



News Letter

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Vinyl is an integral part
of our day to day life



From the desk of Editor

We are IVC - the Indian Vinyl Council. But what is 'vinyl' for those who want to know about our Council?

The dictionary definition of vinyl is a resin formed by polymerizing vinyl compounds or any group of plastics made from such resins. From the point of view of Chemistry, it is the vinyl group, the univalent group C_2H_3 , derived from ethylene.

Of late, you may have walked over a beautiful, shining, and bright 'wooden' flooring. You could have wondered where this bright wood has come from. Chances are that the wonderful and bright wooden flooring was made of 'vinyl.' Should the flooring be of 'wood,' it would have needed several forest trees to be cut. But now, you have the luxury of stepping onto wooden-looking floors without cutting any tree. Isn't it sustainability? If this is not ecologically favourable, what is?

Think about the drinking water you used to get into your homes earlier through metal pipes. Historically, even our plumbing pipes carrying drinking water were made of metals, and a significant quantum of harmful heavy metals would have entered our bodies. Not anymore, with most drinking water pipes nowadays being made of vinyl, PVC, that is.

Remember the old wooden window frames that would swell with humidity and could not be closed properly, resulting in leakage of the effect of air conditioning? Even making a free entry for the dust and noise? And is special pest control needed to prevent the termite attack? Metals are very good conductors of heat, and the metallic frames also result in losses of air conditioning effect. Thanks to the PVC frames, which do not corrode, are not affected by weather and termites, are excellent insulators, and the structure can even be made sound-proof.

Our living conditions have improved significantly due to the many PVC products around us. Vinyl is improving our lives; most of its products are recyclable and reusable.

PVC is indeed the product of the future. If we must progress toward a healthy and sustainable existence, vinyl products will be difficult to substitute for even in the distant future.

Robin Banerjee



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From the Desk of Incoming President

Dr. Shreekant Diwan

Dear Members,

As we embark on this journey together, I am filled with enthusiasm and determination to work with the vinyl value chain members towards a future marked by innovation, growth, and above all, sustainability.

In recent years, sustainability has emerged as a critical focal point across industries worldwide, and the PVC sector is no exception. As stewards of the vinyl industry in India, it is incumbent upon us to lead by example and champion sustainability initiatives that not only benefit our businesses but also contribute positively to our environment and society.

PVC, as a versatile material, has undoubtedly revolutionized various sectors, from construction to healthcare, with its durability, affordability, and performance, and we will work together to promote sustainable practices throughout the PVC lifecycle. This includes:

Resource Efficiency: Encouraging the adoption of eco-friendly manufacturing processes that minimize resource consumption and waste generation.

Circular Economy: Embracing the principles of a circular economy by promoting PVC recycling and reuse initiatives. Through collaboration with stakeholders, we aim to establish efficient collection and recycling systems to divert PVC waste from landfills.

Innovation: Investing in research and development to explore alternative raw materials and production methods that reduce the environmental footprint of PVC while maintaining its performance characteristics.

Transparency and Accountability: Enhancing transparency across the PVC supply chain by promoting responsible sourcing practices and ensuring compliance with environmental regulations and standards.

Education and Awareness: Engaging with stakeholders, including policymakers, industry partners, and the public, to raise awareness about the benefits of PVC sustainability and dispel misconceptions surrounding the material.

By embracing these principles and working collaboratively, I am confident that we can position the wonder polymer at greater heights. Together, we can drive positive change and create a legacy of environmental stewardship for future generations.

Let's work together to realize our shared vision of a vibrant and sustainable PVC industry.

Thank you for your trust and support.

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.

Corporate Talk

Dr. Tobias Rosenthal
Chairman of the Board
Baerlocher Group

Interviewed by

Mr. Robin Banerjee - Editor IVC Newsletter



In the anniversary year, Dr. Tobias Rosenthal succeeds his father Dr. Michael Rosenthal as Chairman of the Advisory Board.

Since October 2016, he has been responsible for the corporate development of Baerlocher Group, including the evaluation of organic and inorganic growth options, as well as coordinating and developing the innovation process and digitalization strategy.

As shareholder of the Baerlocher Group, he is responsible for the communication and alignment with the international Joint Venture partners and the further improvement of the corporate governance.

Q1. At the outset, congratulations on the company's 200th anniversary! What milestones and achievements stand out most prominently during this period?

Thank you very much! Indeed, the company has greatly changed since its founding as Bavaria's first sulfuric acid plant in 1823. The first 123 years are marked by rapid transformation in the chemical industry and numerous changes in ownership, expropriation, and fresh starts.

When my grandfather, Dr. Christian Rosenthal, took over the company as a trustee in 1946, he laid the foundation for the Baerlocher of today. He expanded our metal soap business on an industrial scale, entered the promising field of plastic additives, started selling master compounds, and, share by share, became the majority shareholder.

