

# *Rheoflow*<sup>®</sup>

Solutions for Tomorrow

**Additives & Resins**  
for Paints & Coatings

 **KS Chemical**

“

KS Chemical's core essence is to give 'value and function' to paints and coatings and improve their performance.

We are constantly innovating and growing with our global customers in line with trends in the paint and coating market.

-Eunjung Yoo, CEO

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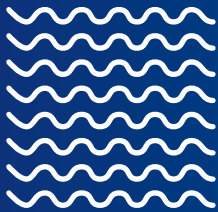
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# Additives for Liquid Coatings



## **WE PROVIDE**

multipurpose additives for liquid coatings that effectively enhance the product quality even at small dosages. Each additive is designed to achieve multifunctional performances in the final coatings, as well as offering sustainable solution and displaying high compatibility with different solvent borne systems.

Solvent  
Borne  
System

## Leveling Agent

PRODUCT	SOLID(WT%), FORM	CHEMICAL TYPES	FEATURES	APPLICATION
<b>Rheoflow® LP-1050</b>	50%, Liquid	Acrylic copolymer	<ul style="list-style-type: none"> <li>• Excellent flow and leveling properties</li> <li>• Prevent surface defects such as craters, pinholes</li> <li>• Good pick-up and recoatability</li> </ul>	<ul style="list-style-type: none"> <li>• All solvent based baking systems</li> <li>• All solvent based no baking systems</li> </ul>
<b>Rheoflow® LP-4200</b>	100%, Liquid		<ul style="list-style-type: none"> <li>• Excellent flow and leveling properties</li> <li>• Good adhesion and flexibility</li> <li>• Good compatibility with other resins</li> </ul>	<ul style="list-style-type: none"> <li>• High solid coatings and UV-coatings</li> <li>• Powder coatings</li> </ul>
<b>Rheoflow® LP-4500</b>			<ul style="list-style-type: none"> <li>• Prevent surface defects such as craters, pinholes, fish eyes, etc.</li> <li>• Good film appearance and recoatability</li> </ul>	
<b>Rheoflow® LP-2000</b>	1%, Liquid	Combination of high b:p solvents	<ul style="list-style-type: none"> <li>• Excellent flow and leveling properties</li> <li>• Prevent surface defects such as craters, pinholes, blisters and orange peels</li> <li>• Prevent boiling marks and improve leveling</li> </ul>	<ul style="list-style-type: none"> <li>• All solvent based baking systems</li> <li>• All solvent based air drying systems</li> </ul>
<b>Rheoflow® LP-2700</b>	75%, Liquid	Acrylic copolymer	<ul style="list-style-type: none"> <li>• Leveling agent with defoaming effect</li> <li>• Prevent surface defects such as craters, pinholes, fish eyes, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Coil coatings</li> <li>• General industries</li> </ul>
<b>Rheoflow® LP-2745</b>	45%, Liquid		<ul style="list-style-type: none"> <li>• Good compatibility with other resins</li> <li>• Good film appearance and recoatability</li> </ul>	
<b>Rheoflow® LP-5400</b>	50%, Liquid		<ul style="list-style-type: none"> <li>• Improve leveling properties</li> <li>• Prevent surface defects such as crater</li> <li>• Leveling agent with defoaming effect</li> <li>• Does not interfere with intercoat adhesion</li> </ul>	
<b>Rheoflow® LP-5500</b>		<ul style="list-style-type: none"> <li>• Excellent flow and leveling properties</li> <li>• Good pick-up and recoatability</li> </ul>	<ul style="list-style-type: none"> <li>• All solvent based baking systems</li> <li>• All solvent based no baking systems</li> <li>• Acryl/Urethane, Epoxy</li> </ul>	
<b>Rheoflow® LP-5800</b>		<ul style="list-style-type: none"> <li>• Excellent flow and leveling properties</li> <li>• Improve gloss</li> <li>• Thermally stable</li> <li>• Does not interfere with recoatability or intercoat adhesion</li> </ul>	<ul style="list-style-type: none"> <li>• Automotive OEM coatings</li> <li>• All solvent based baking systems</li> <li>• All solvent based no baking systems</li> <li>• Solvent free systems</li> </ul>	

