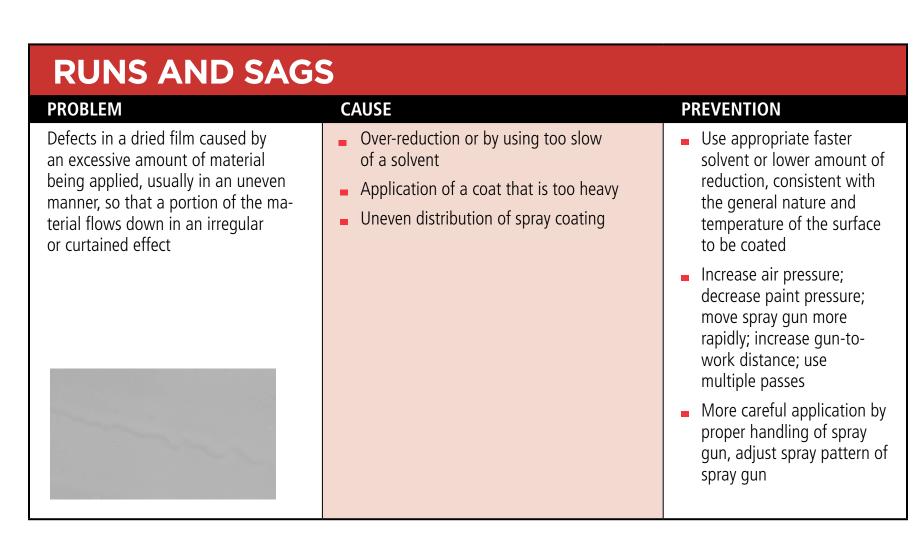
# LIQUID COATINGS

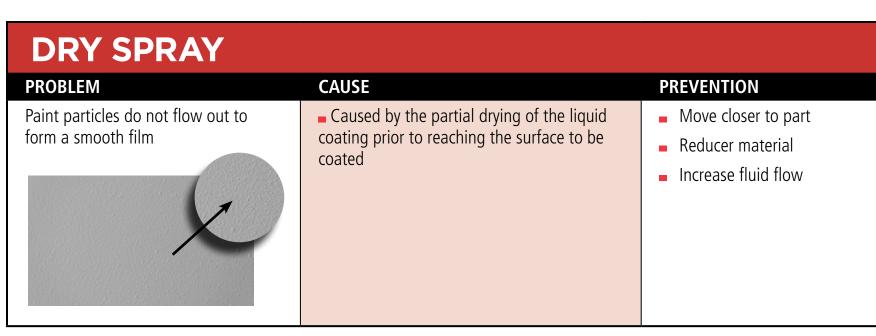
## TROUBLESHOOTING GUIDE



#### **FISHEYES PREVENTION** Clean surface with A surface depression or crater in the Unclean surface wet finish film — fisheyes are caused appropriate solvent, Incompatibility between primer by repulsion of the wet finish by a chemicals, or mechanical and topcoat surface contaminate such as oil or cleaning process Silicone contamination silicone materials Use alternate primer or alternate paint system Locate source of contamination and eliminate it. Check wipers, belt dressings, lubricating greases and oils, hand creams

CONTAMINATION		
PROBLEM	CAUSE	PREVENTION
Foreign particles embedded in paint film (dirt, hair, etc. in paint)	<ul> <li>Inadequate cleaning of the surface to be painted</li> <li>Dirty spraying environment</li> <li>Inadequate air filtration or unfiltered air entering the booth</li> <li>Dirty or unsuitable work clothes that contain dust, lint, or fibers</li> <li>Particles from deteriorated air supply lines</li> <li>Dirty spray gun</li> </ul>	<ul> <li>Thoroughly blow off and wipe the surface to be painted</li> <li>Maintain a clean working area</li> <li>Install proper air filters</li> <li>Repair or replace defective air lines</li> <li>Properly clean and maintain spray equipment</li> </ul>





