



Main Product Catalogue

Refinery
Products

Chemical
Products

Plastic &
Rubber

Paint &
Coating

2024



ABOUT US

In 2019 a group of German and Singaporean managers discussed on the chances and opportunities by bundling their individual networks of regional suppliers, product expertise and market knowledge.

So in 2020 **BHM International** was founded as a Singaporean-German Trading and Sourcing Joint Venture Company – managed by German and Singaporean citizens. BHM International is strictly focussing on **B2B wholesale in chemical raw & intermedia products** as well as on **fertilizers**.

This approach of combining expert knowledge, existing networks and cultural competences based on a defined set of business principles turned out as a clear success. Within just 4 years BHM International was able to grow to a 2-digit Million US-\$ company. Due to this dynamic growth BHM-subsidies can be found in Germany as well as in Middle East.



High-Quality Products & Suppliers

We ensure that our products meet highest international quality requirements as well as established specification and testing standards. Our suppliers are on world-class level and are already proven exporters.



Reliability

BHM International's commitment to quality means you can count on us for all your fertilizer needs. We rigorously test our products and offer expert advice and support.



Competitive Pricing

At BHM International we are committed to providing you with the most competitive and cost-effective pricing available in the market.



Trust, Honesty & Growth

We at BHM International believe in collaborative, honest and sustainable partnerships & communication in each business relation. We have already proven that we grow together with our suppliers and customers.



Efficient Logistics & Punctuality

With our advanced logistics competence & network, we guarantee timely delivery and efficient distribution, ensuring you have what you need when you need it. So trust BHM to provide prompt and reliable service, keeping your operations running smoothly and ensuring you never miss a crucial window of supply and delivery.



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Paraffin

Paraffin wax is a versatile material with a wide range of applications across various industries. Its unique properties, such as a high melting point, smooth texture, and excellent binding capabilities, make it indispensable in many commercial and industrial processes.



Specification

Characteristics	Unit	semi refined (5% oil)	fully refined (oil content < 1%)	Test Method
Kinematic Viscosity	cST	6.3	6.3	ASTM D-445
Flash Point	°C	>240	>240	ASTM D-92
Specific Gravity @ 25 °C	-	0.82	0.82	ASTM D-190
Oil Content	WT%	5%	<1%	ASTM D-721
Melting Point	°C	56	60	ASTM D-937
Color	-	0.5-1	0	ASTM D-1500
Penetration @25 °C	0.1mm	13	12	ASTM D-1321

Description

Feed Your Business with Premium Paraffin Wax Solutions Unlock the full potential of your products with our top-grade paraffin wax, meticulously refined to meet the highest industry standards. Ideal for a wide range of applications, from candle making and cosmetics to packaging and industrial uses, our paraffin wax promises unparalleled performance and quality

Our paraffin wax stands out due to its superior quality, sourced and refined with precision to ensure consistency, purity, and high melting points. This results in a smooth texture and reliable outcomes in every batch. Its versatility makes it suitable for various industries, including candle manufacturing, personal care products, and industrial goods. The excellent binding and lubricating properties of our paraffin wax make it an indispensable component across multiple sectors.

To support your scaling operations, we supply paraffin wax in bulk quantities, ensuring a consistent supply without any disruptions. Our efficient logistics network guarantees timely delivery, regardless of your location.

By avoiding middlemen and fostering direct relationships with experienced and competent suppliers, we are able to offer competitive pricing. These direct connections with large-scale producers enable us to guarantee top-level price-quality ratios.

Petroleum Jelly

Our premium Petroleum Jelly is a versatile and essential product for various industrial applications. As a leading supplier, we provide high-quality petroleum jelly that meets stringent industry standards, ensuring superior performance and reliability for your manufacturing needs.



