



Offering Customised Solutions

Resin, Coupling Agents, Processing Aids,
Melamine Resin, Non-Sticky Rosin (in
Pellet Form) for Tire & Rubber Industries.



The Forace Advantage

Designing products to suit individual customer needs

Consistent quality

Prompt delivery

Wide network of field representatives – prompt response, easy accessibility



We Serve

Foundry Industry	: Consumables for Ferrous, Non Ferrous Foundries
Adhesive Industry	: PTBP Resins, Rosin Mod. Resins, Terpene Phenolics, Solvents
Rubber/ Tire Industry	: Resins, Releases, Coupling Agents, Additives, Waxes
Paint & Ink Industry	: Resins, Rosin Mod. Resins, Solvents
Refractory Industry	: Powdered, Liquid Phenolic Resins
Abrasive Industry	: Bonded, Coated Resins
Friction Industry	: Resins, Additives, Releases
Felt Industry	: Resins, Releases
Speciality Resins	: Resin for Rockwool, Glass fibre Composites, Filter Paper, Scrub Pads
Speciality Chemicals	: Plasticizers, Solvents

Vision

Continuous striving for leadership in the field of speciality resins and foundry chemicals.

Striving

A state of mind throughout the organisation, never being satisfied with the status quo and constantly striving to be better and to do new things.

Leadership

Leadership in the eyes of our customers through our thoughts, behaviour, actions and achievements. Build stronger relationship with our existing customers and reach out to new customers through innovation.

Mission

To provide value to our customers and business partners with quality products, innovative solutions and responsive services.

Values

We believe, our customers define the success of our organisation. The customers are always at the top of our mind in everything we do.

Our people are the heart of the organisation, and we give them the freedom to achieve through clarity of direction and free flow of information.

We have a responsibility to make a positive contribution to the society by our business interfaces.

Profile

Forace was founded in 1980 to address the need for a reliable source of resins in North India. Since then, it has experienced exponential growth and has secured a prominent position in the industry, exporting resins to approximately 28 countries worldwide. By consistently delivering excellent quality, exceptional performance, and outstanding customer service, Forace has emerged as a leader in foundry consumables both ferrous and non-ferrous and has become the largest producer of phenolic and furan resins in the Indian subcontinent.

In its portfolio, Forace offers refractory coatings, exothermic/insulating and HD sleeves, core glues, specialty resin coated sand for manufacturing intricate ferrous and non-ferrous castings, along with speciality release agents and other foundry consumables. The company provides a comprehensive range of consumables for the non-ferrous industry, including those used in high-pressure die-casting, low-pressure die-casting, gravity die-casting, smelters, and extrusion processes.

Demonstrating its commitment to backward integration, Forace manufactures its own key raw materials including para-toluenesulfonic acid (PTSA), ethylene glycol diacetate (EGDA), triacetin and dibasic ester (DBE), para-tertiary-octylphenol (PTOP), formaldehyde, para-formaldehyde & hexamine.

The company also supplies high-quality speciality phenolic resins for various applications, such as tire & rubber, refractory, abrasive, friction, filter paper, resin-felt, scrub pads, glass fiber-reinforced composite and rockwool.

Additionally, Forace produces resins, rosin modified resins and solvents for the paint and ink industry.

Forace product portfolio further extends to alkyl phenolic (PTBP resin), rosin ester gum, penta ester gum, terpene phenolic and solvents for adhesive industry.



Forace also manufactures resins, coupling agents, processing aids, waxes, HMMM, non-sticky rosin (in pellets) and terpene phenolic for the tire and rubber industries.

Through its partnership Forace-TAG, it offers high performance, new generation release agents for multiple segments, including tire & rubber, friction, composite, brake lining, headliner, wood composite, polyurethane, shoe sole, footwear, forging etc.

Forace collaborates with 10 leading global companies, providing their products and solutions to a wide range of customers.

Forace operates four specialized manufacturing units under Forace Speciality Chem Pvt. Ltd. in Haridwar, Uttarakhand as well as in Gujarat.

To ensure timely delivery to its customers, Forace has strategically established warehouses in Ahmedabad, Jamshedpur, Coimbatore, and Kolhapur, Durban, Johannesburg and UAE.