When my father, Dr. Michael Rosenthal, took over in 1980 after the sudden death of my grandfather, he continued the journey with the same strong customer focus that has always been part of our DNA. The most game-changing development during these years was the systematic internationalization through a strong sales network, joint ventures, and start-up production facilities "on the green field." He also developed our special plastic additive (SPA) business, serving various application sectors, including construction, paper, stationery, paints, non-PVC polymer sector, and the backward integration in fatty acids.

Q2. As a young chairman in a historically established company, what unique perspectives do you bring regarding the company's future direction? How do you balance preserving the company's legacy while embracing innovation and change?

In the last few years, I have been driving our global sustainability initiatives as well as the digitalization of the group to support our customers with more sustainable solutions and ensure the global exchange of best practices, know-how, and the latest technologies.

We believe it is imperative to be local in the presence and thought and, therefore, focus on local entrepreneurship and innovation because we know that the markets, regulations, and technologies differ within the regions and want to ensure that we deliver the best solution for each customer.

Baerlocher has always put the customers' needs at the center. In my new role as the chairman of the board, I will continue to drive our business forward, fostering our existing, long-lasting, trusted partnerships around the world and helping our customers continue to shape our industry's future towards sustainability.

Q3. How does the company plan to integrate green chemistry principles into its manufacturing processes, and what impact do you foresee this having on the industry? Can you

share specific initiatives or strategies the company implements to promote sustainability within its operations and products?

At Baerlocher, we are not just expanding but growing systematically and sustainably. Today, environmental consciousness and responsible production are paramount. Our commitment to sustainability is a tagline and the core of our mission. As an organization, we are globally rated for our sustainability by EcoVadis and according to regional standards. We create transparency on our company's carbon footprint on a global scale as a basis for our decarbonization strategy. Regarding our products, we are implementing software solutions for automated sustainability measurement by digital means.

We have implemented a sustainability roadmap at the corporate level, committing to comprehensive resource optimization, including water, clean air, energy, and waste. We are also driving other initiatives aimed at reducing our carbon footprint.

Baerlocher also has a strong tradition of promoting sustainability. One key milestone in this journey is supporting the processors in shifting to Lead-free stabilization systems globally. It began with the historic voluntary commitment to eliminating lead in Europe in 2000, successfully achieved by 2015.

Recycling is becoming increasingly important, and Baerlocher's innovative special additives help customers optimize production processes and increase plastic products' recyclability in every application area.

Q4. The company recently established a new state-of-the-art manufacturing facility in India. Can you elaborate on the decision-making process behind choosing India?

India's economy has witnessed significant growth in recent years, marked by a diverse and dynamic landscape. Infrastructure development is crucial in this progress with ongoing initiatives in various sectors. The "Smart Cities Mission" and "Housing for All" programs are examples of the country's ambitious infrastructure development projects.

The agriculture sector in India holds the record for second-largest agricultural land in the world, generating employment for about half of the country's population.

PVC has been the major contributor to sustainable development in both these sectors, and it has been validated by the growth of PVC consumption in the country. The year 2023 has seen an astounding YoY growth of about 30% reaching the major milestone of 4

MMT. India thus will cross the 5 MMT milestone in the next few years.

With the new capacities announced by the leading industry giants, India will soon be moving towards "Self-sufficiency" in this sector.

Our new site in Dewas is a clear sign of our firm's belief in the future growth of the Indian market and our commitment to being a leading player for the future of India and supporting the "Self-sufficiency" drive of the Honorable Prime Minister.

The increasing importance of polymers in the growing Indian markets brought Baerlocher to India in the 1990s with a first laboratory, and in 1997, Baerlocher India was founded. In our philosophy, it has always been mandatory to be local in both presence and thought. Consequently, Baerlocher started its local production in June 2000 by acquiring a local stabilizer manufacturer unit in Dewas.

This turned out to be a very wise decision. After an intensive selection process in recent years, we decided to build our second site next to the existing one. Not only because it is nicely located from a logistic point of view but also because we always felt welcome and supported by the government and the local authorities.

Our clear vision is to shape our industry's future towards sustainability. Our new site takes our ambitions further by focusing only on Ca-based technology and with sufficient capacity for the expected market growth and transition to Ca-based technologies within the next decade.

From the beginning, it has been the ambition of Mr. Jayen Modi – Managing Director, Baerlocher India, Baerlocher India - to build a state-of-the-art site with regards to sustainability by focusing on sustainable construction, solar and biomass energy utilization, as well as rainwater harvesting. Due to this comprehensive strategy, the project has achieved a Platinum Green Factory Building rating by the Indian Green Building Council (IGBC).

Q5. Beyond the business realm, what role does the company play in corporate social responsibility, especially in the communities where it operates?

I believe that the main benefit of the company for society must come from the core activity and products of the company itself. Thanks to our customers, Baerlocher solutions have a decisive influence as they enable many products without which modern life as we know it would not be possible – Proposed change : bringing water to remote fields, providing fresh and wastewater systems

for the growing global population, and saving energy with windows with superior insulation properties.