Specification

PROPERTIES	VALUE / RESULTS	TEST METHOD
Kinematic Viscosoty @100°C	5.5 - 8.0 cSt	ASTM D445
Specific Gravity @ 60°C	0.815 - 0.880	ASTM D4052
Congeaing Point	50-58°	ASTM D038
Penetration	More than 100	ASTM D1321
Color	1.0	
Acidity or Alkalinity	According to the test metho	B.P 2007
Drop Melting Point	Min 60°	ASTM D127
Flash Point	200° Min.	ASTM D92
Arsenic	passed	
Heavy Metals	passed	
Polycyclic Aromatic Hydrocarbons	passed	

Description

Our Petroleum Jelly is an indispensable component in numerous industries, including cosmetics, pharmaceuticals, personal care, and food processing. Its unique properties make it an ideal base for creams, lotions, and ointments, offering exceptional moisturizing and protective benefits. In the pharmaceutical sector, our petroleum jelly serves as a vital ingredient in topical formulations, providing a stable and effective medium for active ingredients.

In the personal care industry, our petroleum jelly is used to create a wide range of products, from lip balms and baby care products to hair pomades and skin protectants. Its ability to form a protective barrier makes it invaluable for products designed to shield skin from harsh environmental conditions.

Our commitment to quality ensures that our petroleum jelly is refined to the highest standards, guaranteeing purity and consistency. Partner with us to access a reliable supply of premium petroleum jelly, backed by our dedicated customer support and timely delivery. Trust in our expertise to help you create products that meet and exceed your customers' expectations. Transform your formulations with our petroleum jelly and set a new standard of excellence in your industry.

Base Oil

Base oil is a fundamental component in producing lubricants, forming the core of everything from automotive engine oils to industrial machinery fluids. Derived primarily from refining crude oil or synthesized using chemical processes, base oil is essential in reducing friction, heat, and wear between mechanical parts, ensuring smooth, efficient, and long-lasting operation in a wide range of applications.



Specification

PARAMETERS	UNIT	N 70	N 85	N 100	N 150	N 300
Density at 15°C	kg/m ³	860	860	860	865	865
Kinematic viscosity at 40°C	mm ² /s	12,1 – 12,8	15,0 – 18,5	20,6 – 22,6	29,0 – 35,0	62,0 – 68,0
Kinematic viscosity at 100°C	mm ² /s	3,0	3,5	4,2	5,5	8,9
Viscosity index		85	94	95	110	110
Flash point	°C	170	190	190	220	260
Pour point	°C	-12	-15	-15	-15	-12
ISO colour		0,5	0,5	0,5	< 1,0	1,5
TAN	mg KOH/g	0,01	0,01	0,01	0,01	0,01
CCR	%	< 0,01	< 0,01	< 0,01	< 0,01	< 0,01
Volatility Noack	%	-	-	-	12,0	5,0
Sulphur	%	< 0,01	< 0,01	< 0,01	< 0,01	< 0,01
PCA IP 346	%	< 1,5	< 1,5	< 1,5	< 1	< 1
Simdist 5% - 95%	°C	-	345 415	350 460	390 465	420 530

Description

There are offer two categories of base oils: mineral and synthetic. Each type offers distinct advantages, depending on its application. Mineral base oils, produced through refining crude oil, are cost-effective and widely used in conventional lubricants. Synthetic base oils are engineered for superior performance, providing better thermal stability, lower volatility, and improved oxidation resistance, making them ideal for high-performance engines and extreme operating conditions.

The versatility of base oil extends across numerous sectors. It is used in automotive lubricants, such as engine oils, transmission fluids, and gear oils, to ensure optimal vehicle performance. In industrial applications, base oils are integral to hydraulic fluids, metalworking fluids, and turbine oils, offering excellent protection for heavy machinery and equipment.

Moreover, base oil also plays a crucial role in the formulation of greases and other specialty fluids, supporting industries ranging from aviation to construction. Its ability to enhance energy efficiency and equipment longevity makes base oil an indispensable component in modern lubrication technology.

You can get SN150, SN300, SN500, SN600 or recycled base oils from us.

Just contact us to discuss the specifications you need.

Grease

Industrial grease is a critical lubricant designed to protect machinery and equipment under harsh conditions, ensuring smooth and reliable operations in a wide range of industries. Composed of base oil, thickener, and performance-enhancing additives, industrial grease offers exceptional protection against wear, friction, and corrosion.