Forace has got 80 techno-commercial experts in various parts of India and sub-continent to closely work with our customers for providing technical and commercial support.



Facilities

Equipped with state-of-the-art DCS-controlled, fully automatic manufacturing facilities, the company has an installed capacity of 2,40,000 MT of resins at Haridwar, Uttarakhand and Gujarat.

Forace produces a full range of coatings and sleeves for foundries using the most modern equipment, with an installed capacity of 60,000 MT per annum at Haridwar, Uttarakhand and Gujarat.

A resin coated sand plant, established with the latest technology, has an installed capacity of 72,000 MT per annum at Haridwar, Uttarakhand and Gujarat.

Forace supplies non-ferrous consumables from a 24,000 MT per annum plant at Haridwar, Uttarakhand and Gujarat.

In addition, Forace operates a coating & consumables plant in South Africa with a capacity of 6,000 MT per annum.

To ensure automation and traceability, Forace employs the latest technologies, including SAP S4 HANA, a distributed control system (DCS), and a warehouse management system (WMS).

The company's greatest strength lies in its technically proficient workforce, which operates the Forace plants around the clock to facilitate seamless execution of all assignments.



Quality

Forace holds ISO 45001:2018, ISO 14001:2015, and ISO 9001:2015 certifications, reflecting its commitment to delivering products of the highest quality that precisely meet customer needs. The company is also European Reach certified.

Moreover, Forace has achieved IATF 16949 certification, underscoring the robustness of its quality management system.

Forace laboratories are outfitted with state-of-the-art equipment—including gas chromatography (GC), gel permeation chromatography (GPC), thermogravimetric analysis (TGA), flame photometer, kjaldahl, high-performance liquid chromatography (HPLC), fourier transform infrared spectroscopy (FTIR), and differential scanning calorimetry (DSC).

Through Forace warehouse management system (WMS) and the use of QR code technology, Forace ensures full traceability across every stage of production, from receiving raw materials to shipping finished products.

In addition, the company's automated and rigorously controlled manufacturing processes guarantees a consistently high standard of quality.



Technological Development and Services

Our steady growth story is a result of in-house research & development. A dedicated research team is continuously engaged in developing new products and upgrading the formulations, keeping abreast with changes taking place in technologies. We have been recognised as in-house - R&D unit by the Government of India.

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We have got a tire innovation centre. Our labs are well equipped with all the latest analytical instruments like banbury mixer, two roll mill, curing press, goodrich flexometer, premier RPA, premier mooney viscometer, picma tack tester, universal testing machine, box oven & multi cells ageing oven, flex fatigue lab: demattia flexometer, DIN abrasion tester.

We have got a dedicated R&D centre with experienced R&D team working on various products.

Our main forte is to offer customized solutions for challenging applications based on our customer's requirements. Appreciating that every industry has unique requirements varying on account of material inputs, process, location and atmospheric parameters, we develop products to meet the specifics of the customer.

Our field representatives keep track of the performance of each supply and forward the feedback to our technical experts for making necessary modifications if required. Our valued customers are thus assured of suitable products and are freed of the trouble of making adjustments at workplace.



Product List

Foundry Industry

Binders

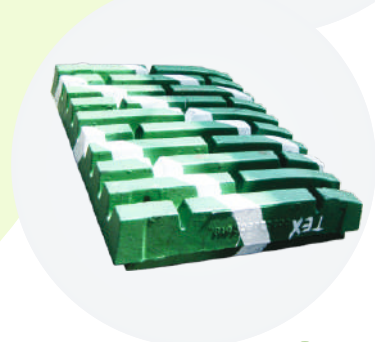
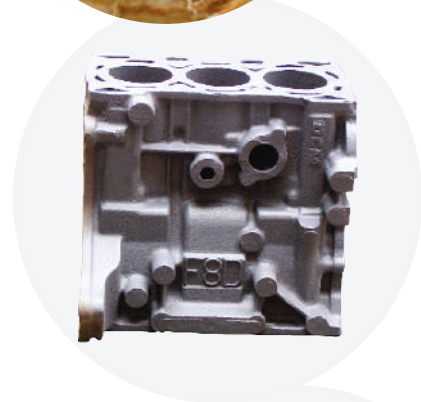
- Shell resin system (Solid / Liquid / Regular / NF)
- Two part no bake acid cured system
- Two part no bake ester set system (Regular / AC / FL)
- Three part no bake alkyd
- Phenolic urethane self setting system (Steel, Iron, NF)
- Phenolic urethane gassing cold box (Steel, Iron, NF)
- Hot box system for ferrous & non ferrous
- Furan no bake (Steel, SG, CI, NF)
- CO₂ cured phenolic
- Inorganic no bake system

