



# Cemented Carbide Drawing Dies / Nibs

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Grade Serie	Grade	Density (g/cm <sup>3</sup> )	Hardness (HRA/HV)	TRS (N/mm)	Grain Size	Recommended Applications
EU	EU10	14.73	94.5 / 2110	2100	Ultrafine	<b>Wet drawing</b> High carbon steel wire, Steel curtain wire, Cutting wire, Coated wire, Welding wire
	EU15	14.70	94.3 / 2080	1750		
ES	ES20	14.90	93.3 / 1850	2860	Submicron	<b>Wet Drawing</b> High carbon steel wire Welding wire  <b>Dry Drawing</b> High carbon steel wire Welding wire Nonferrous metal  <b>Substrate of CVD</b>
	ES25	14.93	92.5 / 1710	2600		
	ES40	14.63	92.6 / 1730	3400		
	ES50	14.45	91.5 / 1580	3400		
	ES55	14.16	92.1 / 1660	3300		

Density, hardness and bending strength are typical values.

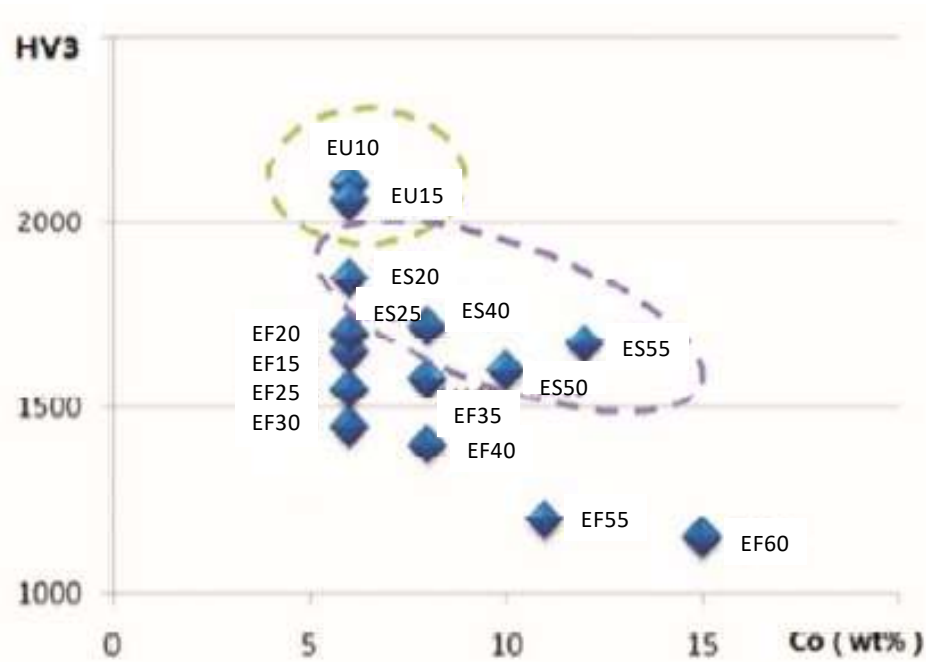
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Grade Serie	Grade	Density (g/cm <sup>3</sup> )	Hardness (HRA/HV)	TRS (N/mm)	Grain Size	Recommended Applications
EF	EF15	14.87	92.3 / 1680	2580	Fine or Medium	<b>Wet drawing</b> High carbon steel Steel cord Welding wire Nonferrous metal  <b>Dry Drawing</b> High carbon steel Steel cord  <b>Substrate of CVD</b>
	EF20	14.92	92.4 / 1700	2400		
	EF25	14.95	91.2 / 1540	2900		
	EF30	14.94	90.4 / 1440	2800		
	EF35	14.70	91.7 / 1600	2680		
	EF40	14.76	89.9 / 1390	3100		
	EF55	14.42	88.3 / 1220	3250		
	EF60	14.05	87.1 / 1110	3300		