Specification

BHM International offers an extensive selection of industrial greases to suit the unique needs of your business and other industries, including:

Available Types

Wheel bearing grease
Silicone-based grease
Fluoroether-based grease
Lithium-based grease
Food-grade grease
Wheel bearing grease
Water-soluble grease
Bentonite clay grease
Polyurea grease
Bearing grease
Anti-seize grease

Description

The versatility of industrial grease makes it essential for many applications. In manufacturing, it ensures the smooth operation of machinery components such as bearings, gears, chains, and conveyor systems. Its ability to withstand heavy loads and intense pressure prevents metal-to-metal contact, reducing downtime and extending equipment lifespan.

The versatility of industrial grease makes it essential for many applications. In manufacturing, it ensures the smooth operation of machinery components such as bearings, gears, chains, and conveyor systems. Its ability to withstand heavy loads and intense pressure prevents metal-to-metal contact, reducing downtime and extending equipment lifespan.

In the automotive and transportation sectors, industrial grease is used in wheel bearings, chassis components, and universal joints to ensure the reliability of vehicles, trucks, and heavy equipment. Its ability to resist water and dirt makes it particularly effective in off-road and outdoor applications, where contamination risks are high.



Download the Full Grease
Catalogue on our Website!

<https://bhm-international.com/downloads/>

Bitumen

Bitumen, a naturally occurring and remarkable substance, is a black, sticky, and highly viscous form of petroleum. Often specified by the term "Crude Bitumen," this dense material requires dilution or heating before it can gracefully flow



Specification

Characteristics	VG-10	VG-20	VG-30	VG -40
Absolute Viscosity, 60 °C, poises, min	800	1600	2400	3200
Kinematic Viscosity, 135 °C, CST, min	250	300	350	400
Flash Point, °C, min	220	220	220	220
Solubility in trichloroethylenem %, min	99.0	99.0	99.0	99.0
Penetration @ 250 °C	80-100	60-80	50-70	40-60
Softening Point, C, min	40	45	47	50
Tests on residue from thin film over test / RTFOT:				
i. Viscosity Ratio at 60 °C	4.0	4.0	4.0	4.0
ii. Ductility at 250 °C, cm, min, after thin film over test	75	50	40	25

Description

The distinctive characteristics of bitumen, with its thick consistency reminiscent of cold molasses, make it a cornerstone in various industries, primarily finding its place in road construction and waterproofing applications.

Crude Bitumen vs Refined Bitumen

Crude Bitumen, in its raw and unaltered state, emerges naturally. Its viscosity, comparable to cold molasses, makes it a challenging material to handle in its original form. To enhance its usability and versatility, Crude Bitumen undergoes processes such as dilution or heating. In contrast, Refined Bitumen, derived from the fractional distillation of crude oil boiling at 525 °C (977 °F), represents a more processed and specialized form of bitumen.

We can offer all relevant different Grades of Bitumen:

VG-10 BITUMEN: VG-10
VG-20 BITUMEN: VG-20
VG-30 BITUMEN: VG-30
VG-40 BITUMEN: VG-40

Naphta

Light as well as Heavy Naphta is the backbone of multiple industries, offering versatility and efficiency like no other. Derived from crude oil, this colorless, flammable liquid is a crucial ingredient in various processes, powering industries from petrochemicals to manufacturing.



