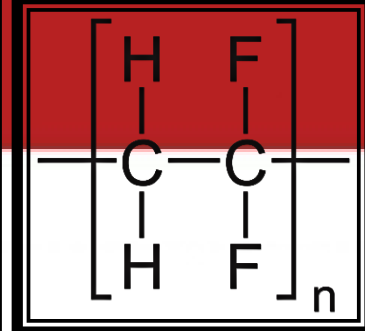




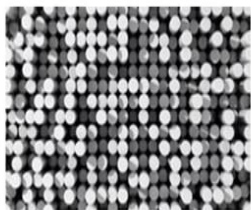
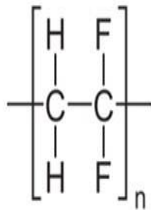
Polyvinylidene Fluoride (PVDF)

Manufacturing Business.

Production of Polyvinylidene Difluoride

Introduction

Polyvinylidene Fluoride, also known as Polyvinylidene Difluoride or PVDF is a highly non-reactive Thermoplastic Fluoropolymer, which is synthesized by the polymerization of Vinylidene Difluoride. PVDF is a specialty plastic used in various applications, wherein the high purity, inertness to solvents, acids and bases are the desired properties. In the market PVDF is available in the form of fine powder grade, which is an essential ingredient in high-end paints for metals and cements.



Such PVDF paints have extremely good gloss and color retention. PVDF has successfully penetrated into vast number of industries such as chemicals, electronics, new energy, construction, and pharmaceuticals, among others. A number of applications in which PVDF is significantly used such as piping & tubing, sheets & films, membrane, cable, and an insulator for premium wire.



Compared to other Fluoropolymers, such as Polytetrafluoroethylene (Teflon), PVDF has a low density and light weight, which makes it useful in construction and automotive sector. PVDF can be injected, molded or welded to manufacture the polymeric sheets and film, which is commonly used in electronics, medical and defense industries, as well as in lithium-ion batteries. It is also available as a cross-linked, closed-cell foam, which is primarily used in aviation and aerospace applications.

PVDF is mainly used in critical applications requiring an excellent chemical resistance, a high degree of purity and excellent mechanical properties. PVDF has a very good creep resistance that is superior to that of other fluoropolymers.

Properties

- **Excellent resistance to creep and fatigue**
- **Excellent thermal stability**
- **Excellent resistance to radiation**
- **Often used as insulation and protection cover in chemical applications**
- **UV resistant (does not age)**
- **High dielectric constant**
- **Working temperature from -20°C to +130°C**

PVDF is often used as an insulation or a protective barrier in the chemical industry. Additional information about the properties of PVDF can be found under the technical data sheets.

Key Features:

- **Heat resistance**
- **High abrasion resistance**
- **Low permeability to most gases and liquids**
- **Weather resistant**
- **Low weight**
- **Mechanical strength**
- **Radiation resistance**
- **Good electrical insulator**
- **Resistance to chemical corrosion**
- **Recyclable**

Applications:

- **Pipes and fittings**
- **Valves**
- **Cathodes & anodes in Li-ion cell manufacturing**
- **High purity semiconductor applications**

