




 **CUSTOMIZED
READY TO USE
PHARMA
POLYMER**


 Since 1985
Vikram[®]
THERMO (INDIA) LTD.
Rewards of Research

“POLYMER EXCELLENCE Led Ready-To-Use Coating Systems”

VTIL achieved polymer excellence by discovery, development, manufacturing and marketing of research based products since last three decades.

With excellence of basic polymers :

 **DRCOAT** Excellent quality ready-to-use tablet coating systems for Enteric coating/ Film coating/ Moisture Barrier & Specialty coating to pharmaceutical industries.

 **DRCOAT** offers aqueous & non-aqueous based coating systems with complimentary technical support.

Our Customized Products

 **ENTERIC COATING PRODUCTS**

 **FILM COATING PRODUCTS**

 **SEAL COATING**

 **SPECIALTY PRODUCTS**

 **MOISTURE BARRIER**





Benefits of **DRCOAT**

- **DRCOAT** - The complete system for Functional and Non Functional Coating.
- **DRCOAT** - "THE QUALITY" meet the international standards.
- Customized Development of ready-to-use products by using three decades of POLYMER EXCELLENCE.
- World Class F&D SUPPORT from start to end.
- Computerized color matching ensures batch to batch consistency.
- Excellent technical assistance on 24 X 7 basis.
- **DRCOAT** based on HIGH QUALITY POLYMERS for enteric series products are manufactured in our WHO GMP compliant plant.

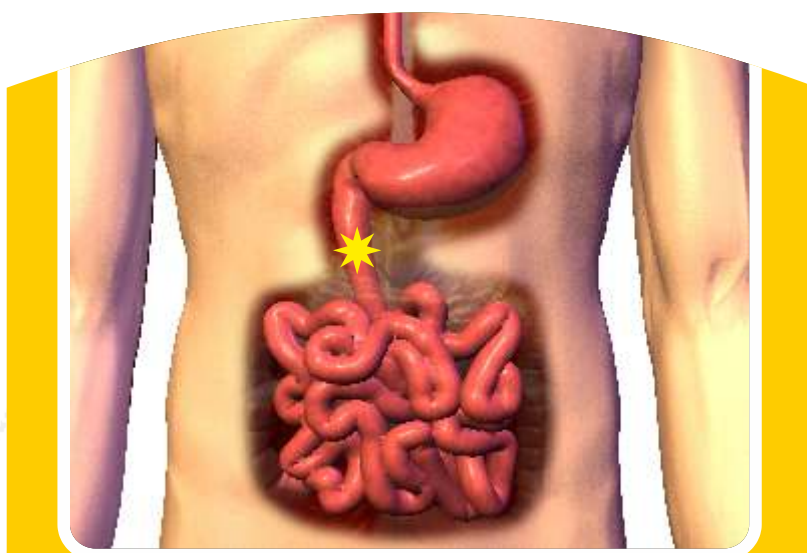
PRODUCT RANGE

PRODUCTS	DESCRIPTION	PHYSICAL FORM	TYPE OF DILUENT
ENTERIC COATING PRODUCTS			
DRCOAT ECS	Methacrylic Acid Copolymer Based Enteric Coating System	Powder	Non-Aqueous
DRCOAT ECA	Methacrylic Acid Copolymer Based Enteric Coating System	Powder	Aqueous
DRCOAT EZ	Methacrylic Acid Copolymer Based Enteric Coating System	Aq. Dispersion	Ready to Spray
IMMEDIATE RELEASE FILM COATING PRODUCTS			
DRCOAT FCS	HPMC Based Film Coating System	Powder	Non-Aqueous
DRCOAT FCA	HPMC Based Film Coating System	Powder	Aqueous
DRCOAT FCA II	HPMC Based Film Coating System	Powder	Aqueous
DRCOAT FCA III	HPMC Based Film Coating System	Powder	Aqueous
DRCOAT FCU	HPMC Based Film Coating System	Powder	Universal
DRCOAT HSP	PVA Based Film Coating System	Powder	Aqueous
DRCOAT SEAL	HPMC Based Seal Coating System	Powder	Universal
MOISTURE BARRIER PRODUCTS			
DRCOAT MB-S	Solvent Based Moisture Barrier Coating System	Powder	Non-Aqueous
DRCOAT MB-A	Aqueous Based Moisture Barrier Coating System	Powder	Aqueous
DRCOAT HSP⁺	PVA Based Moisture Barrier Coating System	Powder	Aqueous
SPECIALTY PRODUCTS			
DRCOAT PEARL	MICA Based Film Coating System	Powder	Universal
DRCOAT DUO	MICA Based Film Coating System	Powder	Universal
DRCOAT GLOW	HPMC Based Film Coating System	Powder	Universal
DRCOAT CLR	Transparent Film Coating System	Powder	Universal
DRCOAT FLV	Flavoured Film Coating System	Powder	Universal

ENTERIC COATING:

- Globally accepted enteric polymers (Methacrylate) based customized Aqueous and Non aqueous enteric coating material.
- **DRCOAT** Enteric series film is insoluble in water and natural & artificial gastric fluid. However, it is soluble in the region of digestive tract, where the fluids are neutral to weakly alkaline.
- **DRCOAT** Enteric series provides most effective enteric protection.