Specification

Analysis	Unit	Limit	Test Method
Density @ 15.0 °C	kg/m3	700 Max.	ASTM D1298
Distillation	°C		ASTM D86
I.B.P.	°C	35 min	ASTM D86
10% evaporated Temp	°C	60 Max.	ASTM D86
50% evaporated Temp	°C	85 Min.	ASTM D86
95% evaporated Temp	°C	125 Max.	ASTM D86
F.B.P.	°C	150 Max.	ASTM D86
Residue	% Vol.	1.5 Max.	ASTM D86
Loss	% Vol.	1.0 Max.	ASTM D86
Total Sulphur	% Vol.	0.03 Max.	ASTM D1266
Corrosions 3 HHRS.	50 °C	No 1 Strip	ASTM D13
Vapour Pressure	K.Pa	75 Max.	ASTM D32
Mercaphtan Content	PPM	25 Max.	ASTM D322
Colour, Saybolt	% Vol.	20 Min.	ASTM D156
Paraffins Content	% Vol.	70 Min.	ASTM D131
Oleffins Content	% Vol.	2 Max.	ASTM D131
Naphetens Content	% Vol.	10 Min.	ASTM D131
Aromatic Content	% Vol.	5 Min.	ASTM D131
Lead (PB) P.B.B.	Uop	40 Max	350 - 68T
C/H Ratio	Estimated	5.5 Max.	Calculate
Gum Existant (Air Jet)	Mg./100ml.	3.0 Max.	ASTM D381

Description

In the petrochemical industry, Naphta is a primary feedstock for the production of ethylene, propylene, and butadiene—essential building blocks for everything from packaging materials to automotive parts. With its ability to seamlessly integrate into both light and heavy processes, Naphta supports a wide range of applications, driving sustainability and scalability in today's industrial landscape.

Flexibility

What sets Naphta apart is its flexibility. It can be tailored to meet specific energy needs, whether through use in steam crackers or reformers, helping to create high-quality fuels and chemicals. Its high energy content also ensures that industries can maintain efficient, uninterrupted operations while reducing the overall carbon footprint.

Experience the unmatched potential of Naphta, where energy meets efficiency, and reliability fuels success. Trust our Naphta to power your future.

Soda Ash

Soda ash, also known as sodium carbonate is used in the production of detergents due to its disinfecting properties. Another important use is to remove mold on wood. Sodium carbonate is used as a pasting agent in the brick making industry. Sodium carbonate is also used in the production of metal, synthetic leather, paper, battery making, casting. We are supplying in light and dense shape.



Specification

Chemical Specification		
No	Characteristics	Range
1	Alkalinity (as Na ₂ CO ₃) %	> 99
2	Chloride in term of NaCl %	< 0.4
3	Iron Content %	< 0.004
4	Insolubility in water %	< 0.1
5	Na ₂ O % (if it 's need)	> 58
Physical Specification		
No	Characteristics	Range
1	Bulk Density (dense), gr/cm ³	0.85 - 1.1
2	Bulk Density (light), gr/cm ³	0.45 - 0.65
3	Dense Granular	
	Mesh No.	%
	< 20	max 10
	(20~30)	max 25
	(30~100)	min 60
	(100~140)	max 7
	> 140	max 3

Packing Details	
Soda Ash Light	50kg / 1.000 Kg PP BigPack
Soda Ash Dense	50kg / 1.250 Kg PP BigPack

Description

There are basically three grades of sodium carbonate soda ash that are produced, namely:

-Dense soda ash, which is an anhydrous substance. It forms an important industrial chemical, and is widely used in the manufacture of different products.

-Light soda ash, which is widely used as a pH regulator/ buffering agent in multiple industrial processes.

Application

According to its wide application is one of the basic production we can deliver in every different grades and the purity until 99% with the best price and the best quality - ready to export to every spot on the world. It also has a high water attraction and must be kept in moisture-proof packaging in bulk or small bags with different densities and other specifications. It is common in water refineries or using in-water drums to keep them clean.

Caustic Soda

Caustic soda, also known as sodium hydroxide (NaOH), is a highly versatile and essential chemical used across various industries. Known for its strong alkaline properties, caustic soda is a key ingredient in many manufacturing processes, contributing to the production of a wide range of products that are integral to everyday life.



Specification

Specification Caustic Soda			
Typical Test	Unit	Specification	Test Method
NaOH	WT%	Min 48.5	Uhde 59.02.01 / 2.4.5.02
NaCl	ppm by wt	Max. 100	Uhde 59.02.01 / 2.4.5.04
Fe	ppm by WT	Max. 3	Uhde A59.09.01 / 2.4.5.06
Sp.Gr @ 15.6°C		1.515 Min.	Uhde A59.01.03 / 2.4.5.03
Appearance		clear	visual
NaClO ₃	ppm by WT	Max.50	Uhde A59.10.02

Description

One of the primary uses of caustic soda is in the production of pulp and paper. It is used to break down lignin, allowing for the separation of cellulose fibers, which are then processed into paper products. Additionally, caustic soda is vital in the textile industry for cotton processing, where it helps in the scouring and bleaching of fabrics.