The health and well-being of our people are equally important to us, and we support this with initiatives like joint yoga, job bikes, and diverse sports events.

Regarding our external CSR activities, we focus on education-related activities as we deem education a core issue to overcome the challenges of our time. Therefore, we organize educational programs for students, learning by traveling activities, and industry-university-research cooperation with local universities as well as work experience for local High Schools and colleges and donations to local schools.

In India, we tie up with the renowned Institute of Plastics Technology to provide machine operating training to students coming from economically weaker sections. We not only try to employ these youth but also give a trained workforce to the industry.

Our country entities are involved in local community supports by participating in service projects like medical camps, blood donation camps, organizing donations to local food banks, etc.

Q6. What core values or principles will guide the company's decisions and strategies in the coming years? Where do you see the company in the next decade, considering the evolving market

landscape and the company's commitments to sustainability?

Based on our vision to lead in transforming our industry, our ambition is to be the perfect match on various levels.

Being respectful of scarce natural resources is becoming a differentiator. Therefore, the challenge of the future will be to deliver the best suitable product and solution for our customers - the perfect match.

But we also want to be the perfect match for our customers by building long-term trusted partnerships and providing best possible service and advice.

Finally, we want to ensure that Baerlocher is the perfect match for all our people. A clear vision and values lead us. Our new code of conduct describes the character of the Baerlocher group. This guides how we want to lead our business and provides a clear picture so people can decide if this aligns with their values.

Two hundred years is an exceptional milestone for the Baerlocher Group and means a lot to us as a company and as a Family. We know this was only possible with the trust and support of our customers, suppliers, and all industry partners, thanks to our experts and the dedicated team that made it all possible.

We are ambitious for future regional growth and fully committed to Dewas and the Indian market. We are happy to continue this journey together with you!

All About Die Temperature during UPVC Processing



Mr. Yashodhan Kanade
Consultant

Introduction:

Unlike other plastics, PVC does not melt during processing (but in common language, fluxed PVC is generally referred to as a “melt”); it undergoes fusion, and the optimum fusion level is 65-70% for the best mechanical properties.

Most processors discuss barrel zone and die zone temperatures in their “control plan,” process PVC accordingly, and keep hourly records.

However, a common experience is that setting the same temperatures on the same machine does not always work for the same formulation. The operator fiddles with the temperatures to get an acceptable product. This introduces inconsistency in the process and, in turn, in the product quality. This happens because we miss the fundamental aspect of processing PVC; therefore, the temperature of PVC matters, rather than the barrel and die zone temperatures.

Any variation in the temperature of PVC, irrespective of the set barrel and die temperatures, will introduce an inconsistency in the product quality. The irony is that we can see UPVC and monitor its temperature only at three places during extrusion – at the hopper, vacuum port, and extrudate. Any variation in the compound temperature in the hopper will cause variation in the temperature of the UPVC extrudate.

The temperature of the compound in the hopper should be 40-45°C. The temperature at the vacuum port should be around 150°C. The temperature at the extrudate should be 180-190°C for best results.

Melt temperature sensor at the die entry:

Pipes and profiles are manufactured using twin screw extruders, be it parallel or conical.

Twin screw extruders are equipped with melt temperature and melt pressure sensors located at the orifice in the adapter.

A case study:

At one place, the UPVC pipe, despite passing all the tests as per IS 4985 standard, failed in the field in a straight line, as shown in Fig 1.



Fig. 1

Obviously, during processing, there seems to be some obstruction over which the fluxed PVC is passing and does not weld well (large diameter pipes do also fail due to Rapid Crack Propagation RCP that can be tested vide ISO 13477)

On carrying out the burst test in the laboratory as per ASTM D 1785 (This test is not a part of IS:4985 standard. However, one can use the pipe sample taken for hydrostatic test at 27°C and increase the pressure till it bursts.), it was found that the failure was in a straight line, at a place other than the spider lines.

On investigation, it was found that the melt temperature probe was protruding significantly within the orifice, as seen in Fig.2. A good practice is to ensure that it does not protrude more than 0.5-1.0 mm inside the orifice to sense the melt temperature.

On resetting the probe protruding 0.5-1.0 mm inside the orifice,

the pipe did not show failure in straight line during the burst pressure test validating the cause for such failure.

In many places, the melt temperature sensor is either not functioning or removed by the processor due to a lack of understanding about the importance of melt temperature and melt pressure during processing.



Fig. 2

What should be the temperature of UPVC at the die entry?

PVC dry blend enters from the hopper in the extruder in grain form, where PVC grain size is 90-250 microns.

As it moves ahead in the extruder, the skin of the grain gets torn due to shear, exposing the hierarchical structure that undergoes further shear and gets dispersed to smaller particle sizes, say 10 microns agglomerates.

