

TSR

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About TSR Holding

A leading group in Iran's polymer and chemical industries

TSR Holding is a pioneer in Iran's polymer and chemical industries, with over 60 years of successful experience. In addition to offering a wide range of high-quality products, the group provides a variety of services through the continuous development of its business value chain. Beyond supplying essential raw materials, TSR plays a significant role in consulting for production, managing complete supply chains, and delivering other value-added services. This combination of quality, product diversity, and service excellence distinguishes TSR both within Iran and across the region.

Expanding the value chain of key raw materials has become a cornerstone of TSR's operations. Alongside its primary products, the group's subsidiaries and research laboratories are actively engaged in the commercialization and production of related and complementary products, further strengthening the value chain across these industries.

Today, TSR stands at the forefront of quality and global standards through the modernization of production technologies, effective knowledge management, and the adoption of contemporary management practices. Its products are distributed under three brands—Polysun, Olsun, and Barysun—serving numerous companies and factories in Iran and neighboring markets.

While the group's core expertise lies in the polymer and chemical industries, TSR has also invested in other sectors, such as commerce and human resources management, creating added value and new opportunities. Looking ahead, TSR intends to further expand its activities into additional domains, reinforcing its role as a dynamic and forward-looking enterprise.



History of TSR

From a Family Business to an Entrepreneurial Industry

TSR is a family-owned business established by the late "Gholamreza Mosabeh." He was engaged in the production of traditional shoes known as "Giveh" (a type of local footwear) in 1939 and in the 1950s and 1960s he started the production of "Galesh" (traditional Persian footwear). However, with the market's growing interest in rubber shoes, he steered his business towards manufacturing this type of footwear.

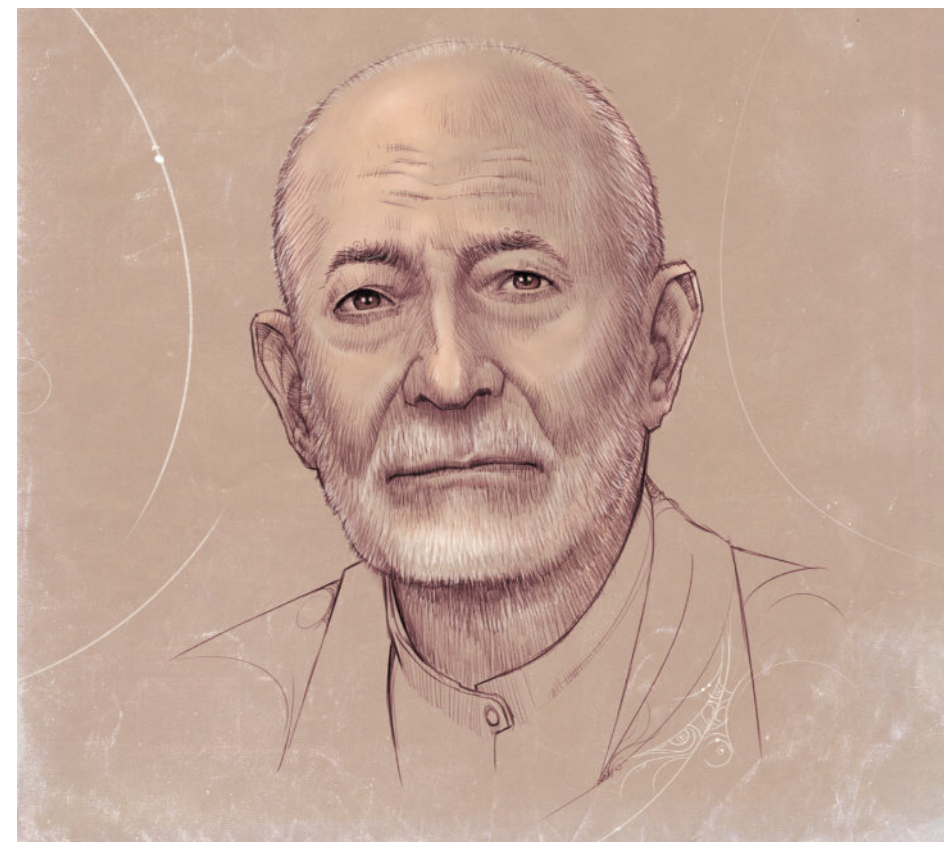
Nevertheless, during that era, the industry faced numerous challenges due to the lack of technology, equipment, and raw materials. For instance, manufacturers used to vulcanize rubber, manually assemble the upper and sole, and create natural rubber with additives like carbonates. Despite all these limitations, the production wheel of the factory never stopped turning.

