



Agrichemical Biorenewable Carbon Index

Stepan Company's goal is to be transparent with our existing chemistries, processes, and commercial products regarding the Biorenewable Carbon Index as described below. As we strive to continue to meet your needs, we are committed to understanding current and future regulations and directives along with the continually changing landscape of certification standards. Stepan is capable and willing to help you develop and market your green line. We are committed to understanding and monitoring changes to the USDA's National Organic Program as well as programs outside of the Agrichemical field.

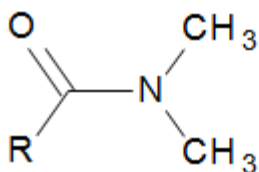
Stepan Company's Agrichemical Biorenewable Carbon Index (BCI) Guide provides you with a single value based on the percent carbon derived from a biorenewable resource. Biorenewable is defined by Stepan as originating from animal, plant, or marine material. The value is calculated by dividing the number of biorenewable carbons by the total number of carbons in the entire molecule. The calculation is based on the idealized molecule as represented on our Stepan Technical Product Bulletins. Products composed of blended materials are calculated based on the normalized percent actives of the Stepan products only. This BCI guide includes agrichemical products that are composed of greater than zero percent biorenewable carbon.

Example BCI Calculation

HALLCOMID™ M-10

Chemical Description: N,N Dimethylcapramide

BCI: 83



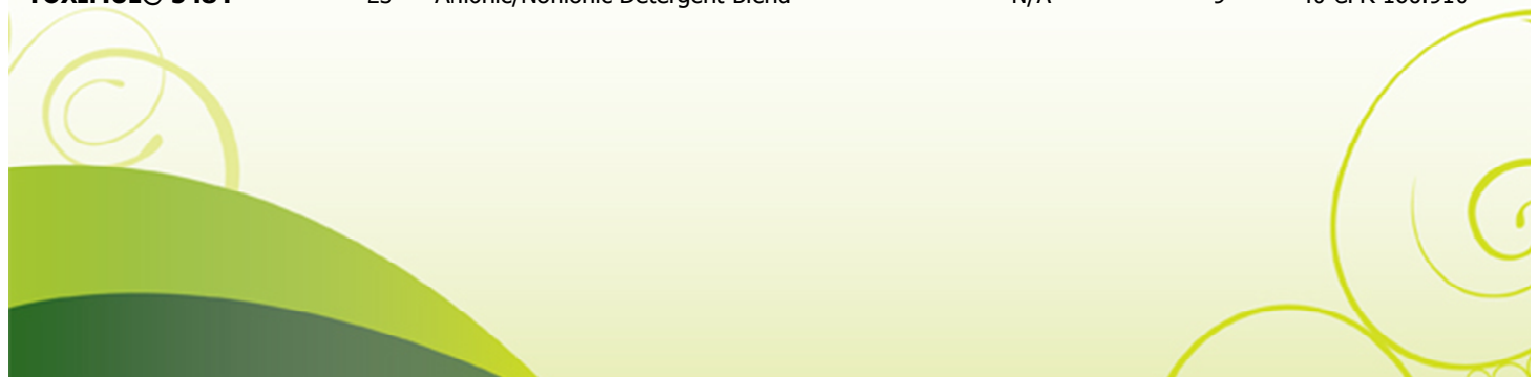
	natural methyl ester		dimethyl	Biorenewable Carbon Index
	C ₁₀		amide	
	C ₉ H ₁₉	C=O	-N(CH ₃) ₂	biorenewable carbon divided by total carbons
# of carbons	9	1	2	100 x (10 ÷ (10 + 2)) = 83