Here, such coarser PVC particles get loosely attached to each other. This is called “Gelation” in modern terminology, as against fusion. Gelation occurs at the vacuum port, where the temperature is around 150°C. Upon degassing, the

void-free gelled PVC moves ahead and further undergoes dispersion to 1-micron primary particles, the first fusion stage.

In the second stage of fusion, upon melting of crystallites in the primary particles, PVC chains are released, which undergo entanglement among the similar PVC chains released from other primary particles.

The second stage of fusion continues till the end of the extruder. At the end of the screws and entrance in the orifice, the temperature of UPVC, as measured by the melt temperature sensor, should be 180-190°C. The next process is shaping the product in the die. It is therefore necessary that the UPVC “melt” entering the die must be homogeneous with respect to:

1. The extent of fusion should be 65-70%, and
2. The temperature of the optimally fused PVC should be 180-190°C.

Such homogeneity is achieved by the specific design of the last few flights of the screw, having to mix pins or cut sections, and the back pressure from the die. What happens in the die and what should be the die temperature?

Fluxed and optimally fused homogenized PVC enters the die via orifice. For UPVC this temperature should be $T_g + 100 \approx 80 + 100 \approx 180-190^\circ\text{C}$ and for CPVCT $T_g + 100 \approx 110 + 100 \approx 210-220^\circ\text{C}$.

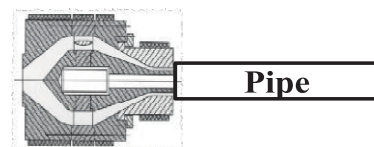


Fig. 3

This temperature is proper for the material to split at the spider legs and rejoin in the converging section of the die and then stabilize in the die land, as depicted in Fig.3.

Inside the die, the material is touching the mandrel and the bush that decides the smoothness of the inner and the outer surface of the pipe or profile. This also affects the fusion level of the outer, inner and the core of the pipe.

This extent of fusion throughout the thickness of the pipe should be uniform between 65-70% to get the best mechanical properties. The

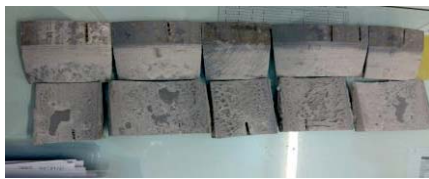
homogeneity of fusion is more important than the average level of fusion. The temperature of the extrudate at this juncture should also be 180+/-5°C. This means that the temperature of PVC within the die should not change. This also means that the purpose of die heaters is twofold –

- To adequately heat the die before starting the machine,
- To maintain the temperature of the optimally fused PVC at 180-190°C.

To do this, heaters are provided on the die head/bush and the mandrel. Thus, the purpose of the die heaters is not to heat the melt within the die, but to ensure that the optimally fused material entering the die from the adapter is maintained at 180-190°C, irrespective of the time of the day and season of the year.

Effect on Methylene Chloride Test (MCT) of the pipe:

In the MCT, pipe ends are chamfered at an angle mentioned in the standard and the pipe is immersed in Methylene chloride at 15° C, for 30 minutes.



Effect is more pronounced in large dia thicker pipes.
Fig. 4

If the temperature of the extrudate is same on the outer surface, core and the inner surface, the extent of fusion has to remain the same and pipe should not fail in the MCT. Such a situation is only possible if the die heaters are used only to maintain the temperature of the melt, within the die at 180-190° C. Any variation in temperature due to any reason amounts to variation in the level of fusion and variation in MCT results as seen in Fig. 4.

This is why pipe fails at one or two places along the circumference, in the falling weight impact test at 0°C. In case of pipe, the die is circular, it has only one thermocouple in every die part. However, in case of profiles, the die is rectangular and consists of many plates and have four thermocouples on four sides of the rectangular die, as seen in Fig. 5.

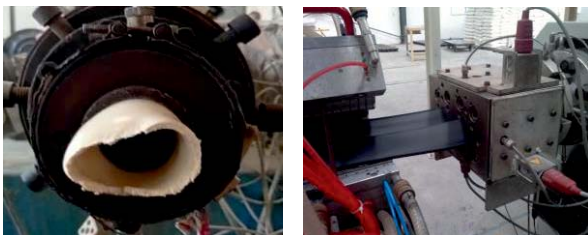


Fig. 5

Why there is a variation in the extrudate temperature?

Look at the die heaters in the figure carefully. You will observe that -

1. The thermocouples are in one line,
2. The heater joints are in one line, and
3. The heater plugs are in one line.

This results in three longitudinal bands of low temperature, along the die, as seen in Fig 6.

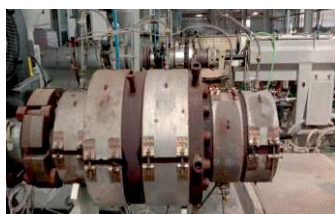


Fig. 6

This results in three longitudinal bands of low temperature, along the die, as seen in Fig 6.