In 1979, "Hassan Mosabeh" and his brothers entered the industry, marking a significant milestone. In 1981, they initiated the production of PVC shoes, a time when other businesses were also starting their activities by importing shoe-manufacturing machinery. During that time, the required granules for shoe production were sourced from other companies.

With the onset of the Iran-Iraq War, granule distribution became rationed. In 1983, the Mosabeh family took their first step towards completing the value chain of their family business by obtaining the license to produce supplementary shoe granules, aiming to address this issue. As other businesses entered this manufacturing sector, the industry of PVC granule production began to grow.

The Mosabeh family continued producing granules within their shoe production factory, enabling them to fulfill a portion of the market's consumption needs in addition to their own requirements. Subsequently, in 1989, with the expansion of granule production, the group established a separate factory for granule production. From 1991, shoe and sole production ceased in order to focus on granule production.

At the end of the 1990s, Gholamreza Mosabeh entrusted the leadership of the business to the next generation. In 2001, Hassan and Mohsen Mosabeh launched a DOP oil production factory to further enhance the value chain of TSR products.



The portrait of "Gholamreza Mosabeh". By: Amin Montazeri

In 2004, Hasan Mosabeh established the Tose'e Sanaye Reza company and obtained the license for the P.A.F. project, and started the steps through development. The development continues by entering his son, Ali Mosabeh, into the business as a third generation since 2007.

In 2010, the installation of a phthalic anhydride and plasticizers production line was completed through the purchase and installation of machinery and equipment. With the expansion of this business, the group also ventures into other industries such as mining and barium salts.

Pursuing the development, the companies' group was established and the modern thinking era started in the family business in the middle of 2010s. simultaneously, the reproduction of PVC granules started effectively for specialized markets.

Since 2021, the business initiated activities in other business areas such as human resources management and commerce, and the company group united under TSR holdings through organizational structure reforms and the business perspective transformation.

TSR



Polysun products

"polysun", one of TSR Holding's brands, produces a wide range of polymer products for various applications. High-quality PVC granules, diverse compounds, general and colored masterbatches, specialized masterbatches, as well as Acrylonitrile Butadiene Rubber (NBR) and airblowings are among the products offered by this brand. polysun delivers these products for a diverse spectrum of applications, including industries such as footwear, automotive, construction, hoses, electronics, telecommunications, and more.

Flexible PVC Granules

In the production of soft PVC granules, or flexible PVC, 40-60% of the composition consists of additives. Plasticizers or PVC plasticizers, in particular, make up the largest share of additives in the production of PVC granules. Other additives in the production of soft PVC granules include heat stabilizers like lead, barium-cadmium (for general applications), calcium-zinc (for medical devices and food packaging), lubricants (waxes and epoxidized oils), anti UV stabilizers and etc.

The TSR Group produces and supplies various PVC granules for diverse applications in three types: transparent, opaque, and PVC/NBR blends. PVC granules blended with NBR (Nitrile Butadiene Rubber) or Acrylonitrile Butadiene Rubber offer better resistance to oils, fuels, and chemicals, making them an excellent choice for applications requiring strong performance in challenging environments.



PVC granules for shoe soles, Slipper and Footwear Industry

TSR's PVC granules provide footwear manufacturers with the flexibility to create durable and versatile soles that combine comfort, resilience, and style. They are suitable for a wide range of applications, including boots, casual shoes, sports footwear, and more.

In addition, TSR offers specialized PVC granules designed for slipper insoles, delivering the ideal balance of durability, comfort, and attractive design. By incorporating these polymers, insole manufacturers can enhance wear resistance, extend product lifespan, and ensure greater satisfaction for end users.