#### **PINHOLING PREVENTION** A defect caused by rapid solvent loss, Solvent selection or reduction Reducing solvent selection which creates tiny holes in the finish Inadequate flash time Increase flash time that penetrate to the underlying Force dry oven Reduce temperature surface. Pinholes may or may not have raised edges High solids coating with too heavy of a film build Control film thickness. Too low of atomization pressures for tips Increasing atomization air being used Decrease tip size or Excess trapped air incorporated into the replace tips paint prior to application Reduce mixing speeds that Loose fittings on the paint intake tube, incorporate air adding air into the paint Make sure all fittings are appropriately tightened and seals are properly fit

ORANGE PEEL		
PROBLEM	CAUSE	PREVENTION
Pebbled film surface similar in appearance to the skin of an orange	<ul> <li>Use of improper solvent for prevailing temperature conditions</li> </ul>	<ul><li>Choose a solvent which will allow greater flow</li></ul>
	<ul> <li>Improper handling of spray equipment</li> <li>Application of a film that is too thing, not allowing proper flow</li> <li>Too high in viscosity at application</li> </ul>	<ul> <li>Adjust air pressure and fluid flow and be sure that gun is held at proper distance from work</li> <li>Apply heavier coating</li> <li>Reduce to proper application viscosity</li> </ul>

### **SOLVENT POPPING CAUSE PREVENTION** PROBLEM Thinner/reducer evaporating too fast for Select recommended A paint defect characterized by raised bumps in the surface — caused by thinner/reducer based on spraying conditions solvent vapor forming within the temperature, humidity, and Too much air movement causing surface paint after it has begun to skin-over. air movement to "skin over" before solvents evaporate The resulting vapor pressure raises Restrict air movement over the paint surface at its weaker spots the surface being painted

Sherwin-Williams liquid coatings offer durable and economical solutions that can be used in a variety of application settings. With a full portfolio of solvent and water-based options, Sherwin-Williams offers product solutions that meet a wide range of performance, VOC, and application needs. Our liquid coatings provide you with full performance and maximum flexibility across a complete color palette.

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LOSS OF ADHESION TO SUBSTRATE		
PROBLEM	CAUSE	PREVENTION
Loss of adhesion on scribe	<ul> <li>Inadequate cleaning</li> <li>Certain types of metal such as galvanized iron, cadmium, and zinc are difficult surfaces</li> </ul>	Revisit pretreatment system. Contact supplier. A quick test is the "waterbreak free" test. Cold water is poured over the part — if the water film is continuous, there is a good chance the surface is clean. Caution should be taken, however, due to many surfactants that cause a water-break-free condition, even though the surface may still be soiled
		<ul> <li>If normal methods of metal preparation do not overcome adhesion difficulties, then send full particulars, with samples of metal, to your Sherwin- Williams representative</li> </ul>

BLISTERING		
PROBLEM	CAUSE	PREVENTION
The formation of blisters in paint films by the local loss of adhesion and lifting of the film from the underlying substrate	<ul> <li>Moisture trapped beneath the paint film due to:         <ul> <li>» Improper dry time after wet sanding</li> <li>» Contaminated air lines</li> <li>» Spraying in extreme high humidity conditions</li> </ul> </li> <li>Trapped solvents from applying wet heavy coats with insufficient flash time between coats</li> <li>Improper dry time of undercoats before topcoating</li> <li>Painting over grease, oil, or rust</li> </ul>	<ul> <li>Apply materials according to product recommendations, allowing sufficient flash time between coats</li> <li>Allow undercoats to thoroughly dry/cure before topcoating</li> <li>Clean and prep substrate using recommended products and procedures</li> </ul>

WATER SPOTTING			
PROBLEM	CAUSE	PREVENTION	
Circles with raised edges or whitish spots resembling the various shapes of water droplets appear on the surface of the paint film	<ul> <li>Allowing water to come into contact with a finish that is not thoroughly dried/cured</li> </ul>	<ul> <li>Do not allow water to come into contact with newly painted finish</li> <li>Store inside longer after coating parts</li> <li>Verify mix ratio and cure conditions</li> </ul>	

SCRATCHING OR MARRING		
PROBLEM	CAUSE	PREVENTION
Slight incisions, breaks, tears, or indentations on the surface caused by abrasive friction	<ul> <li>Film not completely dried</li> <li>Film not cured – catalyzed coating may be under catalyzed</li> </ul>	<ul> <li>Allow for more complete air-drying or baking</li> <li>Check for proper ratio of paint to catalyst</li> </ul>