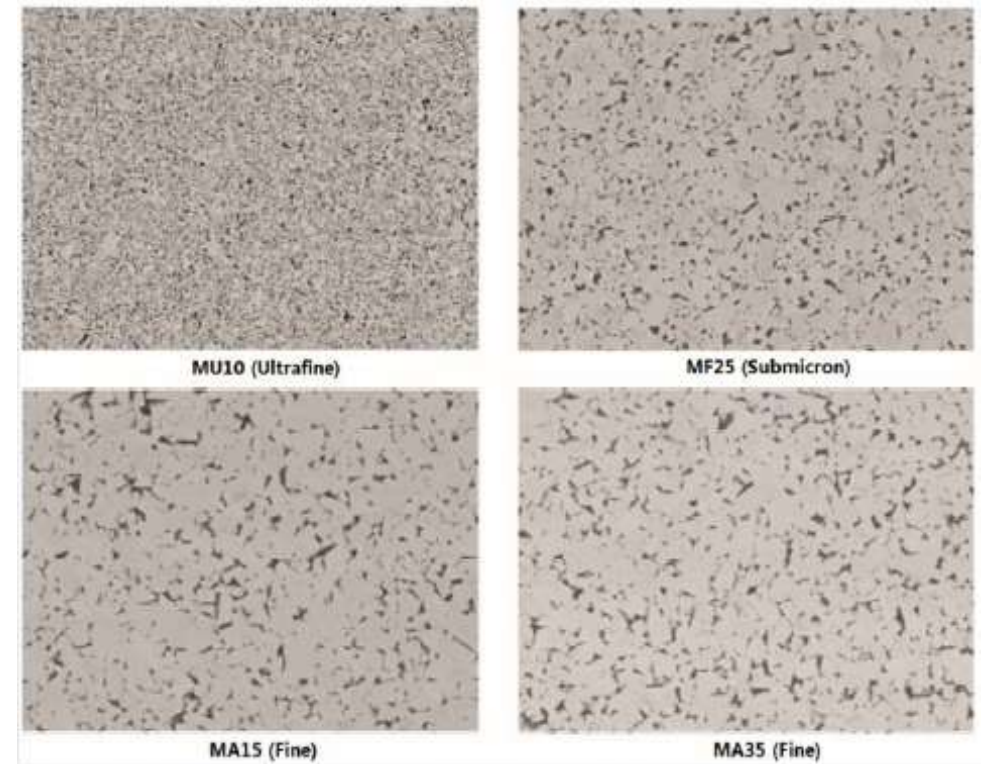
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Hardness: Co% Relationship Table of Grade Series EU, ES and EF



SEM Metallograph of Some Typical Grades



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**INLET AREA** is arc transition commonly. It is to facilitate drawn material to enter working area and prevent the drawn material from being scratched by the edge of the die.

**LUBRICATION AREA** is to store lubricant and lubricate the drawn material.

**WORKING AREA** is the plastic deformation area of drawn material, the choice of this area is mainly length and cone angle. Specific should be chosen according to the performance of drawn material.

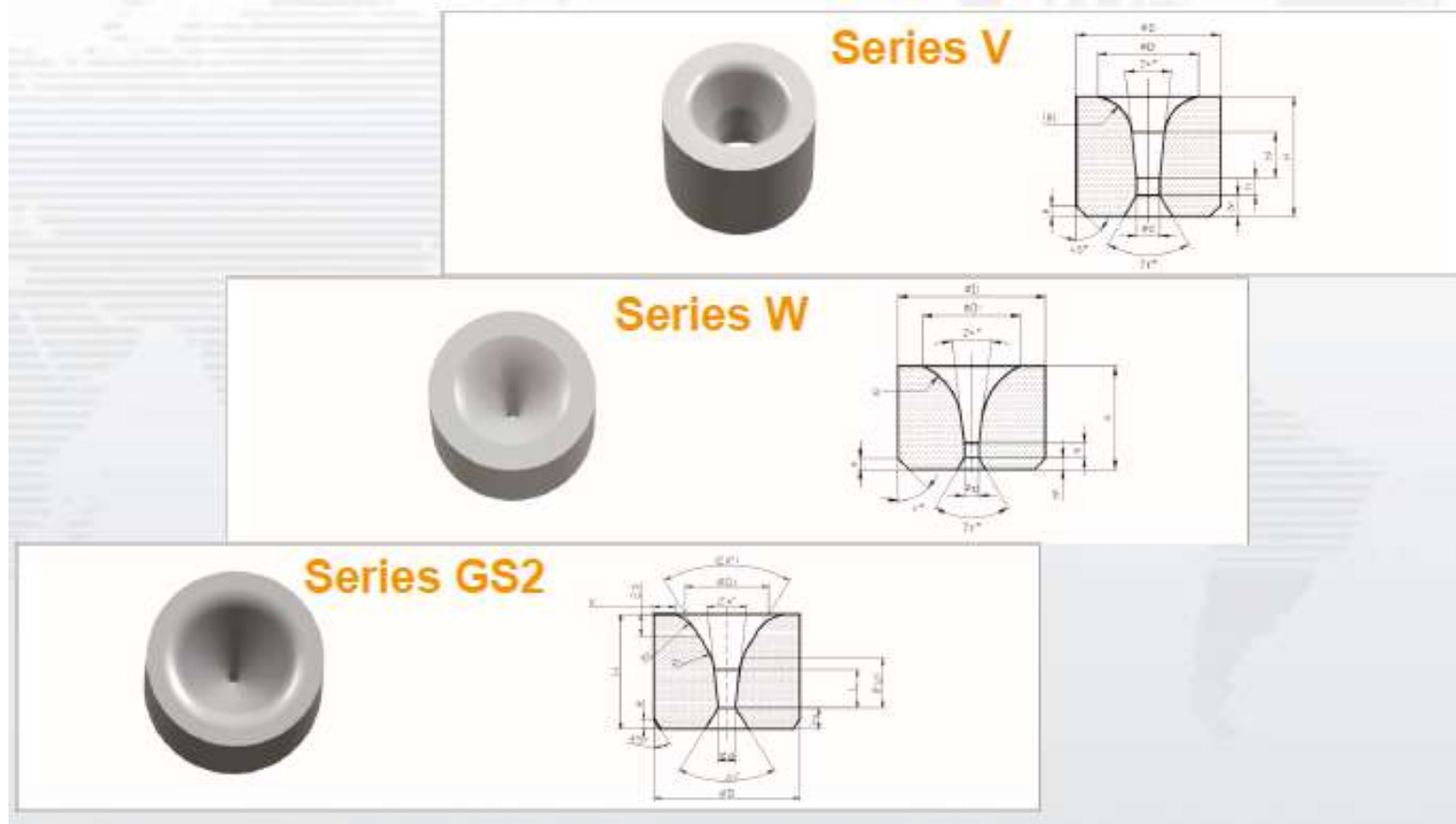
**SIZING AREA**, is the zone where drawn material gets its final size. The length of the sizing area depends on the hardness, sectional area and lubrication of the drawn material. If it is too long, it will increase the friction, reduce the service life of the die. If it is too short, the finished size will be affected.