Coatings

- Powder/Paste coatings zircon, graphite, alumina silicate
- Zircon spirit/water based
- Graphite spirit/water based
- Alumino-silicate mix refractory spirit/water based
- Magnesite spirit based
- Graphite water base for metallic trough
- Bismuth base coating
- Coating for lost foam process
- Coating for vacuum molding process
- Tellurium base coating
- Sulphur block coating
- Coating for centrifugal casting (Automotive Liners)
- Chillcoat
- Antiveining and Insulating coating

Other Foundry Consumables

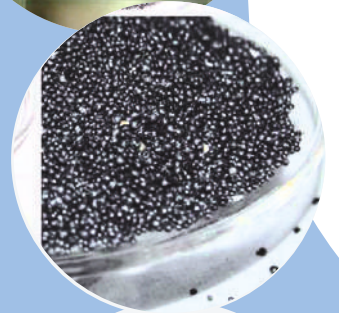
- Thinners
- Pattern cleaning agents
- Release agents
 - Release agent for green sand mould
 - Release agent for alkaline phenolic no bake system
 - Release agent for cold box
 - Parting agent for shell (water / solvent based)
 - Aluminium based release for no bake system



- Core joining paste
 - Hot to hot
 - Cold to cold
 - Cold to cold (ultra fast)
- Core repair paste
- Collapsible agent for silicate
- Anti piping compound
- Mould sealing rope
- Surface hardner for green sand mould
- Sealing compound for mould and core
- Silicon carbide, Carbon, Zirconia and Alumina foam filters
- Ceramic sand
- Chromite sand
- Slag coagulant (perlite ore)
- Spherox, Antiveining sand additives
- Additive for thermal reclamation of alkaline phenolic no bake resins
- Antiveining sand additives by John Winter, UK
- Forslag cleaner, Flux for cleaning refractories for ferrous application
- Sleeves
- Foundry equipment's for no bake foundries by MCM Foundry, Italy
- HD Sleeves by Faprosid, Italy

Shell Resin Coated Sand

- Forsand AC (for anti cracking grade)
- Forsand LN (for steel casting with low nitrogen)
- Forsand GP (for heavy section iron casting)
- Forsand NF (high collapsibility sand for aluminium castings)



Non Ferrous Industry Consumables

Long Life Die coats from John Winter, U.K

- Dytek T LL - Long life titanium oxide coating
- Dytek TES - Long life titanium oxide coating
- Dytek M - Textured insulating coating designed to promote metal flow and reduce entrapped air
- BN H2O-B - Boron nitride coating
- Dytek D - Two-part smooth insulated coating
- Dytek Zr - Zircon/red oxide primer coating
- Dytek V LL - Long life highly insulating moderately textured coating for multipurpose applications
- Dytek G - Graphite based coating



High Performance HPDC Lubricants from TAG Chemicals GmbH, Germany

- Forlube DL 6120 SW
- Forlube DL 6122 SW
- Forlube DL 6126 SW
- Forlube DL 6128 SW
- Forlube DL 6130 SW
- Forlube DL 6120 SWX
- Forlube DL 6122 SWX
- Forlube DL 6126 SWX
- Forlube DL 6128 SWX



Forlube DL 6120 series is a new generation product from TAG Chemicals GmbH which is silicon and wax free, includes excellent release and decreases polishing frequency on moulds drastically and hence increases productivity

Granulated Flux

- Forace GR - 510 Low temperature
- Forace GR -2516 Covering, drossing and cleaning
- Formagremover GR Magremover
- Forace GR -520 LT Low temperature
- Forace GR -520 Medium to low temperature



Powder Fluxes

- Forcoverall - 11 Covering & drossing
- Forcoverall - 36 High temp modifying
- Forbral - 4 rep Coverflux for copper base alloys
- Forcoverall - 88 Reclaiming of chips
- Forbral - 4 Coverflux for copper & bronze
- Forace MGR - 1 Low temperature cleaning
- Forace MGR - 2 Low temperature cleaning