This results in the less melt flow along the three lines, temperature variation with reference to other portions and in turn thickness variation.

This will also cause reversion variation and in turn weak spots where the pipe will fail in impact test but pass at other places.



Fig. 7

The solution is to rotate the die heaters so that the loss of heat from one heater is compensated by the other heater, as shown in Fig. 7.

Also, if there is an air gap between the heater and the die part, the temperature will not be adequate. The heater shows a patch, as shown by the arrow in the Fig. 7.

This will control the outer surface temperature of the pipe.

The temperature of the pipe's inner surface is controlled by the mandrel heater, especially for the large diameter thicker pipes.

It is well known that most of the inside waviness is due to mandrel temperature. Mandrel cooling is practically impossible. Colder melt finds higher resistance to flow on the mandrel surface, causing waviness.

This problem can be overcome by setting the mandrel heater to 20-25% capacity to minimize the problem without overheating.

Also, different amounts of heat are radiated into the atmosphere from the die heaters during the day and night. The operator needs to adjust die heaters to maintain the extrudate temperature at 180-190° C.

Conclusion:

- Since we process PVC, it is essential to understand that the temperature of PVC matters and not the temperature of the barrel and die.
- PVC does not melt during processing, but it undergoes fusion. To get the best mechanical properties in the final UPVC product, the extent of fusion should be 65-70%. The homogeneity of fusion is more important than the average fusion. This homogeneity of fusion level must be attained towards the end of the screws before the fluxed PVC enters the die. The melt temperature measured at this point through a sensor should be 180-190°C.
- The purpose of die heaters is to maintain the incoming optimally fused PVC temperature. If the temperature increases in the die, then non-homogeneity of fusion is introduced, and variation in the extent of fusion is seen at the inner and outer surface of the pipe and the core, as seen many times in the MCT.

Industry Updates

U.N. Global Plastics Negotiations (Inputs from Vinyl Institute USA and European Council of Vinyl Manufacturers)

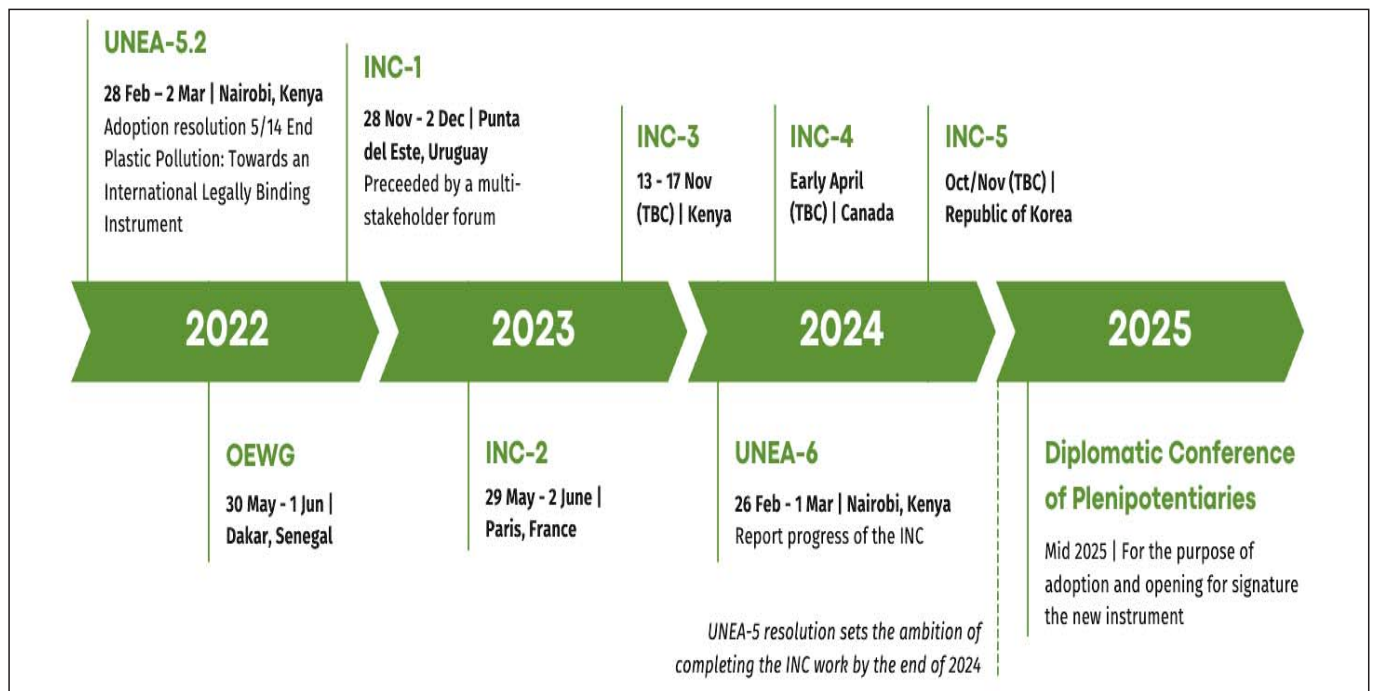
The recent Global Vinyl Council (GVC) Meeting was held in Ho Chi Min City, Vietnam, on 22nd November ,23, and the major point of discussion was UNEP (United Nations Environmental Program) proceedings. Around 23 GVC members attended the meeting.