**EXIT AREA** is the part where the drawn material leaves the mold and finally passes through. Its function is to protect the sizing area from cracking and to ensure that the drawn material does not scratch the mold.

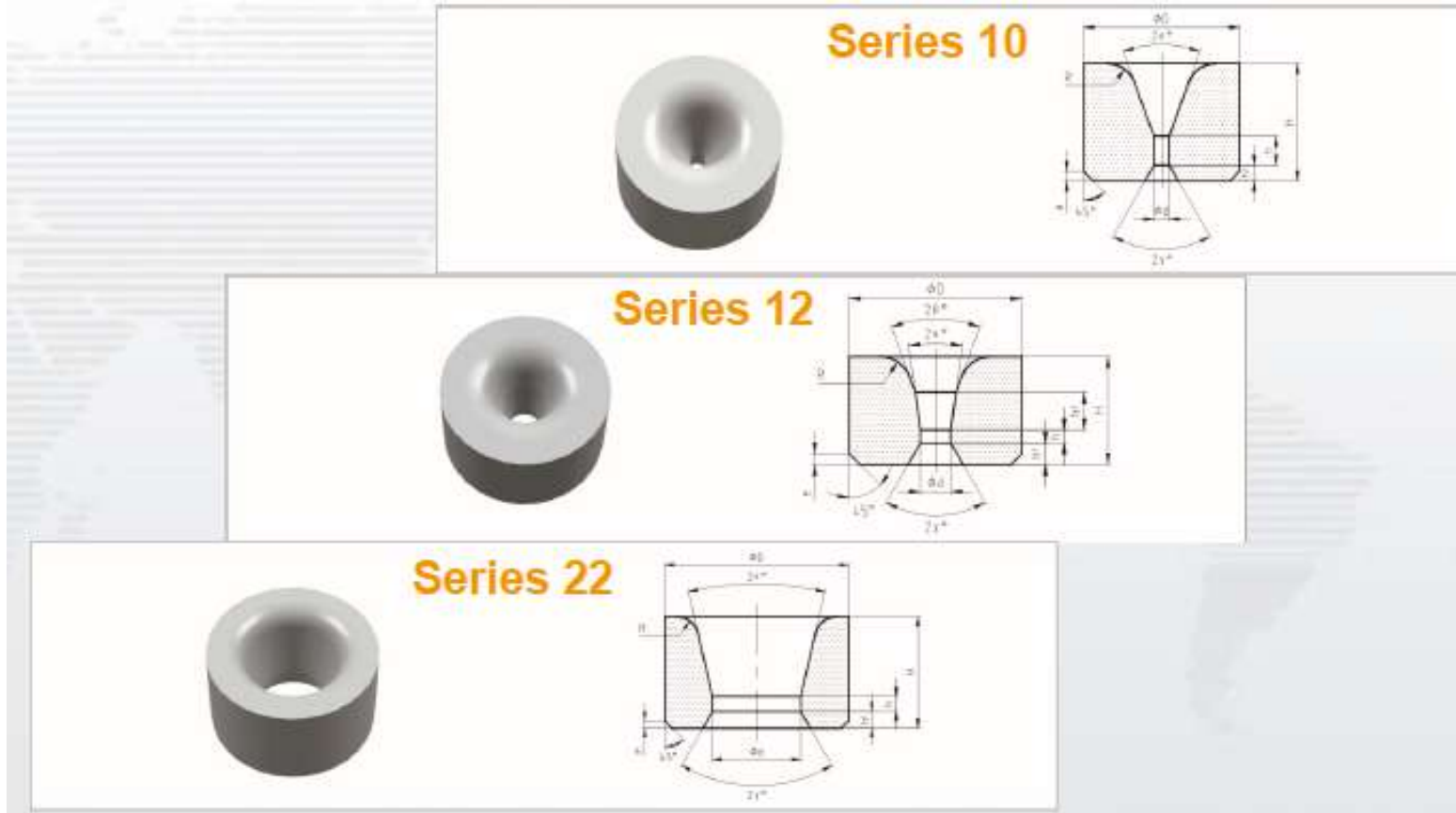
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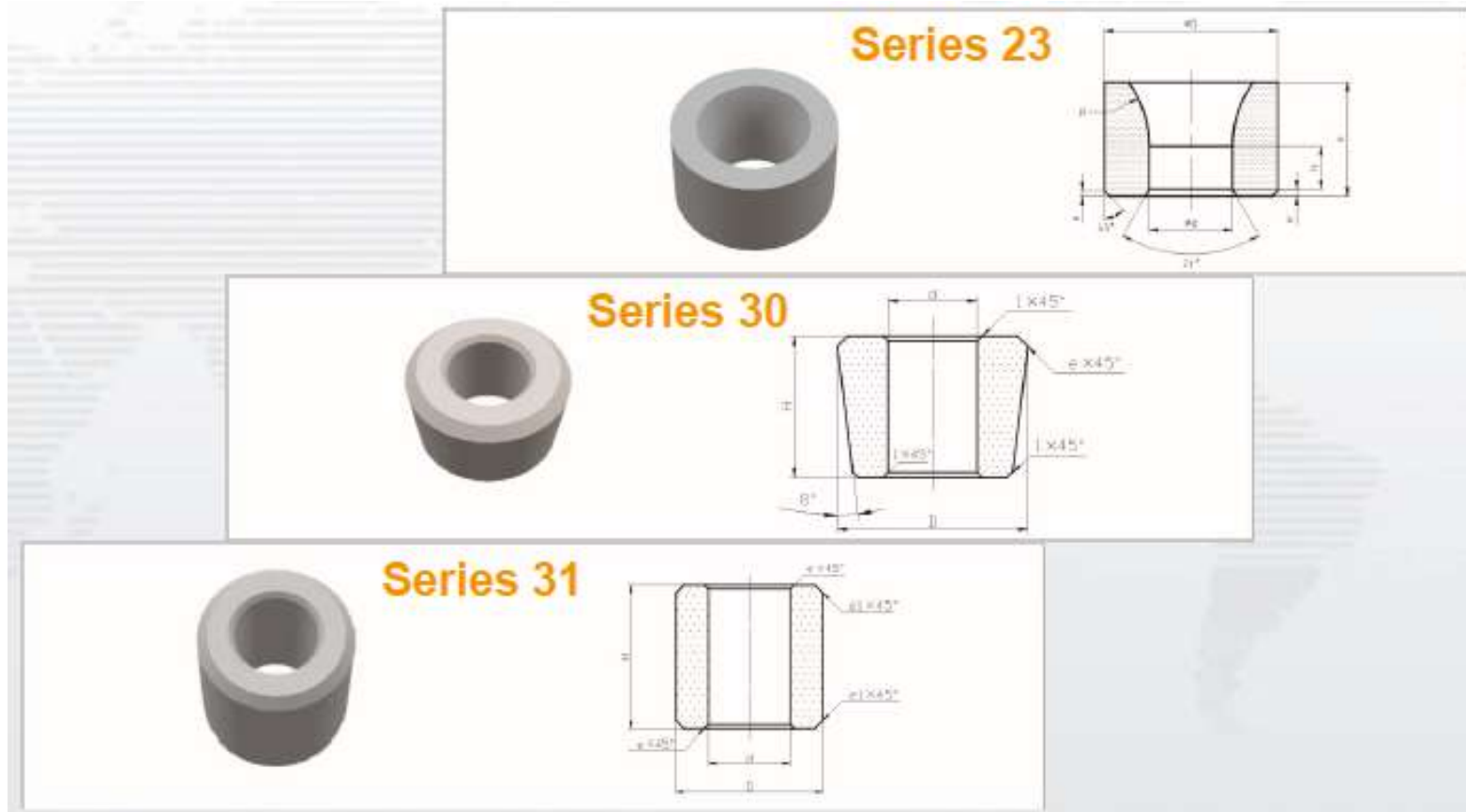