Solvent  
Borne  
System

## Wetting & Dispersing Agent

PRODUCT	SOLID(WT%), FORM	CHEMICAL TYPES	FEATURES	APPLICATION
<b>Rheoflow® DS-360</b>	50%, Liquid	Salt of unsaturated polyamine amides and acidic polyesters	<ul style="list-style-type: none"> <li>• Reduce dispersion time</li> <li>• Stabilize the pigment dispersion</li> <li>• Decrease pigment sedimentation</li> <li>• Increase gloss and improve flow</li> <li>• Improve storage stability</li> </ul>	<ul style="list-style-type: none"> <li>• Architectural coatings</li> <li>• Industrial coatings</li> <li>• Furniture coatings</li> <li>• Bentonite pastes</li> </ul>
<b>Rheoflow® DS-363</b>	45%, Liquid	High molecular weight block copolymers with pigment affinity groups	<ul style="list-style-type: none"> <li>• Achieve high gloss due to the small particle sizes of the deflocculated pigments</li> <li>• Improve color strength</li> <li>• Increase transparency</li> <li>• Increase hiding power</li> <li>• Deflocculate pigments and stabilize them by means of steric hindrance</li> </ul>	<ul style="list-style-type: none"> <li>• Industrial coatings</li> <li>• Automotive OEM &amp; refinish coatings</li> <li>• Coil coatings</li> <li>• Wood coatings</li> <li>• Architectural coatings</li> <li>• Pigment concentrates</li> </ul>
<b>Rheoflow® DS-376</b>	100%, Liquid	Ethoxylate phosphate	<ul style="list-style-type: none"> <li>• Wetting and dispersing carbon blacks</li> <li>• Suitable for stabilizing organic pigments and acidic/neutral carbon blacks</li> </ul>	<ul style="list-style-type: none"> <li>• Pigment concentrates</li> <li>• Plasticizers</li> <li>• Unsaturated polyester</li> <li>• PVC Plasticsols</li> <li>• PU floorings and foam</li> </ul>
<b>Rheoflow® DS-425</b>	80%, Liquid	Modified acrylic copolymer	<ul style="list-style-type: none"> <li>• Excellent deaerating power during paint manufacturing and mixing process</li> <li>• Excellent wetting and dispersing effect on fillers and pigments</li> <li>• Good flow and leveling properties</li> <li>• Good film appearance and recoatability</li> </ul>	<ul style="list-style-type: none"> <li>• Unsaturated polyester and UV-curing coatings</li> <li>• Putties, high fillers loading systems, etc.</li> <li>• High viscosity coatings</li> <li>• UV curing coating systems</li> </ul>

Solvent  
Borne  
System

## Releasing Agent for Plastic

PRODUCT	SOLID(WT%), FORM	CHEMICAL TYPES	FEATURES	APPLICATION
<b>Rheoflow® KMA-125</b>	100%, Liquid	The complex mixture of fatty amines with copolymers of organic phosphate esters and fatty acids	<ul style="list-style-type: none"> <li>• Internal Releaser for Pultrusions of unsaturated polyester, vinyl ester, etc.</li> <li>• Universal wetting and dispersing additive for mold applications</li> </ul>	<ul style="list-style-type: none"> <li>• An internal lubricant for Pultrusion, SMC, BMC and RTM of the thermosetting resins rubber and thermoplastic resins, etc.</li> </ul>