Opaque PVC granules for footwear industries

Grade	Tensile (N/mm ²)	Elongation (%)	Density (gr/cm ³)	Hardness (Shore A)	Thermal Stability (Min)
Sole Grade 100 Type 1	11 ± 1	430 ± 25	1.22 ± 0.02	60 ± 2	80 ± 3
Sole Grade 100 Type 2	10 ± 1	390 ± 25	1.25 ± 0.02	61 ± 2	80 ± 3
Sole Grade 100 Type 3	9.5 ± 1	350 ± 25	1.29 ± 0.02	62 ± 2	80 ± 3
Sole Grade 102 Type 1	12 ± 1	410 ± 25	1.23 ± 0.02	64 ± 2	80 ± 3
Sole Grade 102 Type 2	11 ± 1	380 ± 25	1.26 ± 0.02	65 ± 2	80 ± 3
Sole Grade 102 Type 3	10 ± 1	340 ± 25	1.30 ± 0.02	66 ± 2	80 ± 3
Sole Grade 100 Type 1 TPR	10 ± 1	480 ± 25	1.20 ± 0.02	56 ± 2	80 ± 3
Sole Grade 102 Type 1 TPR	11 ± 1	470 ± 25	1.21 ± 0.02	60 ± 2	80 ± 3
Boot vamp	11 ± 1	380 ± 25	1.18 ± 0.02	62 ± 2	80 ± 3
Boot sole	13 ± 1	350 ± 25	1.22 ± 0.02	64 ± 2	80 ± 3

● The datasheet gives information about several commonly used products as an overview. After receiving the datasheet, offering advice, or getting samples, TSR can make the specific grade for clients in accordance with their needs and finished goods.

Transparent PVC granules for footwear industries

Grade	Tensile (N/mm ²)	Elongation (%)	Density (gr/cm ³)	Hardness (Shore A)	Thermal Stability (Min)
50	5.5 ± 1	490 ± 25	1.13 ± 0.01	39 ± 2	18 ± 3
60	6.5 ± 1	480 ± 25	1.14 ± 0.01	43 ± 2	18 ± 3
70	7.5 ± 1	470 ± 25	1.15 ± 0.01	47 ± 2	18 ± 3
80	9.5 ± 1	460 ± 25	1.16 ± 0.01	55 ± 1	18 ± 3
100	11 ± 1	450 ± 25	1.165 ± 0.01	59 ± 1	18 ± 3
102	11.5 ± 1	440 ± 25	1.17 ± 0.01	61 ± 1	16 ± 3
104	13 ± 1	430 ± 25	1.175 ± 0.01	65 ± 1	16 ± 3
106	13.5 ± 1	420 ± 25	1.18 ± 0.01	67 ± 1	16 ± 3
108	14 ± 1	410 ± 25	1.185 ± 0.01	69 ± 1	16 ± 3
110	15 ± 1	390 ± 25	1.19 ± 0.01	72 ± 1	16 ± 3
115	16.5 ± 1	380 ± 25	1.21 ± 0.01	76 ± 1	16 ± 3
120	18 ± 1	365 ± 25	1.22 ± 0.01	80 ± 1	16 ± 3
129	19 ± 1	350 ± 25	1.23 ± 0.01	82 ± 1	16 ± 3
135	20 ± 1	340 ± 25	1.24 ± 0.01	83 ± 1	14 ± 3

● The datasheet gives information about several commonly used products as an overview. After receiving the datasheet, offering advice, or getting samples, TSR can make the specific grade for clients in accordance with their needs and finished goods.

PVC granules for Hose Industry

TSR's polymer products play a vital role in hose manufacturing, delivering key properties such as flexibility, pressure and heat resistance, and strong chemical durability. These advantages make hoses produced with TSR materials highly reliable for transporting a wide range of substances across industries including agriculture, construction, oil and gas, chemicals, and food processing.