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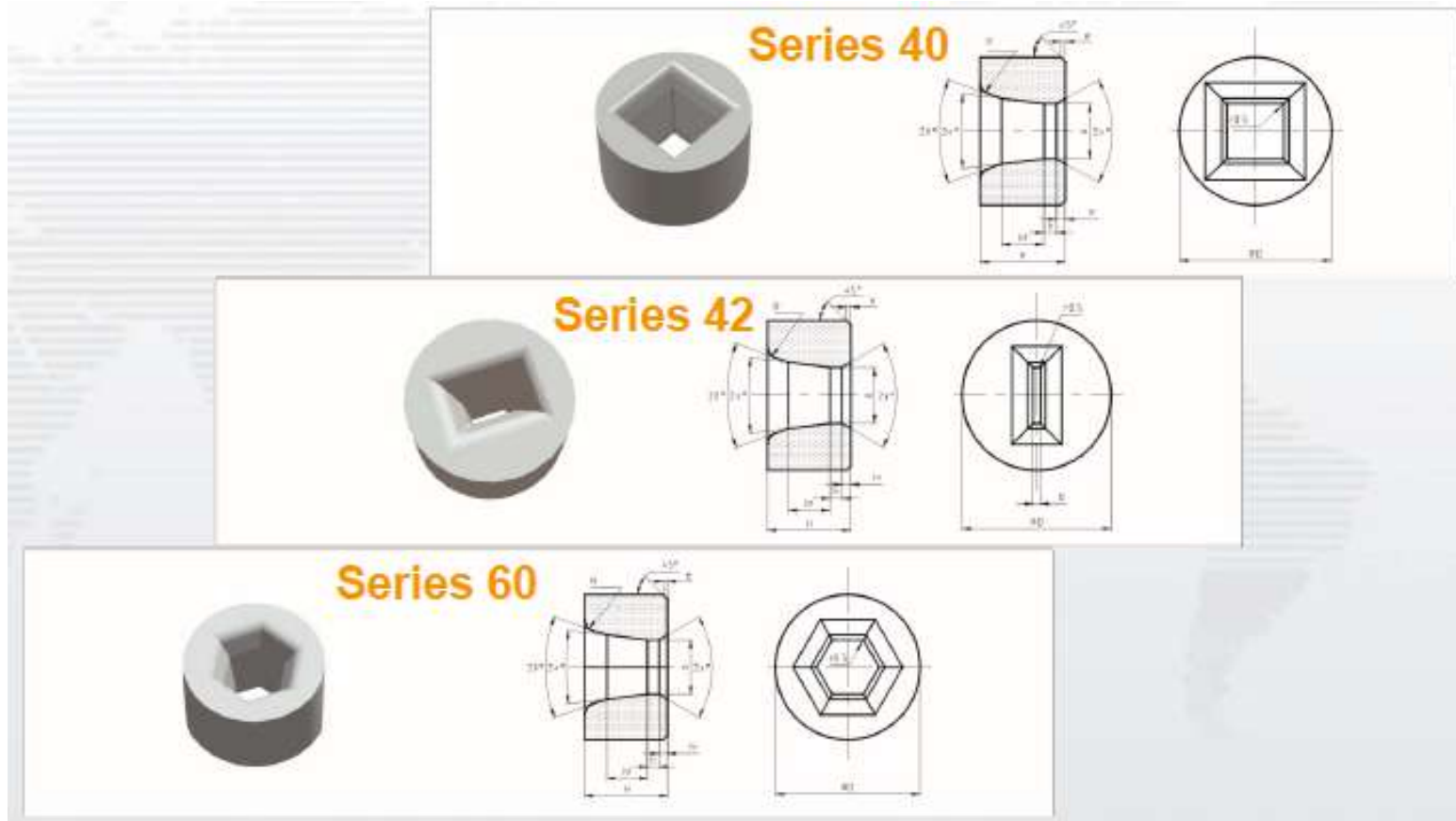




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## CONTACT INFORMATION

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