Solvent  
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System

## Defoamer

PRODUCT	SOLID(WT%), FORM	CHEMICAL TYPES	FEATURES	APPLICATION
<b>Rheoflow® AF-600</b>	<1%, Liquid	Modified silicone	<ul style="list-style-type: none"> <li>• Excellent deaerating power during paint manufacturing and painting</li> <li>• Does not interfere with intercoat adhesion and transparency</li> <li>• Hardly cause surface defects such as craters, pinholes, orange peel, etc.</li> <li>• Good defoaming persistence</li> </ul>	<ul style="list-style-type: none"> <li>• Enamel</li> </ul>
<b>Rheoflow® AF-630</b>	<3%, Liquid		<ul style="list-style-type: none"> <li>• Excellent deaerating power during paint manufacturing and mixing process</li> <li>• Excellent defoaming control effect on coatings</li> <li>• Does not interfere with recoatability or intercoat adhesion</li> </ul>	<ul style="list-style-type: none"> <li>• Heavy duty coatings</li> </ul>
<b>Rheoflow® AF-660</b>	<1%, Liquid		<ul style="list-style-type: none"> <li>• Excellent deaerating power during paint manufacturing and painting</li> <li>• Does not interfere with intercoat adhesion and transparency</li> <li>• Hardly cause surface defects such as craters, pinholes, orange peel, etc.</li> <li>• Good defoaming persistence</li> </ul>	<ul style="list-style-type: none"> <li>• Two-pack epoxy and two-pack polyurethane systems</li> </ul>
<b>Rheoflow® AF-750</b>	20%, Liquid	Acrylic copolymer	<ul style="list-style-type: none"> <li>• Excellent deaerating power during paint manufacturing and mixing process</li> <li>• Good flow and leveling properties</li> <li>• Prevent surface defects such as craters, pinholes, fish eyes, etc.</li> <li>• Good film appearance and recoatability</li> </ul>	<ul style="list-style-type: none"> <li>• Alkyd/Melamine, Alkyd/Urethane</li> <li>• Acryl/Melamine, Urethane/Melamine, Polyester/Melamine, etc.</li> </ul>
<b>Rheoflow® AF-754</b>	25%, Liquid			<ul style="list-style-type: none"> <li>• High viscosity coatings</li> <li>• Epoxy heavy duty paintings and floor coatings based on Urethane or Epoxy</li> </ul>
<b>Rheoflow® AF-770</b>	30%, Liquid			<ul style="list-style-type: none"> <li>• Unsaturated polyester film coatings and gel coatings</li> <li>• Putties, high fillers loading systems, etc.</li> <li>• Artificial marble, unsaturated resins</li> <li>• UV coatings</li> </ul>

Solvent  
Borne  
System

## Acid Catalyst

PRODUCT	SOLID(WT%), FORM	CHEMICAL TYPES	FEATURES	APPLICATION
<b>Hicure® AC-100</b>	50%, Liquid	Amine salt of alkylbenzene sulfonic acid	<ul style="list-style-type: none"> <li>• Fast cure &amp; low curing temperature</li> <li>• Excellent hardness, gloss, humidity resistance and corrosion resistance</li> <li>• Good mechanical properties</li> <li>• Good solubility with resins and solvents</li> </ul>	<ul style="list-style-type: none"> <li>• All solvent based baking systems - Melamine, Urea</li> <li>• Automotive, coil coatings, general industries, appliances, etc.</li> </ul>
<b>Hicure® AC-250</b>	32%, Liquid	Amine salt of p-Toluenesul- fonic acid (p-TSA)	<ul style="list-style-type: none"> <li>• Fast cure &amp; low curing temperature</li> <li>• Good cure and viscosity stability</li> <li>• Water soluble and high solids coating application</li> <li>• Excellent durability</li> </ul>	

Solvent  
Borne  
System

## Rheology Modifier

PRODUCT	SOLID(WT%), FORM	CHEMICAL TYPES	FEATURES	APPLICATION
<b>Rheoflow® SCR 430BX-40</b>	40%, Liquid	Urea-modified acrylic resin	<ul style="list-style-type: none"> <li>• Excellent metallic orientation effect</li> <li>• Good adhesion and chipping resistance</li> <li>• Excellent sagging control</li> </ul>	<ul style="list-style-type: none"> <li>• Automotive OEM high solids metallic base coats for wet-on-wet application</li> <li>• Aluminium orientation</li> </ul>
<b>Rheoflow® ASA 410DM-50</b>	52%, Liquid	Urea-modified solution	<ul style="list-style-type: none"> <li>• Strong thixotropic behavior</li> <li>• Pseudo-plastic and thixotropic rheology prevent settling and sagging</li> <li>• Recommended usage is mainly medium polarity systems</li> <li>• Good chemical resistance and weather resistance</li> </ul>	<ul style="list-style-type: none"> <li>• Industrial coatings</li> <li>• Traffic coatings</li> <li>• PUR-systems</li> <li>• Zinc-rich coatings and fillers, heavy duty coatings</li> </ul>