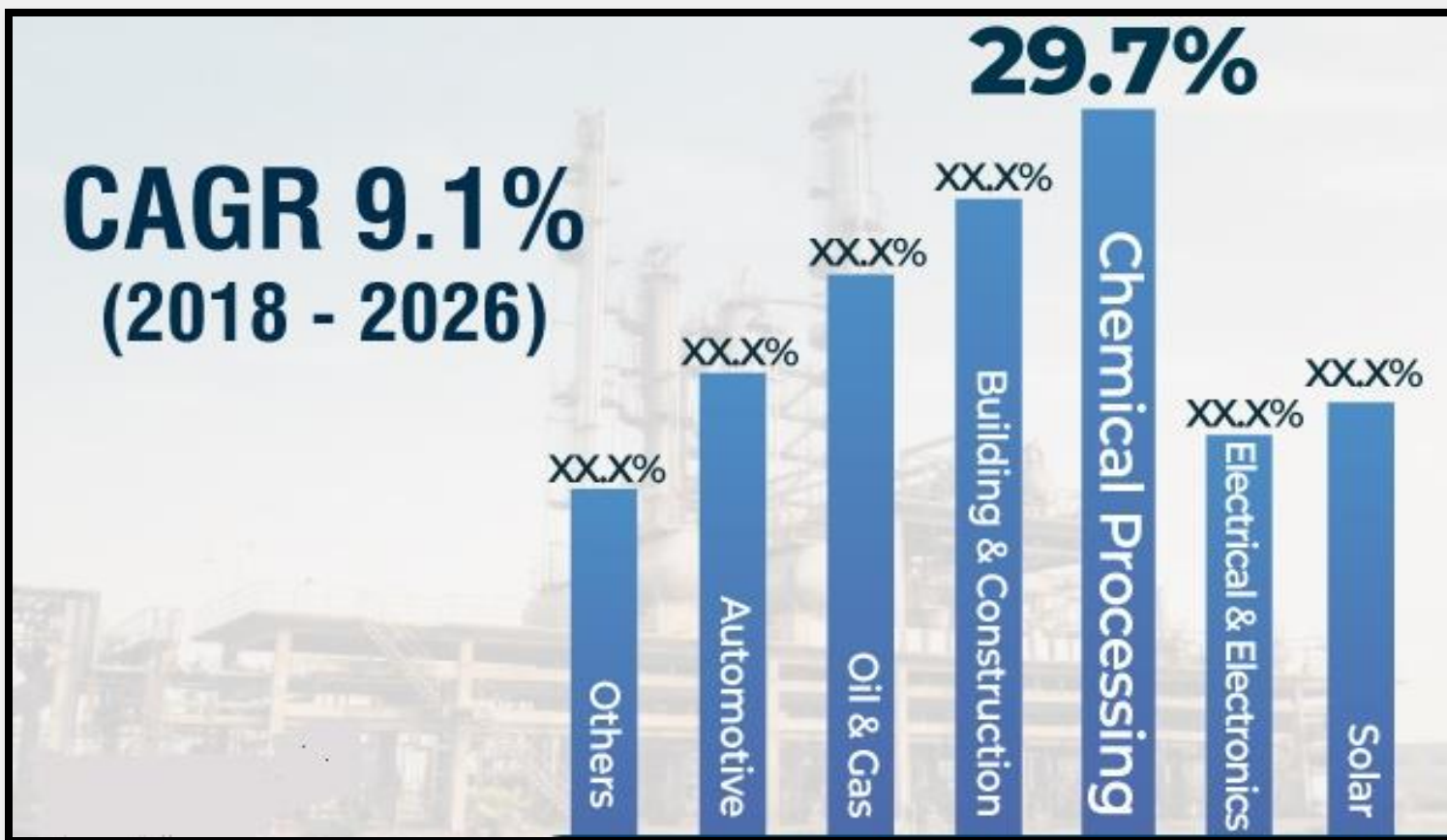


Market Outlook

The market for polyvinylidene fluoride (PVDF) is anticipated to register a CAGR of 6.05% during the forecast period (2019-2024). ods, sheets, tubing, monofilament & drawn fibers, films, membranes, and cast parts are produced from PVDF. Key end-users industries of PVDF include building & construction, chemical processing, automotive, PV modules, oil & gas, and electrical & electronics. Additionally, PVDF finds application in industries such as electric vehicles, water treatment, wires & cables, and textiles. They are used in the form of coatings, sheets, films, pipes, and tubes in various end-use industries.