Opaque PVC granules for Hose Industry

Grade	Tensile (N/mm ²)	Elongation (%)	Density (gr/cm ³)	Hardness (Shore A)	Thermal Stability (Min)
104	11.5 ± 1	265 ± 25	1.31 ± 0.01	69 ± 2	80 ± 10
104	11 ± 1	265 ± 25	1.43 ± 0.01	74 ± 2	80 ± 10
106	12.5 ± 1	265 ± 25	1.31 ± 0.01	71 ± 2	80 ± 10
106	11.5 ± 1	265 ± 25	1.45 ± 0.01	76 ± 2	80 ± 10
108	13 ± 1	265 ± 25	1.32 ± 0.01	71 ± 2	80 ± 10
108	12 ± 1	265 ± 25	1.45 ± 0.01	78 ± 2	80 ± 10
110	14 ± 1	260 ± 25	1.34 ± 0.01	73 ± 2	80 ± 10
110	13 ± 1	260 ± 25	1.46 ± 0.01	80 ± 2	80 ± 10
115	15.5 ± 1	250 ± 25	1.345 ± 0.01	79 ± 2	80 ± 10
115	15 ± 1	250 ± 25	1.47 ± 0.01	85 ± 2	80 ± 10
129	17 ± 1	245 ± 25	1.365 ± 0.01	83 ± 2	80 ± 10
129	15.5 ± 1	245 ± 25	1.48 ± 0.01	86 ± 2	80 ± 10

Transparent PVC granules for Hose Industry

Grade	Tensile (N/mm ²)	Elongation (%)	Density (gr/cm ³)	Hardness (Shore A)	Thermal Stability (Min)
104	13 ± 1	430 ± 25	1.175 ± 0.01	65 ± 1	16 ± 3
106	13.5 ± 1	420 ± 25	1.18 ± 0.01	67 ± 1	16 ± 3
108	14 ± 1	410 ± 25	1.185 ± 0.01	69 ± 1	16 ± 3
110	15 ± 1	390 ± 25	1.19 ± 0.01	72 ± 1	16 ± 3
115	16.5 ± 1	380 ± 25	1.21 ± 0.01	76 ± 1	16 ± 3
120	18 ± 1	365 ± 25	1.22 ± 0.01	80 ± 1	16 ± 3
129	19 ± 1	350 ± 25	1.23 ± 0.01	82 ± 1	16 ± 3

PVC Granules for the Electrical, Power and Telecommunications Industries

TSR Group, drawing on its extensive expertise in the wire and cable industry and its deep understanding of industry standards, produces a wide range of soft PVC granules designed for wire and cable applications. These products are manufactured in compliance with key sections of international standards such as IEC 60502 and IEC 60227.

PVC granules for cable sheathing

TSR Group manufactures various types of sheaths required by the wire and cable industry, including single strand wire sheaths, multi-strand wire sheaths, telecommunications sheaths, network cable sheaths, coaxial cable sheaths, and more, in accordance with international standards.

PVC granules for beddings

TSR Group has the capability to produce high-quality soft PVC granules suitable for bedding sheaths, particularly in high-power cables, including multi-layer and armored types.

Grade	Tensile (N/mm ²)	Elongation (%)	Density (gr/cm ³)	Hardness (Shore A)	Thermal Stability (Min)
Sheathing of Flexible Cable(ST5)	12.5 ± 1	275 ± 25	1.46 ± 0.01	80 ± 1	80 ± 10
Sheathing of Flexible Cable(ST5)	13.5 ± 1	250 ± 25	1.48 ± 0.01	82 ± 1	80 ± 10
NBR Welding cable	13 ± 1	400 ± 50	1.30 ± 0.01	70 ± 2	75 ± 10
Welding cable	8.5 ± 1	400 ± 50	1.34 ± 0.01	67 ± 2	75 ± 10
Sheathing of super flexible Cable	11 ± 1	275 ± 25	1.46 ± 0.01	76 ± 2	70 ± 10
Sheathing of super flexible Cable	11.5 ± 1	300 ± 25	1.33 ± 0.01	71 ± 1	70 ± 10
Sheathing of Fixed Installation Cables(ST1,ST2)	15.5 ± 1	275 ± 25	1.45 ± 0.01	84 ± 1	80 ± 10
Sheathing of Fixed Installation Cables(ST1,ST2)	16.5 ± 1	250 ± 25	1.50 ± 0.01	89 ± 1	80 ± 10
Sheathing of Fixed Installation Cables(ST4)	15 ± 1	250 ± 25	1.48 ± 0.01	86 ± 1	80 ± 10
Sheathing of Fixed Installation Cables(ST4)	16 ± 1	250 ± 25	1.45 ± 0.01	86 ± 1	80 ± 10
Bedding Of Cables	9 ± 1	200 ± 25	1.73 ± 0.01	89 ± 1	60 ± 10

PVC granules for cable insulations

TSR Group produces a wide range of PVC granules for wire and cable insulation, including single-strand and multi-strand wires, flexible wires, telephone and data cables, flat cords, one-kilovolt insulations, and more—all manufactured in compliance with international standards.

