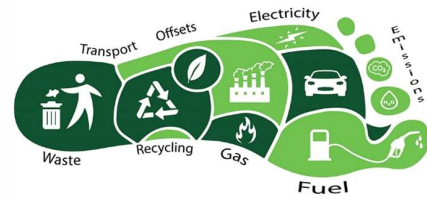


Durability and Long Lifespan: One of the critical sustainability benefits of PVC is its durability. PVC products, especially in infrastructure applications, have a service life of 50+ years, significantly reducing the need for replacement. This extended service life reduces resource consumption and waste generation over time.

Recyclability: PVC is recyclable and post-industrial and post-consumer PVC waste can be collected, processed, and reused to manufacture new products. Recycled PVC can be used in numerous non-critical applications, such as pipes, flooring, and window profiles, reducing the environmental impact associated with virgin material production.

Material Efficiency: Owing to their strong mechanical properties, PVC products are often made with less material than alternatives. For instance, PVC pipes can achieve the same performance levels as competing plastic pipes with thinner walls, resulting in material savings. This makes PVC a resource-efficient material in various sectors.

Low Emissions and Improved Life Cycle: Modern advancements in PVC manufacturing have significantly reduced harmful emissions. Implementing advanced technologies, such as closed-loop processes and best-in-class VCM emissions controls, has made the production of PVC safer and more sustainable. Additionally, lifecycle assessments of PVC show that the material has a lower environmental impact than alternative materials in areas like transportation, energy consumption, and disposal.



Important Application Sectors for Sustainable PVC

PVC is used across various application sectors that benefit from its sustainability attributes. These sectors include infrastructure, healthcare, packaging, and consumer goods. Here are the most important sectors where PVC is vital as a sustainable polymer.

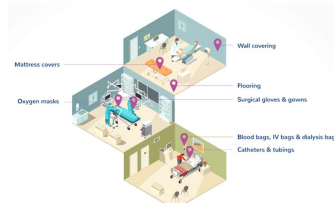
Building and Construction: PVC is a dominant material in the construction industry, accounting for nearly 60% of all PVC consumption globally. It is widely used in building and infrastructure projects due to its robustness, low maintenance, and long lifespan. Critical applications in this sector include:

- **Pipes and Fittings:** PVC pipes are extensively used in water supply, wastewater management, and irrigation systems. Their smooth internal surface reduces energy consumption during water pumping, and their corrosion resistance ensures a long service life with minimal maintenance. PVC pipes are fully recyclable and provide a sustainable solution for long-term infrastructure projects.
- **Windows and Doors:** PVC window and door frames provide excellent insulation properties, reducing energy consumption for building heating and cooling. Their durability and low maintenance make them a sustainable residential and commercial construction option.
- **Roofing and Flooring:** PVC flooring and roofing membranes are used in various applications. Their longevity, low cost, and ability to be recycled make them attractive for both new builds and renovation projects. PVC flooring provides a hygienic, durable, and moisture-resistant surface.
- **Electrical Conduits and Cable Insulation:** PVC's electrical insulation properties and fire resistance make it ideal for wiring and electrical conduits. Its durability ensures safe, long-term performance in buildings while contributing to the reduction of waste.

Healthcare

The healthcare sector relies heavily on PVC due to its unique combination of flexibility, durability, and safety. Over 25% of all plastic-based medical devices are made from PVC, providing a critical contribution to modern healthcare systems. Sustainable benefits include:

- **Medical Devices:** PVC manufactures blood bags, IV tubing, oxygen masks, and catheters. The material's sterility, biocompatibility, and chemical resistance make it ideal for medical applications. Modern innovations in PVC recycling now enable the recovery of certain PVC-based medical products, reducing the environmental burden of healthcare waste.
- **Miscellaneous:** PVC's recyclability is increasingly important for products like gloves, tubes, and packaging, which are essential in healthcare. Hospital recycling initiatives are helping close the loop on PVC waste in this sector.



Packaging

PVC is also widely used in the packaging industry, particularly for rigid and flexible packaging solutions, such as:

- **Blister Packaging:** PVC's clarity, strength, and barrier properties are ideal for blister packs used in pharmaceuticals, electronics, and consumer goods packaging. Its durability ensures that products are well-protected while using minimal material, thus contributing to reduced waste.
- **Shrink Films:** PVC is used for shrink-wrap packaging, providing strong protection and stability for products during transportation.

