

3KS CARC Application

Graco Plural-Component Solutions



Application Overview

Graco's two- and three-component proportioners offer precise and reliable electronic plural component proportioning for a broad range of solventborne, waterborne, and acid catalyzed materials.

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Chemical Agent Resistive Coatings (CARC)

Application Material Overview

CARC is specified by the US Military for coating vehicles used in harsh environments. These coatings have been used for years and are now avaiable in three component (3K) waterborne varieties. This presents unique challenges in handling and mixing that include: a higher viscosity waterborne base material that is mixed with a moisture sensitive isocyanate catalyst. When the base and catalyst are mixed, they then need to be reduced with deionized water. This reduction lowers the fluid viscosity so that it can be applied with conventional, HVLP, or air-assisted airless spray systems.

ProMix® 3KS Solution

The Graco ProMix 3KS electronic plural component proportioning system is designed to handle the 3 components of waterborne CARC. The ProMix 3KS is combined with Graco's ProMix 2KS system that proportions the base and catalyst materials, then reduces them to allow for mix on-demand. The ProMix system is capable of handling multiple colors and can feed both manual and automatic spray guns.

Configuration notes



ProMix 2KS

A G3000 flow meter can be used for the resin and the catalyst measurement (MD1XXX, AD1XXX, and RD1XXX systems).
A coriolis mass flow meter can be used on the resin side to provide higher performance.

A **coriolis mass flow meter** can be used on the resin side to provide higher performance with less frequent flushing (MD3XXX, AD3XXX, and RD3XXX systems).

- Dosing will need to be done using a Dynamic Dosing Kit (15U955). The system will need two of these kits to dose the A and B components and the A+B and C components.
- Dynamic dosing also requires fluid regulators that are positioned on the inbound side of the flow meters. These are used to create a pressure difference on the injection of both the B and C components.
- Flushing should be managed so that air and water flush the A side and a compatible solvent flushes the B side. This requires the use of a 3rd flush valve kit (15V354 for wall panel units, 15V22 for RoboMix units).

ProMix 3KS

- The CARC mixture is reduced with water so a compatible meter must be used. The S3000 Solvent meter (TK4X00 systems)can be used for this application. The Coriolis meter, which is compatible with low viscosity fluids, is also available (TK3X00 systems).
- The mixture of A and B components is higher in viscosity and will require a 3/8" hose set to connect the 2KS and 3KS units in place of the supplied 1/4" hose set.

Summary of components to proportion CARC:

Item #	Product	Part Number	Quantity
1	ProMix 2KS		1
	Standard Meter	MD1XXX, AD1XXX, RD1XXX	
	Coriolis Meter	MD3XXX, AD3XXX, RD3XXX	
2	ProMix 3KS		1
	Solvent Meter	TK4X00	
	Coriolis Meter	TK3X00	
3	Dynamic Dosing	15U955	2
4	3rd Flush Valve		
	Wall Panel	15V354	1
	RoboMix	15V202	1
5	Fluid Regulator		3
6	Hose Assembly, 3/8"		1



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