Die Coatings for Gdc, Lpdc & Hpdc

- Forcoat NF -11 RL Graphite water based
- Forcoat NF -101 Zircon water based
- Forcoat NF - ALN Aluminum thinner base
- Forcoat NF - ALN (paste) Chill paint for aluminum casting
- Forcoat NF -1434 SPL Texture coating
- Forcoat NF - GL Plunger coating
- Forcoat NF - GL-G Plunger coating graphite free
- Forcoat NF - 60 Insulating coating
- Forcoat NG - 14 SPL General purpose
- Forcoat NF - 140 SPL Insulating long life

Degassing & Grainrefining tablets

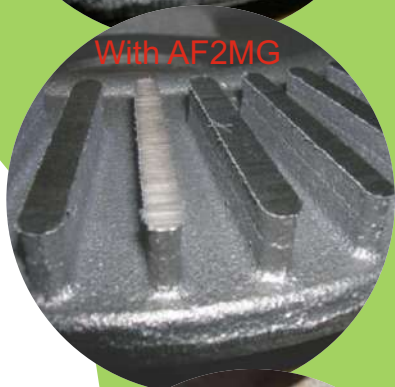
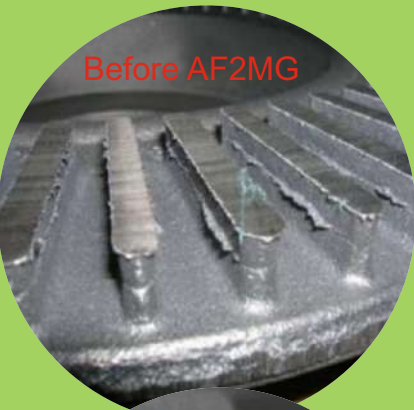
- Forgrain Refiner 2 Magnesium alloy based only sodium free grain refining by carbon
- Fordegasser 200 Degassing maximum scavenging AL chloride
- Fordegasser 190 Degassing and grain refining scavenging gas AL chloride
- Fordegasser 5/10/20 Degassing tablet for copper and brass
- Fordegasser CF/Fordegasser N2 Chlorine free degassing tablet
- Fordegasser CF/Fordegasser N2 Degassing tablets for copper and brass
- Formagremoval GR/tablet Magnesium removal

Others

- Formastic Insulating paste
- Forcoat NFLD Ladlecoat for cast iron
- Forcoat NF-SP Startup paste
- Forcoat NFLD G Ladlecoat for steel



Advance Solutions from John Winter & Co. Ltd. of United Kingdom



Anti veining sand additive (AF2MG, AF7, AF182B & AF194D) are powdered sand additives specifically developed to eliminate sand expansion defects caused by silica sand and eliminate veining even in most severe cases. In certain applications it reduces the use of coating.

AF2M, AF7, AF182B & AF194D are powdered sand additives specifically developed to eliminate expansion defects caused by silica sand. These defects are typically found in a wide range of castings such as turbo chargers, manifolds, axle housings and pumps when using PUCB binders.

Low additions to the core sand of typically 0.5% - 1.0% in case of AF2MG and 2-3.5% in case of AF7 at the sand mixing stage have been proven to eliminate veining, even in the most severe cases.

Apart from the obvious benefits of reducing scrap castings, adding AF2MG increases flowability of the mixed sand, improving core definition.

In certain applications, reduction of the use of coatings is possible as AF2MG, AF7, AF182B & AF194D can be used in conjunction with finer sand grades. This reduces the effects of metal penetration, where high levels of veining would be found. AF7 is used in resin coated sand to remove thermal cracking and metal penetration.