Chemical Manufacturing

Caustic soda plays a crucial role in the production of various chemicals, including soaps, detergents, and other cleaning agents. Its ability to neutralize acids makes it an important compound in chemical reactions and processes, ensuring effective product formulation.

Water Treatment

In water treatment facilities, caustic soda is used to regulate pH levels, helping to neutralize acidic water. This process enhances water quality and protects infrastructure from corrosion, ensuring safe drinking water for communities.

Sulphur

Sulphur is a vital chemical element that plays a crucial role in various industrial processes and agricultural practices. Known for its distinctive yellow color and non-metallic properties, sulphur is a key component in the manufacture of a wide range of products and materials.



Specification

Parameter	Specification
Purity	≥ 99.5 %
Particle Size Distribution	2 -6 mm (90% min)
Moisture Content	≤ 0.5%
Ash Content	≤ 0.3%
Colour	Bright Yellow
Odor	Odorless
Sulphate Content	≤ 0.2%
Iron Content	≤ 100 ppm
Zinc Content	≤ 10ppm
Arsenic Content	≤ 3 ppm
Lead Content	≤ 3 ppm
Mercury Content	≤ 0.1 ppm
Packaging	25 kg bags & bulk

Description

Sulphur is primarily used in the production of sulphuric acid, one of the most widely produced chemicals globally. Sulphuric acid is essential in the manufacturing of fertilizers, where it aids in the production of phosphate fertilizers that boost crop yields. Additionally, sulphur is utilized in the petroleum industry for refining crude oil and in the production of rubber, where it acts as a vulcanizing agent to improve elasticity and durability.

Agricultural Importance

In agriculture, sulphur is an essential nutrient for plant growth. It is a component of amino acids, vitamins, and enzymes, promoting healthy crop development. Sulphur-based fertilizers and soil amendments help address sulphur deficiencies in crops, enhancing their quality and productivity.

Pharmaceuticals and Chemicals

Sulphur is also used in the pharmaceutical industry for the synthesis of various compounds, including antibiotics and antifungal agents. Its antibacterial properties make it valuable in the formulation of medications for treating skin conditions and infections.

Ethylene Glycol

Ethylene glycol is a versatile chemical compound that plays a critical role in various industrial and consumer products. Known for its excellent thermal properties, low freezing point, and high boiling point, ethylene glycol is used in everything from automotive antifreeze to industrial cooling systems.



Specification

Specification (Tri-) Ethylen Glycol (TED)		
Properties	Typical Values	Units
Molecular Weight	150,17	g/mol
Boiling Point (°C)	285	(C°)
Freezing Point	-7	(C°)
Vapor Density	Mai 17	at 15°C (air=1.0)
Specific Heat	0,477	at 0C (cal/gm/°C)
Viscosity	51	cP at 20°C
Purity	99. %	Min Wt
Appearance	clear	visual
Specific Gravity	1.124 - 1.126	at 20 °C/20°C
Water	0.2 Max	Wt. %
Acidity as Acetic Aci	0.005 Max	Wt.%
Color	35 Max	APHA
Ash	0.01 Max	Wt. %

Description

One of the most common applications of ethylene glycol is as a key component in antifreeze and coolant formulations. Its ability to lower the freezing point of water while raising its boiling point makes it ideal for protecting engines and cooling systems from extreme temperatures. Ethylene glycol helps prevent freezing in cold conditions and overheating in high-temperature environments, ensuring the smooth operation of vehicles and machinery.