PVC granules for fillers

TSR Group produces a variety of PVC granules that function as versatile fillers across multiple industries, including the electrical and power sectors, offering wide-ranging applications.

Grade	Tensile (N/mm ²)	Elongation (%)	Density (gr/cm ³)	Hardness (Shore A)	Thermal Stability (Min)
Insulation of Fixed Installation Cables(PVC/A)	20 ± 1	260 ± 25	1.43 ± 0.01	92 ± 2	100 ± 10
Insulation of Fixed Installation Cables(PVC/C)	16.5 ± 1	245 ± 25	1.48 ± 0.01	89 ± 1	80 ± 10
Insulation of Fixed Installation Cables(PVC/C)	16 ± 1	250 ± 25	1.46 ± 0.01	88 ± 1	80 ± 10
Insulation of Flexible Cable(PVC/D)	15.5 ± 1	260 ± 25	1.48 ± 0.01	86 ± 1	80 ± 10
Insulation of Flexible Cable(PVC/D)	16 ± 1	260 ± 25	1.45 ± 0.01	86 ± 1	80 ± 10
Insulation of Flat Flexible Cable (PVC/D)	11.5 ± 1	275 ± 25	1.54 ± 0.01	82 ± 1	80 ± 10
Filler	3 ± 0.5	190 ± 20	1.87 ± 0.02	81 ± 1	45 ± 10
Filler	8 ± 1	200 ± 25	1.75 ± 0.02	86 ± 1	50 ± 10
Filler	3 ± 0.5	180 ± 25	1.91 ± 0.02	83 ± 1	40 ± 10

PVC granules for construction industry

TSR's polymer products are widely used in the construction industry for applications such as geomembranes, waterstops, and gaskets. With excellent waterproofing, weather resistance, and long service life, these materials help improve the quality, durability, and reliability of buildings.

Grade	Tensile (N/mm ²)	Elongation (%)	Density (gr/cm ³)	Hardness (Shore A)	Thermal Stability (Min)
Water Stop	13 ± 1	350 ± 25	1.33 ± 0.01	72 ± 1	70 ± 10
Geo Membrane	13.5 ± 1	310 ± 25	1.34 ± 0.01	74 ± 1	70 ± 10
PVC Inlay flower	2.5 ± 0.5	185 ± 25	1.91 ± 0.01	62 ± 1	60 ± 5
Gasket	15 ± 1	300 ± 25	1.28 ± 0.01	72 ± 1	60 ± 5

PVC granules for automotive industry

The automotive industry relies on various types of PVC granules for a wide range of applications. From manufacturing hoses for fluid transfer and underbody coatings to producing gaskets, floor modules, and automotive wiring, PVC granules play a key role in supporting innovation within this dynamic sector. TSR's polymer products are utilized in numerous critical interior and exterior components of vehicles. With properties such as weather resistance, lighter weight compared to conventional materials, and excellent heat insulation, these materials help enhance both the performance and safety of automobiles.

Olsun products

Olsun, one of TSR Holding's brands, is a pioneer in the production of petrochemical and refinery products, offering a range of essential raw materials and plasticizers for diverse industries. The brand's portfolio includes DOP, DOTP, phthalic anhydride, and epoxidized soybean oil (ESBO), serving as critical inputs for manufacturing processes across multiple sectors.

Plasticizers

Plasticizers are organic esters—typically colorless and odorless liquids—added to polymers to enhance flexibility and processability. The majority of plasticizers, approximately 80–90%, are used in the production of soft PVC, which finds applications in industries such as construction (flooring and wall coverings), electronics (wires and cables), consumer goods (toys, footwear, etc.), packaging, automotive (interior and exterior vehicle components), furniture, and medical products (tubing and blood bags).

Phthalate plasticizers, derived from phthalic anhydride, remain widely used due to their excellent processing performance and versatility. Olsun produces Di(2-ethylhexyl) phthalate (DOP), a key phthalate widely applied in soft PVC manufacturing.