Consumer Goods

In the consumer goods sector, PVC is used in products ranging from household items to sports equipment. Its lightweight, durable, and cost-effective properties make it a preferred material for sustainable manufacturing of long-lasting products such as:

- **Toys:** PVC is often used in the manufacturing of toys due to its flexibility, strength, and safety. It has been reformulated to eliminate harmful additives, making it safer for the environment and children.
- **Furniture and Interior Products:** PVC is also found in furniture upholstery, wall coverings, and other interior products due to its ease of cleaning, low maintenance, and long-lasting nature. These products are increasingly recycled at the end of their useful life, reducing their environmental footprint.

Automotive and Transportation

PVC is utilized in the automotive and transportation industries for a range of applications:

- **Vehicle Interiors:** Car interiors use PVC for seat covers and interior trim. The material's durability and ease of cleaning make it a sustainable choice for long-term vehicle use.
- **Underbody Coatings:** PVC coatings are used on the underbody of vehicles to provide corrosion resistance. This extends the life of vehicles and reduces the need for repairs and replacements, contributing to lower environmental impact over the vehicle's lifespan.

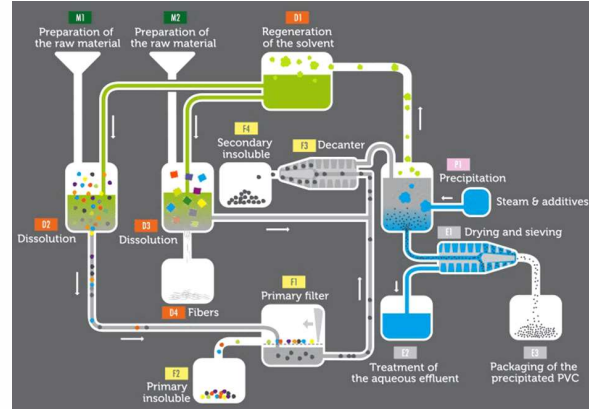
PVC's Role in a Circular Economy

A circular economy emphasizes reducing waste and continuously using resources through recycling, reuse, and regeneration. PVC is critical in advancing a circular economy due to its recyclability and

ability to be repurposed in various applications.

PVC Recycling Initiatives: PVC recycling initiatives are gaining momentum globally, with industry-led programs focusing on collecting and recycling post-consumer PVC products. Examples include:

- **VinylPlus:** A voluntary commitment from the European PVC industry to increase recycling and sustainability in PVC production. According to recent data from Vinyl Plus, over 800,000 tonnes of PVC were recycled annually, significantly reducing the material's environmental footprint.



- **Medical PVC Recycling:** In the healthcare sector, specific recycling programs have been developed to recover PVC from medical products, reducing waste in an industry traditionally associated with high levels of single-use plastic disposal.

Contribution of the fraternity members: Every fraternity member contributes to the sustainability of PVC. The processors are using more sustainable additives, the additive manufacturers ensure they produce sustainable additives more sustainably, and the machinery manufacturers provide higher-efficiency equipment with lower energy consumption.

Conclusion

PVC is a sustainable polymer due to its energy-efficient production, recyclability, and long lifespan. Its application across multiple sectors showcases its versatility and contribution to sustainable development. As global industries prioritize environmental responsibility, PVC's role in a circular economy will expand, driven by advancements in recycling technology and the growing emphasis on reducing waste and emissions.

Vinyl is an integral part
of our day to day life

Become a Member,
to enjoy the
IVC Benefits

Industry Updates

IPI- IVC JOINT SEMINAR

Venue- Hotel Regency Lagoon- Rajkot
Dt 21-08-24, 3.30 pm onwards

Indian plastics institute-Ahmedabad Chapter & Governing council, IPI HO had jointly organized a technical seminar with Indian Vinyl Council. This was the first of such kind of seminar which was being held where in the audience had an opportunity to interact with technical expert from industry, as well as from IVC.

This seminar was held on 21st Aug 2024, at Rajkot at Hotel Regency lagoon. Rajkot being the hub of CPVC & PVC Pipes & fittings, IPI-IVC Seminar management committee had decided to organize the first seminar at Rajkot.

The seminar with a title – Unleashing POTENTIAL OF PVC applications, was

attended by approx. 220 no of participants from industry stakeholders of PVC & CPVC value chain. The audience included decision makers, CEO, Head of Departments, owners & founders of the businesses etc.