Solvent  
Borne  
System

## Additive to increase the Conductivity

PRODUCT	SOLID(WT%), FORM	CHEMICAL TYPES	FEATURES	APPLICATION
<b>Rheoflow® EC-180</b>	70%, Liquid	Solution of an alkylolammonium salt of an unsaturated acidic carboxylic acid ester	<ul style="list-style-type: none"> <li>• Increase the electrical conductivity</li> </ul>	<ul style="list-style-type: none"> <li>• Electrostatic spray coatings</li> <li>• Automotive interior coatings</li> <li>• Automotive bumper coatings</li> </ul>

# Additives for Liquid Coatings



## **WE COOPERATE**

on the development of water borne systems, which are considered eco-friendly and advanced coating technologies. We are ready to collaborate to meet the needs of our customers with our extensive experience of water borne systems.

Water  
Borne  
System

## Wetting & Dispersing Agent

PRODUCT	SOLID(WT%), FORM	CHEMICAL TYPES	FEATURES	APPLICATION
<b>Rheoflow® DW-104</b>	100%, Liquid	Alkoxyate	<ul style="list-style-type: none"> <li>• Wetting and foam control agent</li> <li>• Strong pigment dispersion</li> <li>• Perfect defoaming and appropriate anti-foaming effect</li> </ul>	<ul style="list-style-type: none"> <li>• Electrodeposition coatings</li> <li>• Water based coatings</li> <li>• Architectural coatings</li> <li>• Printing inks</li> </ul>
<b>Rheoflow® DW-104BC</b>	50%, Liquid			

Water  
Borne  
System

## Anti-crater & Dispersing Agent for ED Coatings

PRODUCT	SOLID(WT%), FORM	CHEMICAL TYPES	FEATURES	APPLICATION
<b>Rheoflow® ACW-4040</b>	40%, Liquid (Water)	Modified acrylic copolymer	<ul style="list-style-type: none"> <li>• Good flow and leveling properties</li> <li>• Good film appearance and recoatability</li> <li>• Excellent wetting and dispersing effect on fillers and pigments</li> <li>• Excellent anti-cratering effect on the coated film</li> </ul>	<ul style="list-style-type: none"> <li>• ED-paints                             <ul style="list-style-type: none"> <li>- Anionic &amp; Cationic coatings</li> </ul> </li> <li>• Water based coatings                             <ul style="list-style-type: none"> <li>- Urethane, Acrylic, Epoxy, Polyester, Alkyd, etc.</li> </ul> </li> <li>• Water based inks</li> </ul>

Water  
Borne  
System

## Plasticizer for ED Coatings

PRODUCT	SOLID(WT%), FORM	CHEMICAL TYPES	FEATURES	APPLICATION
<b>Rheoflow® DW-1000</b>	>90%, Liquid	Ethylene oxide modified organic compound	<ul style="list-style-type: none"> <li>• Improve film thickness</li> <li>• Prevent surface defects</li> <li>• VOC abatement</li> </ul>	<ul style="list-style-type: none"> <li>• ED-paints                             <ul style="list-style-type: none"> <li>- Anionic &amp; Cationic coatings</li> </ul> </li> <li>• Water based inks</li> </ul>

# Additives for Powder Coatings



## **OUR RHEOFLOW®**

Flow & Leveling agent product series effectively eliminates surface defects such as craters, fish-eyes and orange peels as well as significantly reinforcing the intercoat adhesion, recoatability and contamination resistance through enhanced substrate wetting/tension.