Ceramic Foam Filters from Drache Umwelttechnik GmbH, Germany

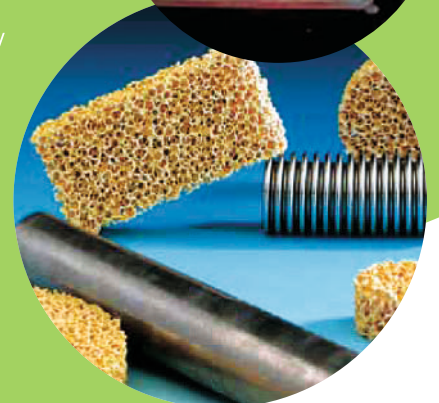
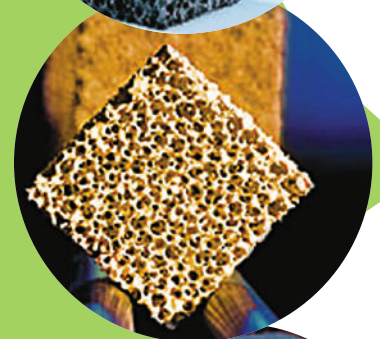
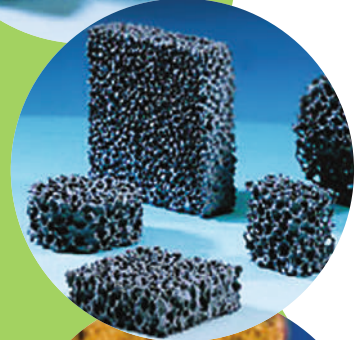
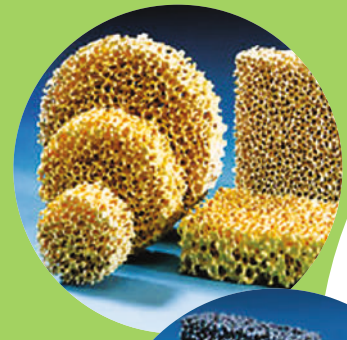
The world's leading manufacturers of Ceramic Foam Filters for molten metal filtration has chosen Forace as their exclusive partner in India.

Cerazirk ZrO_2 Filter

Cerazirk[®] ZrO_2 ceramic foam filters are used in cast steel, super alloy, cast iron and large iron casting applications. The filter is suitable for all types of steel alloys, as well as nickel-and cobalt-based alloys. The temperature stability of ZrO_2 Cerazirk filter is 1700°C . Because of the excellent thermal and mechanical capacity of the material used on the basis of stabilised ZrO_2 , our proven Cerazirk ZrO_2 filter are also highly suitable for applications in large cast iron with higher casting weights. Due to the excellent chemical resistance of ZrO_2 Cerazirk, this filter can also be used in pouring magnesium and its alloys because of its inertness.

Cerazirk LD Filter

Cerazirk LD – that is the new and highly innovative ceramic foam filter for all types of steel casting. The Cerazirk LD filter has some major advantages over common filtration solutions. Cerazirk LD filters offer an improved filter capacity over ZrO_2 -based filters. Furthermore, the risk of freezing effects at lower casting temperatures is greatly reduced, due to the lower material density of Cerazirk LD filter. Finally, Cerazirk LD filter have an innovative surface coating, which increases the filtration efficiency. The Cerazirk LD filter removes inclusions e.g. Al_2O_3 particles, Al-Mg spinels and FeO particles very efficiently from the melt - much more efficient compared to other filter materials.



Customized Feeder Sleeves

Forex – Highly Exothermic & Insulating Feeder Sleeves

The Forex series comprises highly exothermic and insulating feeder sleeves designed to feed all types of iron and steel castings. These feeder sleeves are available in open, blind, neck down, angle neck down, direct pour and oval shapes and are available in diameters ranging from 25 mm to 400 mm

Product Name	Type	Description	MEF
Forex 800 (XP)	Open Blind (with & without william wedge)	Highly Exothermic	1.7 - 1.8
Forex 400	Neck down Angle neck down	Exothermic	1.5 - 1.6
Forex 100	Direct pour Oval	Mildly Exothermic	1.45 - 1.5

Forin – Insulating Feeder Sleeves

Product Name	Type	Description	MEF
Forin 1001 (XP)	Open Blind (with & without william wedge)	Highly Insulating	1.4-1.5
Forin 2001	Neck down Angle neck down	Insulating	1.4-1.45
Forpour	Direct pour Oval	Exothermic and Insulating	1.5



Auxiliaries for Improving the Feeding Efficiency & Casting Quality

- Breaker Core

Breaker cores used to reduce the contact area between the feeder and the casting, making it easier to knock-off the feeders from various castings.

