

## Metalworking Additives Technical Data Sheet - PHOSPHONATES

CUBLEN phosphonates combine antiwear performance with scale-inhibition and chelating properties for extended fluid and tool life. They can be used to prepare metal surfaces for final finishing, and in plating baths to control metal ion contamination.

Phosphonates are also widely used for cooling water treatment, metal cleaners, textile finishing and oil field drilling applications.

Product Name	Chemistry	State @ Room Temperature	Phosphorus Content, %	Color	pH*	Specific Gravity
CUBLEN A 4015 - US	Salt	Liquid	9.0	Colorless	10	1.43
CUBLEN AP 1	Acid	Liquid	4.2	Colorless	2	1.30
CUBLEN AP 5 -US	Acid	Liquid	4.2	Colorless	2	1.33
CUBLEN B 35 NA	Salt	Liquid	6.8	Amber	5	1.20
CUBLEN B 45	Acid	Liquid	10.2	Amber	2	1.22
CUBLEN B 730 NA	Salt	Liquid	5.4	Amber	7.5	1.20
CUBLEN CAP 364	Salt	Liquid	3.9	Yellow	7	1.09
CUBLEN D 3217 - US	Salt	Liquid	7.9	Amber	7	1.34
CUBLEN D 3217 N - US	Salt	Liquid	6.8	Amber	7	1.29
CUBLEN D 4217	Salt	Liquid	8.9	Amber	7	1.38
CUBLEN D 4512 - US	Salt	Liquid	11.3	Amber	2	1.36
CUBLEN D 5012 - US	Salt	Liquid	12.6	Amber	2	1.42
CUBLEN D 5113 - US	Salt	Liquid	10.9	Amber	2.5	1.40
CUBLEN DNC 450	Acid	Liquid	12.2	Amber	<2	1.49
CUBLEN E 3115	Salt	Liquid	7.0	Yellow	7	1.34
CUBLEN E 34135 P	Salt	Solid	7.0	White	12	0.90
CUBLEN F 3226	Salt	Liquid	5.5	Colorless	7	1.28
CUBLEN HPMA	Acid	Liquid	N/A	Amber	2.5	1.23
CUBLEN K 2012 - US	Salt	Liquid	2.5	Colorless	5	1.16
CUBLEN K 2222 - US	Salt	Liquid	4.8	Colorless	6	1.16
CUBLEN K 3014 - US	Salt	Liquid	6.3	Colorless	11	1.30
CUBLEN K 4023 - US	Salt	Liquid	9.1	Colorless	8	1.36
CUBLEN K 60 - US	Acid	Liquid	9.0	Colorless	2	1.45
CUBLEN K 8514 GR	Salt	Solid	17.9	White	11.5	0.90
CUBLEN K 9012 GR	Salt	Solid	11.2	White	5	1.00
CUBLEN KB 50 - US	Acid	Liquid	9.9	Amber	2	1.27
CUBLEN P 40 NA - US	Salt	Liquid	3.4	Colorless	9	1.34
CUBLEN P 50 - US	Acid	Liquid	5.8	Colorless	2	1.29
CUBLEN P 86NAP - US	Salt	Solid	7.4	White	5	0.90
CUBLEN R 40 NA - US	Salt	Liquid	7.8	Yellow	5	1.25
CUBLEN R 49 NA - US	Salt	Liquid	10.2	Yellow	5	1.31
CUBLEN R 50	Acid	Liquid	12.5	Yellow	<2	1.28
CUBLEN R 60	Acid	Liquid	14.9	Yellow	<2	1.37

Please inquire about additional tailor-made products that can be made to fit your exact performance requirements.

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