The seminar was inaugurated with national anthem with the venue full of capacity & then welcome address by Shri Chetan R Shah, Chairman, IPI Ahmedabad Chapter.

Chairman, Governing Council IPI - Shri Abhay Bhai Updhyay, had addressed the audience about the IPI activities & invited all to become members of IPI.

Mr. Rajeev Mahendale- Secretary, Indian Vinyl Council, had appraised about IVC & its activities. Dr. Shreekanth Diwan – Head of Business Development, Baerlocher India & President IVC was the chief guest of the occasion. He delivered an interesting presentation with analogy involving cricket & PVC. The crowd present was amused with the presentation.

Various technical presentations from event sponsorer Benchmark additive & other experts from raw material industry Reliance industries, Epigral Limited, machinery manufacturers like Neoplast Engineering, Windsor machines Ltd, & Rajoo Bausano & additive suppliers like Omiya & Reagens India have presented their papers.

The delegates had a memorable series of lectures from industries top technical experts. The audience come to know about important role of PVC & CPVC in building construction, piping, & other applications.

Secretary, IPI Ahmedabad chapter - Shri Alkesh Parikh had presented a vote of thanks & then all the delegates had a delicious dinner with mouthwatering dishes from the kitchen of Regency lagoon.



IPI- IVC JOINT SEMINAR

Venue- The Park Hyderabad, Hyderabad
Dt 19-10-24, 3.30 pm onwards

Indian plastics institute- Hyderabad Chapter & IPI HO had jointly organized a 2nd technical seminar with Indian Vinyl Council. This seminar was held on 19th Oct. 2024, at Hyderabad.

The seminar with a title – PVC/CPVC – Growth and Future Applications, was attended by approx. 180 no of participants.

The seminar was inaugurated with welcome address by Shri M.V. Prasad, Chairman, IPI Hyderabad Chapter. Dr. Sameer Joshi, Vice Chairman, Governing Council IPI had addressed the audience about the IPI activities.

Mr. Sanjay Nawander- Management Committee Member, Indian Vinyl Council, had appraised about IVC & its activities. Keynote address on Global Polymer Industry – Indian Perspective was delivered by Mr. Unmesh Nayak COO, Polymers, Reliance Ind. Ltd.

1st Technical session covered presentations from Benchmark Polytechnik, APAR Chemicals, Fine Organics, Boorugu & Co. In 2nd technical session, Milacron India, Prasad Group, CIPET, Chemtrend & IVC representatives delivered presentations on diverse topics.

Mr. Abdul Aleem delivered vote of thanks.

The seminar provided a platform to Industry leaders, machine/additive manufacturers, end users, PVC converters to enrich the knowledge through interactions with industry stakeholders.





HAPPY
Diwali

FESTIVAL OF LIGHTS

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INDIAN VINYL COUNCIL



INDIAN VINYL COUNCIL

INDIAN VINYL COUNCIL

Admin. Office : 101/102, Terminal - 9 Building,
Nehru Road, Near Hotel Sahara Star, Vile Parle (East),
Mumbai - 400 099, Maharashtra. INDIA
Tel.: +91 22 67489899
Email ID : membership@indianvinylcouncil.com
Website: indianvinylcouncil.com

Reg. No. : GUJ/21190/Ahmedabad (Registrar of Societies)

MEMBERSHIP APPLICATION

Date of application:

Name of the organization : _____

Business Address : _____

City : _____ Pin : _____ State : _____

Tel. : _____ Email: _____ Website: _____

Factory Address (if applicable) : _____

City : _____ Pin : _____ State : _____

Tel. : _____ Email: _____ Website: _____

Date of Establishment GST No.

Category of Business (Please tick mark wherever applicable) (see page 3 and 4 for criteria of type of membership)

- Manufacturer of PVC resin Additives manufacturer Processor of PVC Equipment manufacturer
- Trader/Distributor Institution/Association Consulting firm Others

Annual Turnover of last financial year Rs.