Breaker cores minimize gas-cutting and grinding by reducing the contact area, making feeder removal easier. This, in turn, lowers fettling and grinding costs.

Different breaker core designs are available for both steel and iron applications. Foundries commonly use either standard or customized breaker cores made from silica sand or chromite sand, depending on their specific requirements.

- Insulating Pads

It is an insulating padding material intended for replacing metal pads in iron, steel and non-ferrous castings. It is available in standard performed boards with thicknesses of 20 mm and 40 mm.

The pads are both durable and resilient, making them capable of withstanding the combined and compressive forces of machine molding.

They are also neutral to the casting surface, ensuring a final finish that is on par with the cast surface itself.

- Forflux APC - Anti Piping Compound

Forflux APC is highly sensitive, exothermic-insulating hot topping, compound for feeder heads.



Complete Product Range for Rubber & Tire Industries

- **Steel Cords Bonding Protector Resins**

- i. Resorcinol based
- ii. Non-resorcinol based

- **Steel Cords Bonding Promoter Resins**

- i. Non-cobalt salts or derivatives (new chemistry)

- **Tackifier Resins**

- i. General purpose - PTOP based
- ii. High performance - PTBP and PTOP based
- iii. Super tackifier - PTBP based

- **Reinforcing Resins**

- i. Un-modified PF
- ii. Tall oil modified PF
- iii. CNSL modified PF
- iv. Advance/ high performance

- **Melamine Resins (HMMM)**

- i. Zinc & non-zinc based
- ii. New amine salts with silanes

- **Rosin Modified Resins**

- i. Hydrocarbon - CCR (new chemistry)
- ii. Alkylphenols - tackifier, inks and coatings

- **Phenolic Resoles**

- i. PTBP based - adhesives
- ii. PTOP based - bladder curing

- **Tread Enhancement Additives (TEA)**

- i. Polyterpene (PT)
- ii. Poly - Alphamethyl styrene (PAMS)
- iii. Terpene Phenolics (TP - Functionalized)

- **Coupling Agents**

- i. Rubber - Carbon black
- ii. Rubber - Silica (new chemistry)

- **Silane Coupling Agents**

- i. Si - 69
- ii. Si - 266
- iii. Si - 363
- iv. NXT
- v. Advanced product (new chemistry)

- **Silica Dispersion or Processing Aids**

- i. Zinc and non-zinc based
- ii. New amine salts with silanes

- **Micro-Crystalline Waxes**

- i. Bi-modal
- ii. Tri-modal

- **Rubber Chemicals**

- i. Accelerators - CBS, TBBS, TBSI and CBSI
- ii. Ultra - accelerators

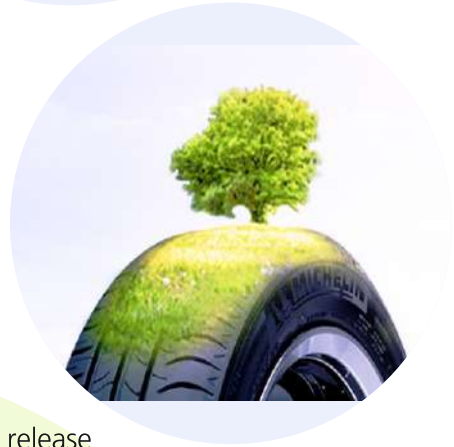
- **Rubber Anti-ozonants**

- i. Replacement for 6-PPD



Release Agent & Lubricants, TAG Germany for Rubber and Tire Industries

- FCM-419 - Permanent bladder coating
- FCM-419 Plus - Permanent bladder coating
- FCRA-100C - Semi-permanent mould coat
- FCRA-100CXX - Semi permanent mould coat
- FCOAT 4891- Permanent mould coat
- FUF-LUBE 729 - Unfiled inside lube
- FTH-LUBE 729 GREY- Filled inside lube
- FUF-LUBE 729 Grey 500 - Specialty filled inside lube (reactive) single release
- FL829 BR 40/700 - Multi release inside paint (reactive)
- FLY- LUBE 629 - Outside lube
- FW7-719 - Finish paint
- FRMB-289 - Rim lube



Advance Technical Solutions from TAG Chemicals of Germany

TAG Chemicals is a leading supplier of Release agents, Lubricants and other speciality chemicals, they have a wide range of products suited for tire & rubber, friction composite and brake lining, headliner, wood composite, polyurethane, shoe sole & footwear, forging etc.