STEPAN TRADE NAME	BCI	CHEMICAL DESCRIPTION	CAS NO.	ACTIVE %	40 CFR STATUS
AMINE OXIDES					
AMMONYX® LO SPECIAL	86	Lauramine Oxide	1643-20-5	30	40 CFR 180.910
ETHER SULFATES					
STEOL® CA-330	67	Ammonium Laureth Sulfate, 3 Moles EO	32612-48-9	28	40 CFR 180.910 and 40 CFR 180.930
STEOL® CA-330-E	67	Ammonium Laureth Sulfate, 3 Moles EO	32612-48-9	25	40 CFR 180.910 and 40 CFR 180.930
STEOL® CS-270	75	Sodium Laureth Sulfate, 2 Moles EO	68585-34-2	70	40 CFR 180.910 and 40 CFR 180.930
STEOL® CS-270 C	75	Sodium Laureth Sulfate, 2 Moles EO	68585-34-2	70	40 CFR 180.910 and 40 CFR 180.930
STEOL® CS-330	67	Sodium Laureth Sulfate, 3 Moles EO	9004-82-4	28	40 CFR 180.910 and 40 CFR 180.930
STEOL® CS-370	67	Sodium Laureth Sulfate, 3 Moles EO	9004-82-4	70	40 CFR 180.910 and 40 CFR 180.930
STEOL® CS-370-E	67	Sodium Laureth Sulfate, 3 Moles EO	9004-82-4	70	40 CFR 180.910 and 40 CFR 180.930
TOXIMUL® TAABS-5	35	Branched Alcohol Ether Sulfate/Tallow Amine Ethoxylate, POE-5 Salt	N/A	100	40 CFR 180.920
TOXIMUL® TAABS-8	31	Branched Alcohol Ether Sulfate/Tallow Amine Ethoxylate, POE-8 Salt	N/A	100	40 CFR 180.920
TOXIMUL® TAAS-5	66	Linear Alcohol Ether Sulfate/Tallow Amine Ethoxylated, POE-5 Salt	N/A	100	40 CFR 180.920
TOXIMUL® TAAS-8	58	Linear Alcohol Ether Sulfate/Tallow Amine Ethoxylated, POE-8 Salt	N/A	100	40 CFR 180.920
TOXIMUL® TANS-5	33	Alkylphenol Ether Sulfate/Tallow Amine Ethoxylated Salts	N/A	100	40 CFR 180.920
TOXIMUL® TANS-6	32	Alkylphenol Ether Sulfate/Tallow Amine Ethoxylated Salts	N/A	100	40 CFR 180.920
TOXIMUL® TANS-8	30	Alkylphenol Ether Sulfate/Tallow Amine Ethoxylated Salts	N/A	100	40 CFR 180.920
TOXIMUL® TANS-15	25	Alkylphenol Ether Sulfate/Tallow Amine Ethoxylated Salts	N/A	100	40 CFR 180.920



STEPAN TRADE NAME	BCI	CHEMICAL DESCRIPTION	CAS NO.	ACTIVE %	40 CFR STATUS
SOLVENTS					
HALLCOMID™ M-8-10	82	[N,N-Dimethyloctamide (N,N-Dimethylcaprylamide) AND N,N-Dimethyldecanamide (N,N-Dimethylcapramide)]	1118-92-9 (and) 14433-76-2	100	40 CFR 180.920
HALLCOMID™ M-10	83	[N,N-Dimethyldecanamide (N,N-	14433-76-2	100	40 CFR 180.920
STEPAN® 108	100	Caprylic/Capric Triglyceride	73398-61-5	100	40 CFR 180.910 and 40 CFR 180.930
STEPAN® C-25	90	Methyl Caprylate/Caprates	68937-83-7	100	40 CFR 180.910
STEPAN® C-42	93	Methyl Laurate/Methyl Myristate	111-82-0 (and) 124-10-7	100	40 CFR 180.910
STEPAN® C-65	94	Methyl Palmitate/Oleate	67762-38-3	100	40 CFR 180.910
STEPSOL® ME	95	Methyl Oleate, Methyl Linoleate	67784-80-9	100	40 CFR 180.910
STEPSOL® ROE-W	95	Canola Oil, Methyl Ester	67762-38-3	100	40 CFR 180.910
WETTING AGENTS					
STEPWET® DF-95	100	Sodium Lauryl Sulfate	151-21-3	93	40 CFR 180.910 and 40 CFR 180.930
STEPWET® DF-95 NEEDLES	100	Sodium Lauryl Sulfate	151-21-3	93	40 CFR 180.910 and 40 CFR 180.930