Nature of business:

Name of Authorized Representatives	Designation	Specimen Signature	Mobile No	Email ID
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(Principle Member)

(Alternate Member)

Category of Membership Applied for (Please tick mark wherever applicable):

- Privilege Associate Donor

Name of the authorized Person:

SIGNATURE

FOR OFFICIAL USE

Received on:

Accepted at the Managing Committee Meeting held on

Sign of Hon. Secretary / Auth. Signatory

Send the filled form along with the cheque to :
Indian Vinyl Council, 101/102 terminal -9, Nehru Road, neat Hotel Sahara Star, Vile Parle (E) , Mumbai 400099 .India



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FEE STRUCTURE

A) Privilege Members : Individuals in the Business of PVC, Corporate in PVC business, PVC compounders, PVC converters, PVC end product fabricators and any other company engaged in the field of PVC value chain or furthering the object of the Society, may be admitted as Privilege Member

Figures in Rupees

Please tick as applicable category					
CATEGORY (COMPANY TURN OVER)	0-100 Cr	100-250cr	250-500Cr	500-1000Cr	1000+Cr
ADMISSION CHARGE	5000	5000	5000	5000	5000
ANNUAL MEMBERSHIP FEE	10000	25000	50000	75000	100000
TOTAL	15000	30000	55000	80000	105000
ADD GST (18%)	2700	5400	9900	14400	18900
TOTAL	17700	35400	64900	94400	123900
LESS TDS(10%)	1500	3000	5500	8000	10500
TOTAL PAYABLE	16200	32400	59400	86400	113400

MEMBERSHIP RENEWAL CHARGE

Figures in Rupees

Please tick as applicable category					
CATEGORY (COMPANY TURN OVER)	0-100 Cr	100-250cr	250-500Cr	500-1000Cr	1000+Cr
ANNUAL MEMBERSHIP FEE	10000	25000	50000	75000	100000
TOTAL	10000	25000	50000	75000	100000
ADD GST (18%)	1800	4500	9000	13500	18000
TOTAL	11800	29500	59000	88500	118000
LESS TDS(10%)	1000	2500	5000	7500	10000
TOTAL PAYABLE	10800	27000	54000	81000	108000

B) Associate Member: Any society, association, chamber of commerce or other not-for-profit organization, trust, foundation etc. registered as per the applicable law and representing manufacturing industries, service providers, suppliers, end users, dealer etc. belonging to the Vinyl chain from the India, may be admitted as Associate Member of the Society

Figures in Rupees

Membership Fee	10,000
One Time Enrolment Fee	5,000
Total	15,000
Add GST 18%	2700
Total	17700
Less TDS @ 10% (for F/Y 21-22)	1500
Total Payable	16200

Above mentioned are Annual fees and become due in April every year.

C) Donor Member: Individuals, firms, trusts, foundations, institutions, bodies corporate or associations supporting or desirous of supporting, or furthering the objects of the Society, may, on payment of the lump sum donations, as is fixed by the Society from time to time.

Donation will be accepted in multiples of Rs 1.0 Lakh and minimum of Rs 5.0 lakhs

Privilege Members of IVC



- 1 Reliance Industries Limited
- 2 Baerlocher India Additives Pvt. Ltd.
- 3 Goldstab Organics Pvt. Ltd.
- 4 Reagens India Polymer Additives Pvt Ltd
- 5 Bihani Manufacturing Company Pvt. Ltd.
- 6 Ori-Plast Limited
- 7 The Supreme Industries Ltd
- 8 Theysohn Extrusion
- 9 Platinum Industries Private Limited
- 10 NCL Veka Limited
- 11 Manish Packaging Pvt Ltd.
- 12 Finolex industries Ltd
- 13 Deceuninck Profiles India Pvt Ltd
- 14 Basil Prompt Vinyl Pvt. Ltd.
- 15 Amisha Vinyls Pvt Ltd
- 16 Asia Pacific Vinyl Network
- 17 PVC converters (India) Private Limited
- 18 Pioneer Flex
- 19 Sun Ace Chemical India (Pvt.) Ltd.
- 20 Encraft India Pvt. Ltd.
- 21 Vihan Engineering Pvt. Ltd.
- 22 Lubrizol Advanced Materials India Pvt. Ltd.
- 23 Bharat Milling Industries
- 24 Prabhu Poly Pipes Ltd
- 25 Cooldeck Industries Pvt .Ltd
- 26 Duroplast India Pvt Ltd
- 27 Karan Polymers Pvt. Ltd
- 28 Mobil Chem Speciality Pvt. Ltd
- 29 Shand Pipe Industry Pvt.Ltd
- 30 Benchmark Polytechnik Pvt. Ltd.
- 31 Kemron Wood Plast Pvt. Ltd.
- 32 Nishan Multi Trade Pvt. Ltd.
- 33 Payal Poly Plast Pvt. Ltd.



INDIAN VINYL COUNCIL

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PAN : AABTI7693E

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