Release Agent for Friction Composite

- FTM-FG-521C - is water based mould release agent for phenolic
- Forabond 6X - for water based bonding for friction materials

Release Agent for Headliner

- FTME-201C - Semi permanent release agent for headliners
- Z-21211-49C - Semi permanent release agent for headliners

Release Agent for Polyurethane System

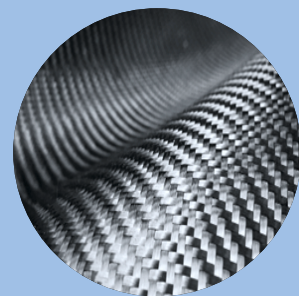
- FPU-307/FPU 407/FPU-705 - Release agent for polyurethane shoe systems
- FPU-207/407 W / SV - Release agent for PU rigid foam and integral skin
- FPU-207/407 SV - Release agent for PU rigid foam and integral skin
- PU-041 NE - Release agent for PU-flexible foam
- FPU-041-4N - Release agent for PU-flexible foam
- FPU -117 W - Release agent for PU-casting
- FPU -117 SV - Release agent for PU-casting
- FPU -117 - Release agent for PU-casting

Lubricant for Forgings

- SLP-305 - Seamless pipes
- FG-303 - Forging without graphite
- FG-303 GR C - forging with graphite
- FGAL - Aluminum forging

Release Agents & Special Chemicals for Wood Composite

- 602 WS31 - External fiberline for MDF
- 603 BP/AF - External fiberline for PB
- 602 WS12 - External fiberline for MDF
- 609 K301 - Releases for OSB
- 609 K401 - Releases for OSB
- 606 Series - Internal fiberline for particle board and MDF industry



Alkyl Phenolic Resin (PTBP Resin) for Adhesive Industry

Para-tertiary butylphenol (PTBP) resin is a thermosetting resin synthesized through the condensation of Para-tertiary butylphenol with formaldehyde. This resin is known for its excellent adhesive, chemical, and heat-resistant properties, making it ideal for various industrial adhesives.

Applications

- Leather Industries
- Footwear Industries
- Shoe Industries
- Foam Industries
- Rubber Industries
- Paint Industries

Products

- FPP 207 Light Yellow
- FPP 307 Dark Violet
- FPP 507 (HHR) High Heat Resistant Resin (Light Yellow)

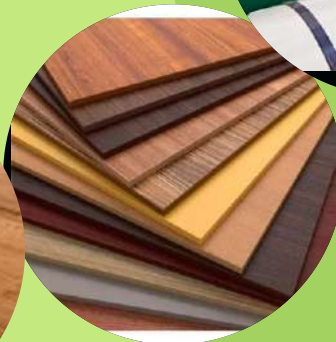
Solubility

Soluble in Aromatic solvents including toluene, benzene, ketones and chlorinated hydrocarbon.



Complete Range of Products for Paint and Ink Industry

- Butylated urea formaldehyde resin
- Butylated melamine formaldehyde resin
- Rosinated alkyds
- Short oil alkyds
- Medium oil alkyds
- Long oil alkyds
- Chainstopped alkyds
- Thermoplastic acrylic resin
- Thermosetting acrylic resin
- High solid acrylic resin
- 2k hydroxyl functional acrylic resin
- Reactive resin polyamide (hardners for epoxy)



Safety, Health and Environment

With strong principles of social commitment embedded within the company, all measures are taken to ensure perfect harmony with the delicate ecology surrounding the plant. As a part of its responsibility, the company has maintained 10,000 green trees surrounding the plant premises. Proper precautions are taken to ensure that there is no adverse impact on natural resources. Adequate standards are followed in handling solvents and hazardous chemicals.

Forace is a zero-discharge company powered by a state-of-the-art 1.5 MW solar facility, underscoring our dedication to environmental sustainability.

In addition, **Forace is certified with IATF 16949, ISO 45001:2018, 14001:2015 and 9001:2015** demonstrating our robust quality management system and commitment to delivering the highest standards of excellence in our operations.

Our technology development team continuously upgrades product formulations with a view to minimise free monomers, BTX solvents, so as to control deterioration of environment at workplace.





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