- The United Nations is currently negotiating a binding global agreement on plastic waste. During the negotiations, a well-organized group of more than 50 nations advocated eliminating "problematic plastics," including restrictions on

PVC and Polystyrene.

The first session of U.N. negotiations for a Global Plastics Treaty — also known as INC-1 (Intergovernmental Negotiating Committee) was held in Punta del Este, Uruguay, on December 2nd, 2022. More than 2,300 delegates from 160 countries attended the first session. As expected, the first meeting was highly procedural. It was the first of the five INCs to negotiate the Global Plastics Treaty.

- INC-2 was held in Paris, France, in May 2023. The timelines for implementation were discussed.
- INC -3 was held recently in Kenya from November 13-17, 2023, the first draft document was made.



The timelines for UNEP Negotiations and Discussions

- In Summary, countries are taking different approaches. For instance, some countries, including the USA wants individual national plans with unique goals for EACH country (Approach A). While other nations want a global agreement with binding language for ALL countries (Approach B).
 - APPROACH A: Pollution reduction
 - Legally binding national action plans to set baselines & targets,
 - Industry ambitions focus on accelerating pollution reductions through circularity, design to support waste infrastructure,
 - Thought leadership to define/showcase the industry's global efforts to eliminate waste/accelerate circularity.
 - APPROACH B: Production Reduction
 - Industry ambitions focus on completely/partially decoupling industry from fossil feedstocks, caps, and/or bans,
 - Legally binding global requirements on industry on resin production,
 - More difficult for the world's largest economies (China, U.S.) to enter the agreement,
 - Thought leadership in showcasing the industry's efforts more regionally.
- While the U.S. is calling for a treaty with no bans on polymers or a reduction in overall production, a group calling itself the High Ambition Coalition To End Plastic Pollution has set seven goals to achieve, with the number one being "Eliminate problematic plastics, including by bans and restrictions." The group currently has 51 national members, including many European countries. It is still early in the process, but this group may try to ban the manufacturing of polystyrene and PVC. This matter is likely to be discussed in IMC 4, which is scheduled for April 2024 in Canada. India will be represented and will make every effort to protect its interests.

Industry Updates

- India Approach in INC 3:
India showed a very balanced approach.

 1. It needs no overemphasis that plastics are useful materials, and that the INC should address the pollution caused by plastic which needs to be addressed.
 2. Accordingly, there must be no binding targets/caps on the production of plastic polymers.
 3. The legally binding instrument should address plastic pollution by addressing the availability, accessibility, and affordability of alternatives, including cost implications, and by specifying arrangements for capacity-building and technical assistance, technology transfer, and financial assistance.
 4. A country-driven approach needs to be adopted to address plastic pollution.

Action plan by GVC (Global Vinyl Council):

1. Become a credentialed participant in the U.N. negotiations.
2. Contact the government to oppose any PVC ban.
3. Report to fellow GVC members about the country's position on the PVC ban.
4. Attend and participate in all United Nations INC meetings.

Our message is that “we cannot accomplish the United Nations Sustainable Development Goals without PVC.”



Meeting attended by Ms. Aruna Kumari, IVC

MINISTRY OF CHEMICALS AND FERTILIZERS (Department of Chemicals and Petrochemicals)

NOTIFICATION New Delhi, the 26th February, 2024

Poly Vinyl Chloride (PVC) Homopolymers (Quality Control) Order, 2024 S.O. 920(E).

In exercise of the powers conferred by section 16 read with sub-section (3) of section 25 of the Bureau of Indian Standards Act, 2016 (11 of 2016), the Central Government, after consulting the Bureau of Indian Standards is of the opinion that it is necessary or expedient so to do in the public interest, hereby makes the following Order, namely:-

- I. Short title and commencement.—
(1) This order may be called the Poly Vinyl Chloride (PVC)

Homopolymers (Quality Control) Order, 2024.

- (2) It shall come into force on the expiry of one hundred and eighty days from the date of its publication in the Official Gazette.
- (3) It shall apply to goods or articles specified in Column (1) of the Table below and shall not apply to goods or article meant for export.

2. Conformity to standard and compulsory use of Standard Mark.-

Goods or articles specified in column (1) of the said Table shall conform to the corresponding Indian Standard given in column (2) of the said Table and shall bear the Standard Mark under a licence from the Bureau of Indian Standards as per Scheme-I of Schedule-II of the Bureau of Indian Standards (Conformity Assessment) Regulations, 2018.