We can offer all types:

Mono Ethylene Glycol (MEG), Diethylene Glycol (DEG) and Triethylene Glycol (TEG)

Versatile Industrial Uses

Ethylene glycol is also widely used in manufacturing processes, particularly in the production of polyester fibers and resins. It serves as a vital raw material in the creation of polyethylene terephthalate (PET), which is used in plastic bottles, packaging, and textiles. Additionally, ethylene glycol plays a role in the production of paints, inks, and solvents, providing stability and enhancing product performance.

Safety and Sustainability Considerations

While ethylene glycol is effective in many applications, it requires careful handling due to its toxicity if ingested. However, ongoing developments in safer alternatives and recycling efforts have made the industry more sustainable.

Anhydride

Anhydrides are a crucial class of chemicals known for their versatility, reactivity, and widespread use across industries.

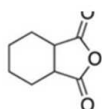
Whether in the production of coatings, plastics, adhesives, or pharmaceuticals, anhydrides play a key role in delivering high-performance solutions that meet the demands of modern manufacturing.



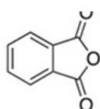
Specification

Example: Specification Phthalic Anhydride

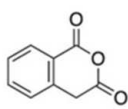
Item	Content	Content
Form	Molten	Flakes
Molten Colour (APHA)	15 MAX.	20 MAX.
Heat Stability (APHA)	40. MAX.	40 MAX.
Purity (WT%)	99.85 MIN.	99.85 MIN.
Solidification Point (°C)	130.8 MIN	130.8 MIN.
MA Content (%)	n/a	0.05 MAX.
Acidity (%)	n/a	0.20 MAX.



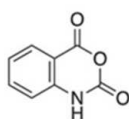
1,2-cis-cyclohexanedicarboxylic anhydride



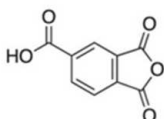
phthalic anhydride



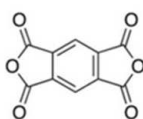
homophthalic anhydride



isatoic anhydride



trimellitic anhydride



pyromellitic dianhydride

Description

Anhydrides are highly reactive, making them ideal for a range of chemical processes. Their ability to easily bond with other compounds makes them valuable in the synthesis of various products, including polyesters, resins, and plasticizers. In industrial coatings, they enhance durability and resistance, providing long-lasting protection for surfaces exposed to harsh environments.

Versatile Across Industries

The versatility of anhydrides extends to numerous applications. They are used in the production of adhesives and sealants, improving strength and flexibility in products like automotive parts, electronics, and construction materials. In the pharmaceutical industry, anhydrides are vital intermediates in the synthesis of active ingredients, contributing to the development of life-saving medicines.

Cost-Effective and High-Performing

Anhydrides offer a cost-effective solution for manufacturers seeking to improve product quality and performance. Their efficiency in chemical reactions helps streamline production processes, reducing costs and increasing output without compromising on quality. This makes them an attractive option for industries aiming to optimize their operations.

Acetate

Acetate is a premium material celebrated for its combination of elegance, versatility, and eco-friendliness. Derived from renewable resources like wood pulp and cotton, acetate delivers both aesthetic appeal and functionality. Commercially important acetate salts are aluminium acetate, used in dyeing, ammonium acetate, a precursor to acetamide, and potassium acetate, used as a diuretic. All three salts are colourless and highly soluble in water.



Specification

Parameter	Specification
Assay (acidimetric)	min. 98.0 %
pH (5% H ₂ O)	6.7 - 7.6 %
insoluble in water	max. 0.005 %
Chloride (Cl)	max. 0.0005 %
Nitrates (NO ₃)	max. 0.001 %
Sulfate (SO ₄)	max. 0.001 %
Calcium (Ca)	max. 0.001 %
Heavy Metals (Pb)	max. 0.0002 %
Iron (Fe)	max. 0.002 %
KMnO ₄ red. Matter (as HCOOH)	max. 0.005 %
Calcination residue	max. 0.01 %
Water	max 2 %

Description

Acetate's ability to hold vibrant colors and rich patterns makes it a favorite in the fashion world. Acetate is used as a solvent in paints, inks, coatings. Cellulose acetate is used eyeglass frame. It is used in diapers. Potassium acetate is used as a food preservative.. Its smooth texture, lightweight design, and ability to be custom-tinted create endless design possibilities, providing a polished, sophisticated finish that stands out.