PRODUCT	DESCRIPTION	TYPE OF DILUENT	RECOMMENDED SOLVENT SYSTEM	RECONSTITUTION LEVEL	USAGE LEVEL / WEIGHT GAIN
DRCOAT ECS	Methacrylic acid copolymer based Enteric coating	Non-Aqueous	IPA: DM (95:5)	10-11% w/w	6-8 %
DRCOAT ECA	Methacrylic acid copolymer based Enteric coating	Aqueous	D.M. Water	18-20% w/w	7-9%
DRCOAT EZ	Methacrylic acid copolymer based Enteric coating	Aqueous	Ready to Spray	Ready to spray	8-10% on Dry polymer base



Application Example:

Diclofenac Sodium, Ketoprofen, Indomethacin, Para-amino-salicylic acid, Omeprazole, Pantoprazole, Rabeprazole, Esomeprazole, Lansoprazole, Bisacodyl, Bisacodyl Docusate Sodium, Sodium Valporate, Pancreatin, Aspirin, Doxilamine Succinate, Serratiopeptidase and Pantoxifylline.

Packaging:

10kg net in paper fiber drum with polyethylene lining.

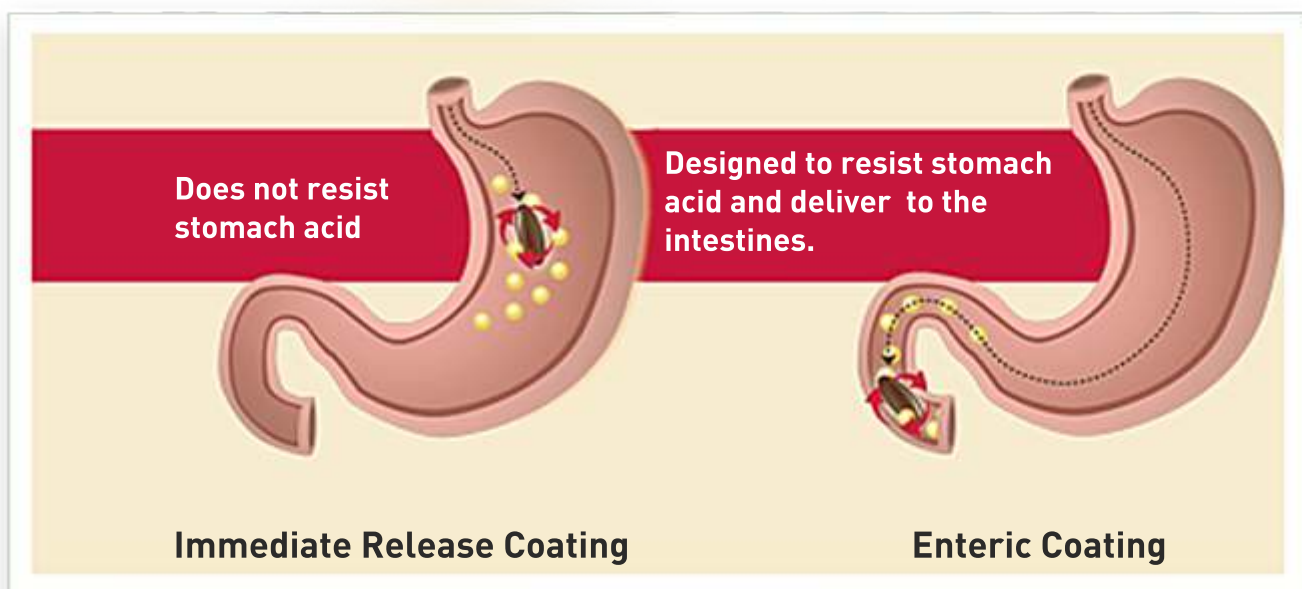
DRCOAT EZ : 60kg HDPE carboy.

Storage:

Store at controlled room temperature. (USP, General Monograph).