Non-phthalate plasticizers, such as Dioctyl terephthalate (DOTP) and epoxidized soybean oil (ESBO), offer alternatives to phthalates with different chemical structures and toxicological profiles. Driven by increasing regulations on certain phthalates due to human health concerns, these non-phthalate plasticizers are gaining importance globally. Olsun's DOTP and ESBO products provide safe, high-performance solutions for PVC applications while supporting regulatory compliance.



Phthalic Anhydride

Phthalic anhydride is a versatile chemical compound used in the production of plastics from vinyl chloride and in the synthesis of phthalate esters. Beyond its role in plasticizers, it is also employed in the manufacture of polyester and alkyd resins used in paints, coatings, and nail polishes, as well as in insect repellents and polyester polyurethanes.

Test	Unit	Test Method	Result
Crystallization point	°C	Visual	130.9
Appearance	-	GC	White Flakes
Phthalic Anhydride	%W/W	GC	99.8
Maleic Anhydride	%W/W	GC	≤0.05
Other Impurities (as Benzoic & Phthalide)	%W/W	IS 5158A-4	≤0.10
Free Acidity (as Phthalic acid)	%W/W	ASTM D3366	≤0.10
Color of Molten Material	APHA (MAX.)	ASTM D3366	20
Color of Molten Material after Heat treatment	APHA (MAX.)	ASTM D 1045	60



Epoxidized Soybean Oil (ESBO)

Epoxidized Soybean Oil (ESBO) is a widely used plasticizer and stabilizer in the polymer industry, valued for its unique combination of technical performance and environmental benefits. Produced through the epoxidation of natural soybean oil, ESBO contains epoxy groups that effectively absorb and neutralize HCl released during PVC degradation, making it a highly efficient thermal stabilizer. In addition to enhancing flexibility, heat resistance, and durability, it is recognized as a non-toxic, eco-friendly additive that complies with global standards such as FDA and REACH.

Test	Unit	Test Method	Result
Color	Pt-Co	ASTM D3366	60
Specific Gravity (20/20°C)	gr/cm3	ASTM D1045-86	0.990
Acidity	KOH mg/g	ASTM D1045-86	0.1
Volatility (125°C x 3hr)	Wt %	KLJTM	0.09
Iodine Value	gr I2/100g	ASTM D1959	2
Epoxy Value	Wt %	ASTM D1652-04	6.6



DOTP Plasticizer

Diocetyl Terephthalate (DOTP) is a non-phthalate plasticizer produced from terephthalic acid or dimethyl terephthalate, offering a safer alternative to traditional ortho-phthalates like DOP and DINP. This colorless, transparent liquid is non-toxic, insoluble in water, and fully compliant with international standards such as 16P, ROHS, and REACH. Known for its durability, heat resistance, and excellent compatibility with PVC, DOTP is widely used in flooring, roofing membranes, cables, vinyl wallpaper, food packaging films, and synthetic leather, and can be processed by extrusion, calendaring, or injection molding.

Test	Unit	SPEC.	Test Method	Result
Color	APHA	Max 50	ASTM D1045	30
Specific Gravity (20/20C)	g/ml	0.980-0.986	ASTM D4052	0.982
Acid Value	KOH mg/g	Max 0.07	ASTM D664	0.05
Volatility (%) (125c x 3hr)	Wt%	Max 0.15	JIS K6751	0.09
Water Content	Wt%	Max 0.1	ASTM D1522	0.042



DOP Plasticizer

As PVC plasticizers, phthalates offer excellent compatibility, favorable permeability, and reliable performance with minimal formulation adjustments, making them highly versatile across numerous applications. Among them, Dioctyl Phthalate (DOP) stands out as the benchmark plasticizer for PVC, with the properties of other plasticizers often measured against it. Renowned for its compatibility, flexibility, and cost efficiency, DOP remains one of the most widely used plasticizers in the soft PVC industry.

Test	Unit	SPEC.	Test Method	Result
Color	APHA	Max 50	ASTM D1045	30
Specific Gravity (20/20C)	g/ml	0.980-0.986	ASTM D4052	0.982
Acid Value	KOH mg/g	Max 0.07	ASTM D664	0.036
Volatility (%) (125c x 3hr)	Wt%	Max 0.15	JIS K6751	0.09
Water Content	Wt%	Max 0.1	ASTM D1522	0.042
Ester Value	KOH mg/g	285 ± 3	ASTM D 1045	287



Barysun products

Barysun, one of TSR Holding's brands, specializes in producing a range of barium salts, including barium sulfate (blanc fixe), barium carbonate, and barium chloride, along with compounds such as sodium sulfide (flake and liquid). These products serve as essential raw materials for industries such as glass manufacturing, ceramic glazing, and agricultural pesticides, meeting diverse industrial requirements with consistent quality.