Versatile for a Wide Range

Acetate is incredibly versatile and can be molded into various shapes while maintaining its durability. It is the preferred material for eyewear frames, fashion accessories, and even sustainable packaging. Acetate's strength and flexibility ensure that products maintain their form and function while offering high performance over time.

Comfortable and Durable

Hypoallergenic and lightweight, acetate is comfortable for all-day wear, particularly in products like eyewear. Its resilience allows it to withstand daily wear and tear while maintaining its vibrant colors and stylish finish.

Commercially important acetate salts are aluminium acetate, used in dyeing, ammonium acetate, a precursor to acetamide, and potassium acetate, used as a diuretic. All three salts are colourless

Polyethylene

Polyethylene (PE) is one of the most popular and versatile plastics in the world, offering exceptional durability, flexibility, and adaptability for a wide range of applications. Its unique combination of properties makes it the preferred material across industries like packaging, construction, automotive, and more.



Specification

Feature	Test Method	Spec	Polyethylene 1000	Polyethylene 500	Polyethylene 300
Intensity	DIN 53479	gr/cm ³	0.92 - 0.94	0.94 - 0.96	0.95 - 0.96
Molecular Weight	DIN 53728-T	gr/mol	> 4,000,000	500,000	300,000
Notched Impact Strength	DIN 53453	kJ/m ²	unbroken	unbroken	12
Charpy notched Impact Strength	ISO 11542/2	kJ/m ²	>210	>25	-
Tensile Strength	DIN 53455	kg/cm ²	250	250	250
Extend rupture	DIN 53455	%	> 300	>500	>500
Stiffness	DIN 53505	Shore D	60 - 68	60 - 68	60 - 65
Operating Temperature	Maximum		90	80	80
	Minimum		-269	-100	-50
Melting Point	700+D5:G11	°C	130 - 138	130 - 138	127 - 131
Linear Expansion Coefficient	DIN 53752	°C-1	2x10 ⁴	2x10 ⁴	2x10 ⁴
Water Absorption	ASTM D570	&	0	0	0
Friction Coefficient	Asyle		0.1 - 0.5	0.15 - 0.20	0.20 - 0.25
Dielectric Strength	DIN 53481	kV/cm	900	700	700

Description

Polyethylene is known for its toughness and resilience. It resists impact, moisture, chemicals, and extreme temperatures, making it an ideal choice for demanding environments. From heavy-duty pipes to everyday plastic containers, polyethylene products are designed to last.

Highly Versatile

Polyethylene's versatility allows it to be manufactured in different forms, from flexible films to rigid structures. High-density polyethylene (HDPE) is perfect for robust applications like piping, while low-density polyethylene (LDPE) excels in flexible packaging and plastic bags. This adaptability ensures PE meets the specific demands of a variety of industries.

Lightweight and Cost Effective

Despite its strength, polyethylene remains lightweight, making it easier to handle and transport, which lowers costs across production and supply chains. Its affordability and efficient manufacturing process make it a cost-effective solution, especially for large-scale applications.

PVC

Polyvinyl chloride (PVC) is one of the most widely used and trusted materials across industries, offering a perfect balance of durability, versatility, and affordability. Whether for construction, plumbing, or packaging, PVC has become a go-to choice due to its exceptional performance in a range of applications.



Specification

Components (phr)	Sn	Sn/TMPTMA	Ca/Zn	Ca/Zn/TMPTMA
PVC	100	100	100	100
CaCO ₃	7	7	7	7
TiO ₂	1	1	1	1
External Lubricant	1,15	1,15	2	2
Internal Lubricant	0,6	0,6	1	1
Butyl tin mercaptide	0,65	0,65	-	-
CaSt ₂	-	-	2	2
ZnSt ₂	-	-	1	1
Co-stabilizer	-	-	1	1
Process aid	-	-	1	1
TMPTMA (crosslinking agent)	-	10	-	10

Description

PVC is resistant to weathering, chemicals, and corrosion, making it ideal for long-lasting use. Its strength ensures that products made from PVC can withstand harsh conditions, whether they're used indoors or outdoors.