Global Polyvinylidene Fluoride (PVDF) Market Share (%), By End-user (2019)



The primary factor driving growth of the market is increasing demand for PVDF in vast number of applications in vast end-use industries coupled with rising acceptance of PVDF is a major factor expected to drive growth of the market over the forecast period. Additionally, an increasing demand for lithium-ion batteries, coatings, sheets, and photovoltaic films is an important factor favoring the demand for the product in coming years. However, the threat of substitutes on account of rapid ongoing research in polymeric materials and growing environmental & health concerns regarding the product, which is more likely to invite regulations limiting its production. Nevertheless, rapidly increasing end use in new energy sector is poised to drive the market during the forecast period.

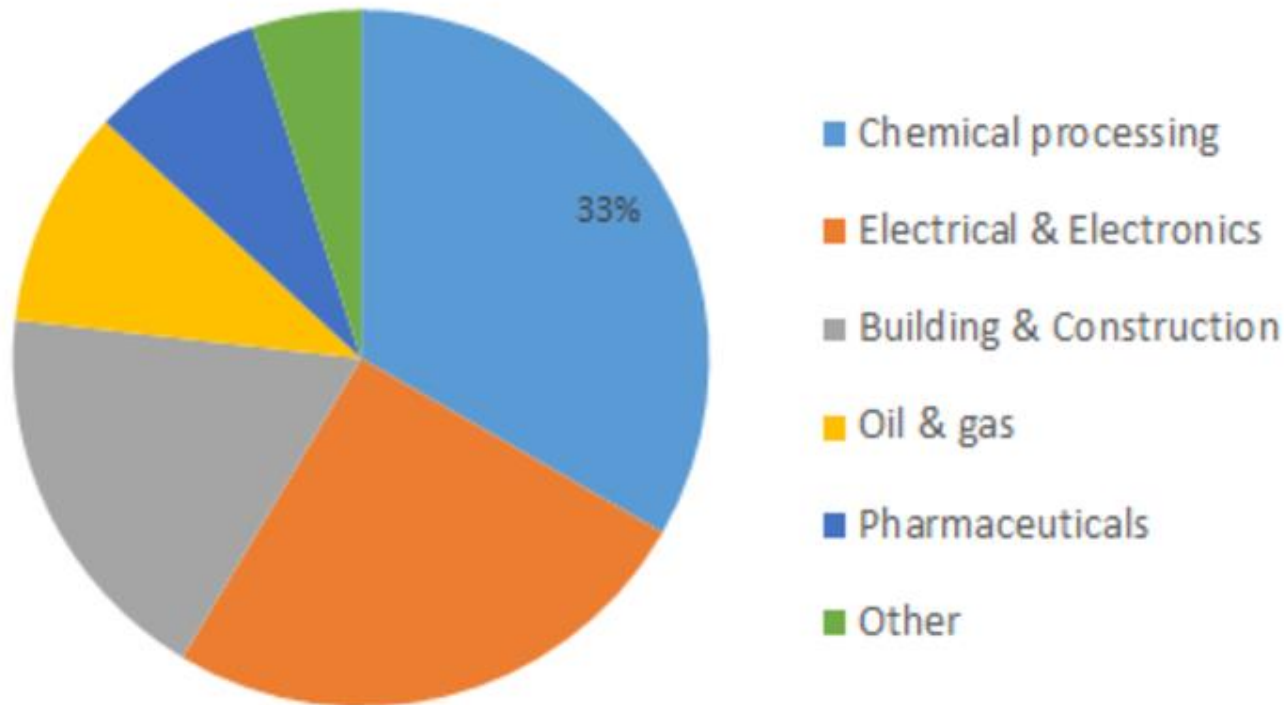
PVDF is widely used as metallic coatings in various chemical processing industries for various applications such as heat exchangers, filters, membrane, and pumps. Traditional lining or coating products and poor adhesion of thermoplastics to a metal substrate and lack of consistency in coating applications can affect the service life of metal products. PVDF offers high performance in harsh and wide variety of chemicals. Additionally, it offers superior thermal resistance, corrosion barrier, and abrasion- and chemical-resistance.