3. Certification and enforcement authority.—

In respect of goods or article specified in Column (1) of said table, the Bureau of Indian Standards shall be the certifying and enforcing authority.

4. Penalty for Contravention of the provisions of Order.-

Any person who contravenes the provisions of this order shall be punishable under the provisions of the said Act.

5. Description

Goods or Article

- (1) PolyVinyl Chloride (PVC) Homopolymers

Indian Standard

- (2) IS 17658:2021

Title of Indian Standard

- (3) PolyVinyl Chloride (PVC) Homopolymers -

6. Specification Note: For the purposes of the description, the latest version of the Indian Standards including the amendments issued thereof and notified by the Bureau of Indian Standards from time to time, shall apply from the date of such notification.

The Plastic Waste Management Rules, 2016 :Amended on 14th March 24

On 14-3-2024, the Ministry of Environment, Forest and Climate Change notified the Plastic Waste Management (Amendment) Rules, 2024 to amend the Plastic Waste Management Rules, 2016. The provisions came into force on 14-3-2024.

Key Points:

Importer

The definition of “importer” has been made specific and now includes the imports of any plastic packaging/ commodity with plastic packaging/ carry bags/ plastic sheets/ plastic raw material, including in the form of resin/ pellets/ intermediate material used for manufacturing plastic packaging/ films/

Industry Updates

preforms, for commercial use*.

*Earlier, “importer” meant a person who imports plastic packaging or products with plastic packaging or carry bags or multilayered packaging or plastic sheets or like

*Manufacturer

Earlier, “Manufacturer” meant and included a person/ unit/ agency engaged in production of plastic raw material to be used as raw material by the producer.

Now, it includes a person engaged in production of plastic raw material/ compostable plastics/ biodegradable plastics*.

Producer

Earlier, the ambit of the definition of “Producer” was limited to people engaged in manufacturing of plastic packaging.

Now, it also includes persons engaged in: Manufacturing of intermediate material that is used for manufacturing plastic packaging; Contract manufacturing of products using plastic packaging or through other similar arrangements for a brand owner.

Seller

Definition of “seller” has been inserted which means any person who sells plastic raw material for producing plastic packaging is a seller.

Rule 4 relates to “Conditions” and the provision relating to selling of raw material has been revised.

Earlier, only the producer who had a valid registration from the State Pollution Control Boards or Pollution Control Committee could get raw material from the manufacturer.

Now, only the producers registered under these rules can get raw materials from the manufacturer.

The manufacturers of compostable plastic/ biodegradable plastic carry bags or commodities permitted under the rules, will have to obtain a certificate from the Central Pollution Control Board (‘CPCB’) before marketing or selling. The manufacturer of compostable plastic/ biodegradable plastic will have to inform the CPCB, the quantity of such commodities introduced in the market and the pre-consumer waste generated by it

*Some provisions have been inserted which enables the local

body to assess*:

The plastic waste generated; *Plastic waste management infrastructure available for collection/ segregation/ processing and send a report to the State Pollution Control Board or Pollution Control Committee by 30th June of each year*;

measures to prevent stocking, distribution, sale and usage of prohibited single use plastic items in their jurisdiction.

The Annual report will include: plastic waste management infrastructure available for collection, segregation, processing; projection of plastic waste to be generated; status on framing and implementation on byelaws; Action taken to prevent stocking, distribution, sale and usage of prohibited Single Use Plastic items.

*Rule 7-A relating to “Responsibility of Panchayat at District level” has been inserted which lays down similar responsibilities the local body has to assess.

Another provision in the Protocols for compostable and biodegradable plastic materials has been inserted which says that the BIS should specify separate colour/ marking for plastic packaging and commodities made from compostable plastics/ biodegradable plastics*.

New provisions have been inserted in Rule 11 relating to “Marking or labelling”: The commodity made from compostable plastic will have to bear a label “compostable only under industrial composting” and shall conform to the Indian Standard: IS/ISO 17088:2021 titled as Specifications for Compostable Plastics

The commodity made from biodegradable plastic will have to bear the label —Biodegradable in [— specify number of days —] only in the [—specify recipient environment such as soil, landfill, water etc.—]

The following forms have been revised** *

Form I- Application for registration for producers or Brand Owners has been substituted*.

Form V- Format for Annual Report on Plastic Waste Management to be submitted by the Urban Local Body**

Form VI- Format for Annual Report on Plastic Waste Management to be submitted by SPCB/ PCC

Form VII- Format for Quarterly report of Plastic Raw Material*...

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www.indianvinylcouncil.com

FOR REPORTS & NEWS

Managing Committee

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Dr. Shreekant Moreshwar Diwan
Head of Business Development
Baerlocher India Additives Pvt. Ltd.

VICE PRESIDENT



Mr. Ajay Shand
Director
Shand Pipe Industries Pvt. Ltd.