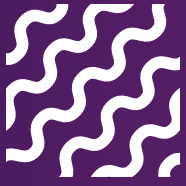
## Leveling Agent with Silica

PRODUCT	SOLID(WT%), FORM	CHEMICAL TYPES	FEATURES	APPLICATION
Rheoflow® <b>PLP-100</b>	100%, Powder	Acrylic copolymer with silica	<ul style="list-style-type: none"> <li>• Excellent flow and leveling properties</li> <li>• Prevent surface defects such as craters, pinholes, fish eyes, etc.</li> <li>• Good recoatability</li> <li>• Excellent UV and weather resistance</li> </ul>	<ul style="list-style-type: none"> <li>• Powder coatings                             <ul style="list-style-type: none"> <li>- Acrylic, Epoxy, Polyester</li> <li>- Urethane &amp; Hybrid systems</li> </ul> </li> </ul>
Rheoflow® <b>PLP-100H</b>				
Rheoflow® <b>PLP-200</b>				
Rheoflow® <b>PLP-560</b>				
Rheoflow® <b>PLP-600</b>				
Rheoflow® <b>PLP-650</b>				
Rheoflow® <b>PLP-770</b>				
Rheoflow® <b>PLP-850</b>				

## Leveling Agent for Masterbatch

PRODUCT	SOLID(WT%), FORM	CHEMICAL TYPES	FEATURES	APPLICATION
Rheoflow® <b>LP-4000</b>	100%, Liquid	Acrylic copolymer	<ul style="list-style-type: none"> <li>• Excellent flow and leveling properties</li> <li>• Prevent surface defects such as craters, pinholes, fish eyes, etc.</li> <li>• Good recoatability</li> <li>• Good adhesion and flexibility</li> <li>• Compatible with other resins</li> </ul>	<ul style="list-style-type: none"> <li>• Powder coatings                             <ul style="list-style-type: none"> <li>- Acrylic, Epoxy, Polyester</li> <li>- Urethane &amp; Hybrid systems</li> </ul> </li> <li>• Printing inks</li> <li>• High solid coatings &amp; UV-coatings</li> </ul>
Rheoflow® <b>LP-5000</b>				
Rheoflow® <b>LP-6000</b>				
Rheoflow® <b>LP-8000</b>				

# Resins/ Polymer



## **WE SUPPLY**

synthetic resins for Automotive, Refinish, PCM, and general industrial coatings application. Resins or Polymer are the key component of coatings allowing adhesion to a substrate, binding pigments and extenders together and determining important properties of durability, flexibility and gloss of the finished products.

## Blocked Isocyanate

PRODUCT	SOLID(WT%), FORM	CHEMICAL TYPES	DISSOCIATION TEMP.	FEATURES	APPLICATION
<b>Hiblock® BI-160</b>	60%, Liquid	Blocked aliphatic polyisocyanate based on hexamethylene diisocyanate trimer solution	90~100 °C	<ul style="list-style-type: none"> <li>• Fast cure &amp; low curing temperature</li> <li>• Good flexibility and adhesion</li> <li>• Good chipping resistance and mechanical properties</li> <li>• Excellent weather resistance</li> </ul>	<ul style="list-style-type: none"> <li>• One component baking systems with hydroxyl functional reactants - Alkyd, Acrylic, Polyester, Polyurethane, Epoxy, etc.</li> <li>• Coil coatings, can coatings, general industries, appliances, automotive coatings, etc.</li> </ul>
<b>Hiblock® BI-160B</b>					
<b>Hiblock® BI-175</b>	75%, Liquid		140~150 °C		
<b>Hiblock® BI-180</b>			120~130 °C		

Let's work together  
and make  
something great.

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Email

[info@ks-chem.co.kr](mailto:info@ks-chem.co.kr)



Web

[www.ks-chem.co.kr](http://www.ks-chem.co.kr)



Address

12, Hwasan-3gil, Onsan-eup,  
Ulju-gun, Ulsan, 45009, S.Korea



Tel

+82-52-239-2271

-

Fax

+82-52-239-2275

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*[www.ks-chem.co.kr](http://www.ks-chem.co.kr)*

**Tel:** +82-52-239-2271    **Fax:** +82-52-239-2275    **Email:** [info@ks-chem.co.kr](mailto:info@ks-chem.co.kr)    **Web:** [www.ks-chem.co.kr](http://www.ks-chem.co.kr)

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