STEPAN TRADE NAME	BCI	CHEMICAL DESCRIPTION	CAS NO.	HLB	40 CFR STATUS
EMULSIFIER BLENDS					
MICRO-STEP® H-307-A	61	Sulfonate/Nonionic Surfactant Blend	N/A	12	40 CFR 180.910
TOXIMUL® DM-83	17	Anionic/Nonionic Detergent Blend	N/A	13	40 CFR 180.910
TOXIMUL® 3403F	22	Sulfonate/Nonionic Surfactant Blend	N/A	13	40 CFR 180.910
TOXIMUL® 3406F	11	Sulfonate/Nonionic Surfactant Blend	N/A	10	40 CFR 180.910
TOXIMUL® 3473F	29	Sulfonate/Nonionic Blend	N/A	10	40 CFR 180.910
TOXIMUL® 3474F	10	Sulfonate/Nonionic Blend	N/A	6	40 CFR 180.910
TOXIMUL® 3476F	16	Sulfonate/Nonionic Blend	N/A	8	40 CFR 180.910
TOXIMUL® 3479F	4	Sulfonate/Nonionic Blend	N/A	13	40 CFR 180.910
TOXIMUL® 3483	31	Anionic/Nonionic Detergent Blend	N/A	10	40 CFR 180.910
TOXIMUL® 3484	23	Anionic/Nonionic Detergent Blend	N/A	9	40 CFR 180.910



STEPAN TRADE NAME	BCI	CHEMICAL DESCRIPTION	CAS NO.	HLB	40 CFR STATUS
ETHOXYLATED CASTOR OILS					
TOXIMUL® 8240	44	Castor Oil Ethoxylate, POE-36	61791-12-6	13	40 CFR 180.960
TOXIMUL® 8241	49	Castor Oil Ethoxylate, POE-30	61791-12-6	12	40 CFR 180.960
TOXIMUL® 8242	42	Castor Oil Ethoxylate, POE-40	61791-12-6	13	40 CFR 180.960
ETHOXYLATED FATTY ACIDS					
NINEX® MT-603	74	Fatty Acid Ethoxylate, POE-3	61791-00-2	6	40 CFR 180.910 and 40 CFR 180.930
NINEX® MT-610	46	Fatty Acid Ethoxylate, POE-10	61791-00-2	12	40 CFR 180.910 and 40 CFR 180.930
NINEX® MT-615	36	Fatty Acid Ethoxylate, POE-15	61791-00-2	13	40 CFR 180.910 and 40 CFR 180.930
NINEX® MT-630F	22	Fatty Acid Ethoxylate, POE-30	67784-86-5	16	40 CFR 180.910 and 40 CFR 180.930
ETHOXYLATED FATTY AMINES					
TOXIMUL® CA-2	75	Cocamine Ethoxylate, POE-2	61791-14-8	6	40 CFR 180.920
TOXIMUL® CA-7.5	44	Cocamine Ethoxylate, POE-7.5	61791-14-8	12	40 CFR 180.920
TOXIMUL® TA-2	82	Tallow Amine Ethoxylate, POE-2	61791-26-2	5	40 CFR 180.920
TOXIMUL® TA-5	64	Tallow Amine Ethoxylate, POE-5	61791-26-2	9	40 CFR 180.920
TOXIMUL® TA-8	53	Tallow Amine Ethoxylate, POE-8	61791-26-2	11	40 CFR 180.920
TOXIMUL® TA-15	38	Tallow Amine Ethoxylate, POE-15	61791-26-2	14	40 CFR 180.920
ETHOXYLATED SORBITOL ESTERS					
TOXIMUL® SEE-340	60	Sorbital Trioleate Ethoxylate, POE-20	61790-88-3	11	40 CFR 180.910 and 40 CFR 180.930
TOXIMUL® SEE-341	38	Sorbital Monooleate Ethoxylate, POE-20	9005-65-6	12	40 CFR 180.910 and 40 CFR 180.930
GLYPHOSATE SURFACTANTS					
STEPAN® 3109-6	46	Blend	N/A	N/A	40 CFR 180.920
TOXIMUL® 8362	38	Nonionic Surfactant Blend	N/A	13	40 CFR 180.920
TOXIMUL® 8363	38	Nonionic Surfactant Blend	N/A	13	40 CFR 180.920

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