Coating Parameters

	NON-AQUEOUS	AQUEOUS
Inlet Temp.	40-45°C	60-65°C
Bed Temp.	30-35°C	35-40°C
Atomizing Air Pressure	NMT 2.0 Bar, as minimum as possible but NLT 1.0 Bar	NMT 2.0 Bar, as minimum as possible but NLT 1.0 Bar



IMMEDIATE RELEASE FILM COATING :

- ↙ The most basic film coating widely used in the pharma Industries for protection and better aesthetic appearance.
- ↙ Wide range of colors available as per requirement.
- ↙ **DRCOAT** is the best in class for its performance and appearance.

PRODUCTS	DESCRIPTION	TYPE OF DILUENT	RECOMMENDED SOLVENT SYSTEM	RECONSTITUTION LEVEL	WEIGHT GAIN / USAGE LEVEL
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A. Regular Film Coating :

DRCOAT FCS	HPMC based FILM coating	Non-Aqueous	IPA: MDC(50:50)	5-6 % w/w	2 - 2.5 %
DRCOAT FCA	HPMC based FILM coating	Aqueous	DM Water	11-12% w/w	2 - 2.5 %
DRCOAT FCA II	HPMC based FILM coating	Aqueous	DM Water	11-12% w/w	2 - 2.5 %
DRCOAT FCA III	HPMC based FILM coating	Aqueous	DM Water	15-20% w/w	2 - 2.5 %
DRCOAT FCU	HPMC based FILM coating	Universal	IPA:DM(80:20) IPA:MDC(50:50) DM Water	5-6% w/w 11-12% w/w	2 - 2.5 %
DRCOAT HSP	PVA based Film Coating	Aqueous	DM Water	Up to 20 % w/w	2.5 - 3 %

B. Seal Coating :

DRCOAT SEAL	HPMC based SEAL coating	Universal	IPA: MDC(60:40)	5-6% w/w	2-3%
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Application Examples:

All immediate release formulation such as Azithromycin, Levocetizine, Paracetamol, Aceclofenac, Calcium tablets, Chloroquine Phosphate, Erythromycin, Amoxicillin, Vitamins, Nutraceuticals, Potassium Clavulanate, Ciprofloxacin, Norfloxacin and Ranitidine.

Packaging:

10kg net in paper fiber drum with polyethylene lining.

Storage:

Store at controlled room temperature.
(USP, General Monograph).





Coating Parameters

	NON-AQUEOUS	AQUEOUS
Inlet Temp.	50-60°C	65-70°C
Bed Temp.	32-35°C	38-42°C
Atomizing Air Pressure	1 - 3.5 Bar	1 - 3.5 Bar



MOISTURE BARRIER COATING:

PRODUCTS	DESCRIPTION	TYPE OF DILUENT	RECOMMENDED SOLVENT SYSTEM	RECONSTITUTION LEVEL	WEIGHT GAIN / USAGE LEVEL
DRCOAT MB-S	Solvent based Moisture Barrier coating	Non-Aqueous	IPA: MDC(50:50)	5-6 % w/w	3 - 4 %
DRCOAT MB-A	Aqueous based Moisture Barrier coating	Aqueous	DM Water	11-12% w/w	3 - 4 %
DRCOAT HSP⁺	PVA based Moisture Barrier Coating System	Aqueous	DM Water	Up to 20 % w/w	3 - 4 %

Coating Parameters

	NON-AQUEOUS	AQUEOUS
Inlet Temp.	50-60°C	65-70°C
Bed Temp.	32-35°C	38-42°C
Atomizing Air Pressure	1 - 3.5 Bar	1 - 3.5 Bar

Packaging:

10kg net in paper fiber drum with polyethylene lining.

Storage:

Store at controlled room temperature.
(USP, General Monograph).



SPECIALTY COATING:

PRODUCTS	DESCRIPTION	TYPE OF DILUENT	RECOMMENDED SOLVENT SYSTEM	RECONSTITUTION LEVEL	WEIGHT GAIN / USAGE LEVEL
DRCOAT PEARL	MICA based FILM coating	Universal	IPA: MDC(50:50) DM Water	5-6 % w/w 11-12% w/w	2 - 2.5 %
DRCOAT DUO	MICA based FILM coating	Universal	IPA: MDC(50:50) DM Water	5-6 % w/w 11-12% w/w	2 - 2.5 %
DRCOAT GLOW	HPMC based FILM coating	Universal	IPA: MDC(50:50) DM Water	5-6 % w/w 11-12% w/w	1 - 2%
DRCOAT CLR	Transparent Film Coating	Universal	IPA: MDC(50:50) DM Water	5-6 % w/w 11-12% w/w	2 - 2.5 %
DRCOAT FLV	Flavoured Film Coating System	Universal	IPA: MDC(50:50) DM Water	5-6 % w/w 11-12% w/w	2 - 2.5 %


Packaging:

5kg & 10kg net in paper fiber drum with polyethylene lining.