Versatility Across Industries

From pipes and fittings in plumbing systems to window frames, cables, and flooring, PVC can be easily molded and shaped into a variety of products. Its flexibility and resistance to abrasion make it a valuable material for everything from household goods to large-scale industrial applications.

Cost-Effective Solution

Compared to other materials like metal or wood, PVC is highly affordable without compromising quality. It provides a lower-cost option that doesn't require regular maintenance, offering exceptional value over time.

SBR

Styrene-Butadiene Rubber (SBR) is a synthetic rubber known for its exceptional durability, flexibility, and affordability, making it one of the most popular materials across numerous industries. From automotive to construction, SBR delivers reliable performance and is a trusted choice for manufacturers worldwide.



Specification

Symbol	SBR	SBR5	SBR10	SBR20	SBR30
SBR (phr)	100	100	100	100	100
BDC (phr)	0	5	10	20	30
ZnO (phr)	5	5	5	5	5
Sulphur (phr)	2,5	2,5	2,5	2,5	2,5
MBTS (phr)	1,5	1,5	1,5	1,5	1,5
Stearic acid (phr)	2	2	2	2	2

Description

SBR's high resistance to abrasion makes it perfect for products exposed to continuous stress and heavy-duty use. Whether in tires, conveyor belts, or industrial gaskets, SBR maintains its structural integrity, ensuring long-lasting performance. It stands up to rough conditions, offering an extended product life compared to many other materials.

Flexibility for All Conditions

One of the key advantages of SBR is its excellent flexibility in both hot and cold environments. Whether it's used in automotive parts, hoses, or flooring, SBR remains pliable and effective, even under temperature extremes. This flexibility enhances its performance and reliability, making it a top choice for a wide variety of demanding applications.

Cost-Effective and Versatile

SBR offers an affordable alternative to natural rubber, without sacrificing quality or performance. It's an economical choice for manufacturers seeking to lower costs without compromising on product durability or versatility. Its ability to be easily blended with other rubbers adds to its value, allowing for tailored solutions to meet specific needs.

Alkyd Resins

Alkyd resins are the backbone of high-performance coatings, offering durability, flexibility, and a smooth finish. With their versatile applications, alkyd resins have become a go-to solution in industries ranging from automotive and furniture to architectural and protective coatings.



Specification

Table 4: Physico-chemical properties of the finished alkyds prepared with crude rubber seed oil (RSO) (I – III) and the methyl ester of rubber seed oil (IV – VI)

Properties	Alkyds					
	I	II	III	IV	V	VI
Colour	Brown	Brown	Dark brown	Brown	Brown	Dark brown
Specific Gravity	0.945	0.938	0.933	0.943	0.940	0.938
Acid value	2.41	1.11	0.74	12.70	13.80	14.45
Saponification value	354.10	326.29	322.60	291.95	293.02	299.07
Iodine value	65.64	72.21	83.30	66.30	71.69	80.24
Refractive index	1.4777	1.4762	1.4768	1.5050	1.5018	1.5002
Solid Content (%)	62	60	64	52	56	51
Scratch	3H	3H	HB	HB	B	2B
Gouge	4H	4H	H	H	HB	B

Description

Alkyd resins are renowned for their resistance to wear and tear, making them ideal for surfaces exposed to harsh environmental conditions. Whether it's exterior walls, industrial machinery, or metal structures, coatings made with alkyd resins maintain their integrity over time, even in demanding climates.

Unmached Versatility

Formulated to work with a variety of pigments and additives, alkyd resins deliver brilliant colors, excellent gloss retention, and outstanding adhesion. They are suitable for both oil- and water-based systems, giving manufacturers the flexibility to create the perfect product for any application.

Fast Drying and Easy Application

Modern advancements in alkyd resin technology have enhanced their drying times, allowing for faster production cycles without compromising on quality. Their ease of application ensures a smooth, professional finish with fewer coats, saving time and resources.

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