

Typical distributions of Shell NEODOL[®] ethoxylate adducts

Shell NEODOL ethoxylates are produced in a base-catalysed condensation reaction of ethylene oxide (EO) with an alcohol (ROH, giving a mixture of ethylene oxide adducts of varying chain length plus an amount of unreacted/free alcohol [EO=O]. The composition of the mixture follows a standard distribution curve, generally peaking at the average EO.

Table: Shell NEODOL ethoxylates - typical distributions, %m/m of ethoxylate adducts of each EO chain length

Shell NEODOL	23-1	LM-2 23-2	91-2.5 25-2.5	25-3	91-5	91-6	LM-7 25-7	91-8	LM-9
Products							45-7		
eo/roh	1	2	2.5	3	5	6, 6.5	7	8	9
EO chain length									
0	42	22	16	15	5	3	3	2	2
]	21	14	13	11	4	2	2	1]
2	15	15	14	13	6	4	4	2	2
3	9	13	13	13	8	5	5	3	3
4	5	10]]	11	10	6	6	4	4
5	3	7	8	9	10	8	7	5	5
6	2	5	6	7	10	8	8	6	5
7	1	4	5	5	9	9	9	8	6
8	1	3	4	4	8	9	9	9	7
9	1	2	3	3	7	9	8	9	8
10	-]	2	2	6	8	8	9	9

11	-]	2	2	5	7	7	8	8
12	-]]]	3	6	6	8	8
13	-]]]	3	5	5	7	7
14	-]]]	2	4	4	6	6
15	-	-	-]	1	3	3	4	5
16	-	-	-	-	1	2	2	3	4
17	-	-	-	-	1]	2	3	3
18	-	-	-	-	-]]	2	2
Higher	-	-	-	-]	-]]	5

NOTE: LM-2, LM-7 and LM-9 are oleo ethoxylates, 2, 7 and 9 mole EO respectively. N91-2.5 is a legacy grade, no longer produced, for comparison.





Shell NEODOL is a trademark of the Shell Group of Companies

Shell Chemical LP 150 North Dairy Ashford Houston, Texas 77079 USA Internet <u>http://www.shell.com/chemicals</u>

Disclaimer

The information contained in this publication is to the best of our knowledge true and accurate, but any recommendations or suggestions that may be made are without guarantee since the conditions of use are beyond our control. Furthermore, nothing contained herein shall be construed as a recommendation to use any product in conflict with existing patents covering any material or its use.

Neither the whole nor any part of this document may be reproduced, stored in any retrieval system or transmitted in any form or by any means without the prior written consent of the owner.

Shell Chemicals

The term 'Shell Chemicals' collectively refers to individual Shell Group companies engaged in the chemicals business throughout the world. These are separate and distinct entities. The collective expressions 'Shell' and 'Shell Chemicals' herein may be used for convenience where reference is made in general to those companies or where no useful purpose is served by identifying any particular company or companies.

Updated May 2022