Barium salts

Barium salts, derived from the element barium, are valued for their distinctive properties and broad industrial applications. Widely used in sectors such as medicine, electronics, agriculture, and manufacturing, these compounds contribute to essential processes ranging from product innovation to large-scale industrial production. Their unique reactivity and versatility make barium salts indispensable to advancements in science, technology, and industry.

Barium Carbonate

Barium Carbonate (BaCO₃) is a fine white powder with broad industrial applications in ceramics, glass, pigments, and chemicals. It is a key ingredient in producing ceramic glazes, opal dishes, sanitaryware, and various types of glass, while also serving roles in paints, pigments, the chlor-alkali industry, oil and gas operations, and the extraction of metals such as lead and zinc. Although insoluble in water and alcohol, it readily reacts with acids. Given the toxic nature of barium compounds, strict safety and health precautions are required when handling barium carbonate.

Item	Unit	Result
BaCO3 Purity	%	99
Residue on sieve 325 mesh	%	0.1
Iron	%	0.001
HCL insoluble matter (SO ₃)	%	0.05
Bulk Density	g/cm ³	0.9 – 1.0



Precipitated Barium Sulfate (Blanc Fixe)

Blanc Fixe (Precipitated Barium Sulfate – BaSO₄) is a high-purity, fine white powder widely used as a functional filler across industries such as paints, plastics, rubber, paper, and textiles. Known for its high brightness, chemical stability, and narrow particle size distribution, it enhances whiteness, surface quality, and durability in coatings, pigments, and design materials. With its inert nature and excellent performance, Blanc Fixe is also utilized in specialized applications, including pharmaceuticals and X-ray contrast agents, making it a versatile and valuable industrial material.

Item	Unit	Result
BaCO3 Purity	%	99
Residue on sieve 325 mesh	%	0.1
Iron	%	0.001
HCL insoluble matter (SO ₃)	%	0.05
Bulk Density	g/cm ³	0.9 – 1.0



Barium Chloride

Barium Chloride (BaCl_2) is a white, water-soluble salt widely used across industries such as paints, plastics, rubber, resins, textiles, electronics, and drilling fluids. Known for its chemical reactivity and high solubility, it serves as a valuable raw material, processing aid, and stabilizer in numerous chemical and industrial applications, including impurity control and sulfate removal.

Item	Unit	Result
$\text{BaCl}_2 \cdot 2\text{H}_2\text{O}$ Purity	%	99
Iron as Fe_2O_3	%	0.001
Strontium	ppm	250
Calcium	%	0.001
Moisture	%	0.3



Other Mineral Salts

Sodium Sulfide Flake

Sodium Sulfide Flakes (Na_2S) are a vital industrial chemical, typically supplied in red or yellowish flakes, and widely used in sectors such as leather tanning, pulp and paper, mining, and dye manufacturing. With strong reducing properties, they play a key role in processes like dehairing in leather treatment, recovery of valuable metals in ore flotation, and the production of sulfur-based dyes and intermediates. Their versatility makes them indispensable in improving process efficiency and achieving high-quality outputs across multiple industries.

Item	Unit	Result
Na_2S Purity	%	60
Water insoluble	%	0.1
Iron	ppm	100
Na_2CO_3	%	0.5
Na_2SO_3	%	0.5
$\text{Na}_2\text{S}_2\text{O}_3$	%	0.2

Sodium Sulfide Liquid

Sodium Sulfide Liquid 60% is a concentrated aqueous solution of Na_2S that offers the same powerful reducing capabilities as the flake form, while providing easier handling and faster solubility in large-scale applications. It is commonly used in the textile, water treatment, and chemical synthesis industries, where its liquid form ensures uniform dosing and improved operational efficiency. As a cost-effective and reliable solution for industries requiring high-volume consumption, Sodium Sulfide Liquid 60% is valued for its consistency, reactivity, and contribution to more streamlined production processes.