These factors are anticipated to significantly boost the demand for PVDF during the forecast period. PVDF is used as a solvent dispersion coatings for architectural applications, and shows high solvency in ester and ketone solvents. PVDF possesses crystalline and amorphous phase in its structure due to which PVDF coatings offers superior properties, such as high flexibility and solvent resistance. Rising demand for PVDF in the building & construction industry due to its characteristic features such as high abrasion resistance, high chemical resistance, wear resistance, thermal resistance, UV resistance, and anti-skid. These factors are projected to boost the market during the forecast period.



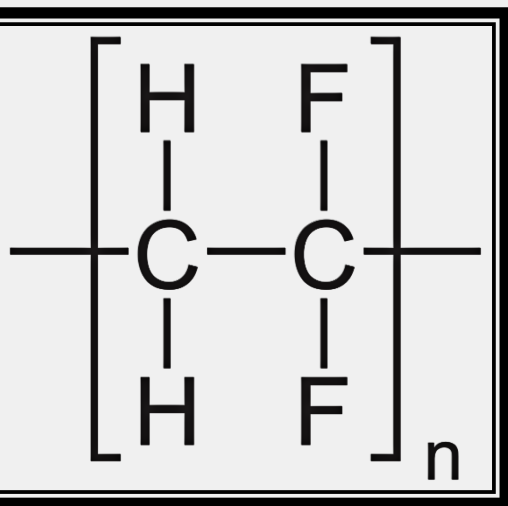
Global PVDF Market Share, by End Use Industry 2016 (%)



Geographically, developing regions offer promising growth opportunities for polyvinylidene fluoride, due to its high demand in various industry components such as tanks, vessels, tower packing, pumps, filters, valves, and heat exchangers. Asia Pacific is likely to hold a dominant share in the polyvinylidene fluoride (PVDF) market and China, Japan, and South Korea are the main regions where the demand for polyvinylidene fluoride is high. North America has a high customer base due to rising shale gas exploration activities in the region.

Based on type, the polyvinylidene fluoride market has been bifurcated into homopolymer and copolymer. In terms of end-user, the market has been divided into chemical processing, oil & gas, electrical & electronics, solar, automotive, building & construction, and others.

Key players in Global PVDF Market are Arkema (France), 3M (Germany), DAIKIN INDUSTRIES, Ltd (Japan), Shanghai Sanai Fu New Material Co., Ltd. (China), Solvay S.A (Belgium), Ofluorine Chemical Technology Co.,LTD. (China), KUREHA CORPORATION (Japan), Zhejiang Fotech International Co.,Ltd. (China), the Quadrant group of companies (Japan), and ZHUZHOU HONGDA POLYMER MATERIALS CO.,LTD (China), among others.



Major Queries/Questions Answered in the Report?

- 1. What is Polyvinylidene Fluoride (PVDF) Manufacturing industry ?**
- 2. How has the Polyvinylidene Fluoride (PVDF) Manufacturing industry performed so far and how will it perform in the coming years ?**
- 3. What is the Project Feasibility of Polyvinylidene Fluoride (PVDF) Manufacturing Plant ?**
- 4. What are the requirements of Working Capital for setting up Polyvinylidene Fluoride (PVDF) Manufacturing plant ?**

- 5. What is the structure of the Polyvinylidene Fluoride (PVDF) Manufacturing Business and who are the key/major players ?**
- 6. What is the total project cost for setting up Polyvinylidene Fluoride (PVDF) Manufacturing Business?**
- 7. What are the operating costs for setting up Polyvinylidene Fluoride (PVDF) Manufacturing plant ?**
- 8. What are the machinery and equipment requirements for setting up Polyvinylidene Fluoride (PVDF) Manufacturing plant ?**