Storage:

Store at controlled room temperature.
(USP, General Monograph).





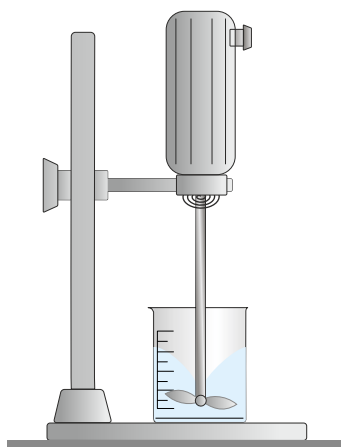
Research - Investigative activities that a business chooses to conduct with the intention of making a discovery that can either lead to the development of new products or processes, or to improvement of existing products or processes. Research and development is one of the means by which business can experience future growth through developing new products or processes to improve or expand their operations.

Research & Development

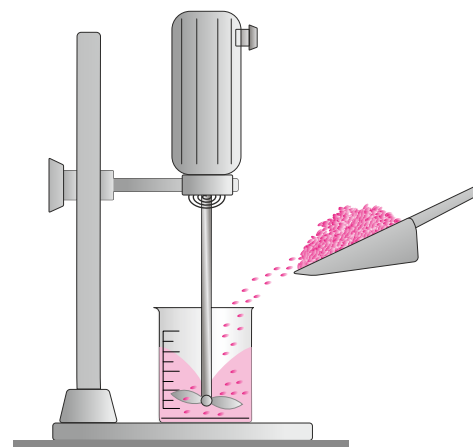
- ↪ The company has invested large amount of money and manpower resources in its R&D and F&D center and has carried out innovative process development work.
- ↪ It has a laboratory fully equipped with high-tech advanced instruments like HPLC - Varian, GPC - Varian, FTIR - Varian, GC - Varian, KF titrator, Brookfield Viscometer LV/HA, Photo spectrometer, Incubator, Dissolution tester, Disintegration tester, Autoclave, stability chamber, and other routine instruments, and highly qualified technical manpower.
- ↪ Vikram Thermo (India) Limited have a strong R&D and F&D team, with vast experienced and qualified pharmacists, research scientist, chemist & chemical engineers to develop various polymers in pharma/cosmetic applications.
- ↪ Vikram Thermo (India) Limited has also developed a separate Application/F&D facility for committed front line & back office techno marketing team to serve our customer 24 X 7.
- ↪ A newly developed advanced Wet Lab, Instrument Lab & Micro Lab to support process development & application.



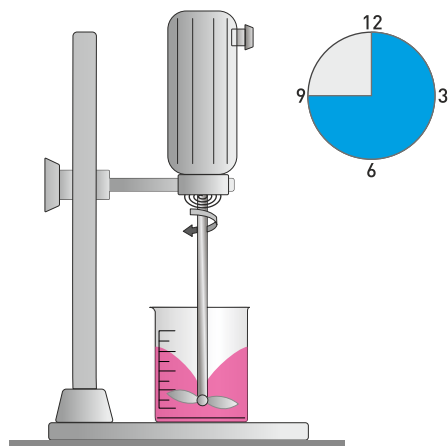
PICTORIAL SOLUTION PREPARATION



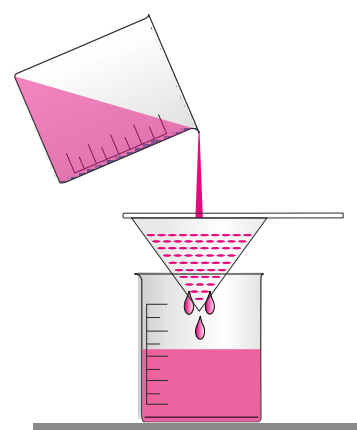
Vortex Formation



Slow addition in Vortex



45 Minutes Stirring



200 mesh filtration
(Nylon Cloth)



Tips for Trouble Free Coating:

- Pan RPM as per pan size, adequate number of baffles and spraying fan width are important parameters for uniform coverage and weight gain.
- Adequate Spray rate with optimized atomizing pressure together with appropriate gun-to-bed distance ensuring proper bed temperature will lead to perfect & smooth coating.
- Avoid excessive heat to arrest flying of coating polymer and roughness on tablet surface.
- Proper curing of coated tablets is recommended before testing & packing.
- During spray, continuous slow speed stirring is recommended.
- Avoid manual stirring. Good stirrer facility ensures perfect spray able solution.
- Excellent heating & exhaust system are critical for quality coating.
- Do not colloid any enteric series materials.

A large, vertically oriented rectangular area with rounded corners, filled with horizontal dashed lines for writing. The background of this area is a light cream color, contrasting with the yellow background of the rest of the page.



We always in new *Re* search



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