HONORARY SECRETARY



Mr. Rajeev Mehendale
Director
Goldstab Organics Pvt. Ltd

HONORARY TREASURER



Mr. Pranay Bhargava
Managing Director
Amisha Vinyls Private Limited

M C MEMBER



Mr. Vivekanand Sane
Past President IVC
Reliance Industries. Ltd

M C MEMBER



Mr. Sanjay Nawander
Reagens India Polymer Additives
Pvt. Ltd

M C MEMBER



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Kalkaji Extension

M C MEMBER



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Reliance Industries Ltd

M C MEMBER



Mr. G K Saxena
Supreme Industries

M C MEMBER



Mr. Robin Banerjee
Honorary Member

M C MEMBER



Mr. Satish Kumar
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Ms. Aruna Kumari
Asia Pacific Vinyl Network

M C MEMBER



Mr. Neeraj Agarwal
Duroplast India Pvt. Ltd

M C MEMBER



Mr. Rajesh Shinde
Theysohn Extrusion

M C MEMBER



Mr. Jayachandran
PioneerFlex

SECRETARY GENERAL, IVC



Dr. E. Sundaresan



INDIAN VINYL COUNCIL

INDIAN VINYL COUNCIL

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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
------------------------------------	-------------	--------------------	-----------	----------

(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

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					
Company Turnover	0-100 Cr	100-250 Cr	250-500 Cr	500-1000 Cr	1000+ Cr
ADMISSION CHARGE	5000	5000	5000	5000	5000
ANNUAL MEMBERSHIP FEE	25000	50000	75000	100000	250000
TOTAL	30000	55000	80000	105000	255000
ADD GST (18%)	5400	9900	14400	18900	45900
TOTAL	35400	64900	94400	123900	300900
LESS TDS (10%)	3000	5500	8000	10500	25500
TOTAL PAYABLE	32400	59400	86400	113400	275400

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.

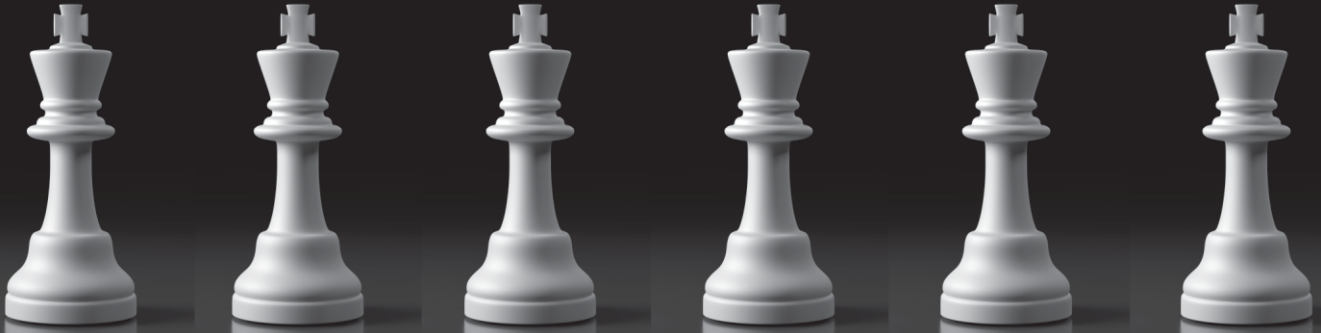
Donation will be accepted in multiples of Rs 1.0 Lakh and minimum of Rs 5.0 lakhs

VISIT OUR WEBSITE

www.indianvinylcouncil.com

**FOR ONLINE MEMBERSHIP
APPLICATION**

Privilege Members of IVC



1. Amisha Vinyls Pvt Ltd
2. Asia Pacific Vinyl Network
3. Baerlocher India Additives Pvt. Ltd.
4. Basil Prompt Vinyl Pvt. Ltd.
5. Bharat Milling Industries
6. Bihani Manufacturing Company Pvt. Ltd.
7. Cooldeck Industries Pvt .Ltd
8. Deceuninck Profiles India Pvt Ltd
9. Duroplast India Pvt Ltd
10. Encraft India Pvt. Ltd
11. Finolex Industries
12. Goldstab Organics Pvt. Ltd.
13. Karan Polymers Pvt. Ltd
14. Lubrizol
15. Manish Packaging Pvt Ltd.
16. Mobil Chem Speciality Pvt. Ltd
17. NCL Veka Limited
18. Ori-Plast Limited
19. PioneerFlex
20. Platinum Industries Private Limited
21. Prabhu PolyPipes Ltd
22. PVC Converters (india)Pvt Ltd
23. Reagens India Polymer Additives Pvt Ltd
24. Reliance Industries Limited
25. Shand Pipe Industry Pvt.Ltd
26. SUN ACE Chemicals
27. The Supreme Industries Ltd
28. Theysohn Extrusion
29. Vihan Engineering Pvt.Ltd



INDIAN VINYL COUNCIL

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