- 9. Who are the Suppliers and Manufacturers of Plant & Machinery for setting up Polyvinylidene Fluoride (PVDF) Manufacturing plant ?**
- 10. What are the requirements of raw material for setting up Polyvinylidene Fluoride (PVDF) Manufacturing plant ?**
- 11. Who are the Suppliers and Manufacturers of Raw materials for setting up Polyvinylidene Fluoride (PVDF) Manufacturing Business?**
- 12. What is the Manufacturing Process of Polyvinylidene Fluoride (PVDF)?**

- 13. What is the total size of land required for setting up Polyvinylidene Fluoride (PVDF) Manufacturing plant ?**
- 14. What will be the income and expenditures for Polyvinylidene Fluoride (PVDF) Manufacturing Business?**
- 15. What are the Projected Balance Sheets of Polyvinylidene Fluoride (PVDF) Manufacturing plant ?**
- 16. What are the requirement of utilities and overheads for setting up Polyvinylidene Fluoride (PVDF) Manufacturing plant?**
- 17. What is the Built up Area Requirement and cost for setting up Polyvinylidene Fluoride (PVDF) Manufacturing Business?**

18. What are the Personnel (Manpower) Requirements for setting up Polyvinylidene Fluoride (PVDF) Manufacturing Business?

19. What are Statistics of Import & Export for Polyvinylidene Fluoride (PVDF)?

20. What is the time required to break-even of Polyvinylidene Fluoride (PVDF) Manufacturing Business?

21. What is the Break-Even Analysis of Polyvinylidene Fluoride (PVDF) Manufacturing plant?

22. What are the Project financials of Polyvinylidene Fluoride (PVDF) Manufacturing Business?

- 23. What are the Profitability Ratios of Polyvinylidene Fluoride (PVDF) Manufacturing Project?**
- 24. What is the Sensitivity Analysis-Price/Volume of Polyvinylidene Fluoride (PVDF) Manufacturing plant?**
- 25. What are the Projected Pay-Back Period and IRR of Polyvinylidene Fluoride (PVDF) Manufacturing plant?**
- 26. What is the Process Flow Sheet Diagram of Polyvinylidene Fluoride (PVDF) Manufacturing project?**

27. What are the Market Opportunities for setting up Polyvinylidene Fluoride (PVDF) Manufacturing plant?

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- **Instruments, Laboratory Equipments and Accessories**
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Tags

#Production_of_Polyvinylidene_Fluoride, #Manufacturing_of_Poly_(Vinylidene Fluoride), #Preparation_of_Polyvinylidene_Fluoride_(PVDF), Process for Production of Polyvinylidene Fluoride, #Polyvinylidene_Fluoride_(PVDF), Polyvinylidene Fluoride (PVDF) Manufacturing Plant, Polyvinylidene Fluoride Production, Polyvinylidene Fluoride Properties, #PVDF_Applications, Production of Polyvinylidene Fluoride, #PVDF_Production_Unit, PVDF (Polyvinylidene Fluoride), PVDF, Manufacturing and Processing of Polyvinylidene Fluoride, Polyvinylidene Fluoride Manufacture, PVDF Manufacture India in India, PVDF Manufacture, #Polyvinylidene_Fluoride_Industry, Manufacture of Polyvinylidene Fluoride, Chemical Compound, Making of Polyvinylidene Fluoride, Detailed Project Report on PVDF Manufacture, #Project_Report_on_Polyvinylidene_Fluoride_Production, Pre-Investment Feasibility Study on Polyvinylidene Fluoride (PVDF) Manufacturing Plant, Techno-Economic feasibility study on Polyvinylidene Fluoride Production, #Feasibility_report_on_PVDF_Manufacture, Free Project Profile on Polyvinylidene Fluoride (PVDF) Manufacturing Plant, Project profile on Polyvinylidene Fluoride Production, Download free project profile on Polyvinylidene Fluoride (PVDF) Manufacturing Plant, #Polyvinylidene_Difluoride, Highly Non-Reactive Thermoplastic Fluoropolymer

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