

## **Product Specification**

## Vanadium Oxytrichloride (VOCl<sub>3</sub>)

## CHEMISTRY

Major Elements				
	Min.	Aim	Max.	
Vanadium (Total)	29.1%	29.4%	29.7%	
Vanadium (V+4)			0.03%	
Chloride (Cl)	60.2%	61.0%	62.0%	
Aluminum (Al)			0.003%	
Copper (Cu)			0.001%	
Iron (Fe)			0.008%	
Manganese (Mn)			0.001%	
Molybdenum (Mo)			0.005%	
Nickel (Ni)			0.001%	



## PHYSICAL CHARACTERISTICS

Color Specification			
Typical Color:	9 Gardner Scale (ASTM 1544)		
Maximum Color:	10 Gardner Scale (ASTM 1544)		
Physical Properties			
Freezing Point:	-77°C (-106.6°F)		
Boiling Point:	126°C (260.1°F)		
Bulk Density:	114 lbs/ft <sup>3</sup> .		
Specific Gravity:	1.82 g/cc		
Appearance			
Yellow Liquid			
Standard Packaging			
Bulk tanker or 250-gallon (950-liter) DOT or IMO containers containing 3,000 lbs. (1,360 kg) of product.			

*Vanadium Oxytrichloride (VOCl<sub>3</sub>)* is a high-purity product produced at our ISO 9001:2015 certified Hot Springs, Arkansas facility.

US Vanadium's vanadium oxytrichloride is a high-purity catalyst used in the production of EPDM rubber; it is also blended with titanium tetrachloride at the Hot Springs plant to form vanadium-titanium mixes for polyethylene production.

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Director of Technology Approval Chad Mardan	
Quality Manager Approv	val Robert Ellent