



### CERTIFICATE OF ANALYSIS

**Product** : NONYL PHENOL ETHOXYLATE (NP+9EO)  
**Source** : F – 604 A  
**Manufacture Date** : 27 FEBRUARY 2020  
**Expiry Date** : 27 FEBRUARY 2021

ITEMS No.	COMPONENT	METHOD	UNIT	SPECIFICATION	RESULT
1	APPEARANCE (25°C)	VISUAL	-	CLEAR LIQUID	CLEAR LIQUID
2	COLOR, Pt-Co (40°C)	SA 009 (SD)	APHA	MAX 40	10
3	HYDROXYL NUMBER	SA 032 (SD)	MG KOH/G	87 ~ 95	92.55
4	pH 1 WT% AQUA. SOLN. (25°C)	SA 054 (SD)	-	5.5 ~ 7.5	6.45
5	WATER CONTENT	SA 003 (SD)	WT %	MAX 0.2	0.0446
6	POLYETHYLENE GLYCOLS	SA 056 (SD)	WT %	MAX 2	< 2
7	CLOUD POINT *	SA 055 (SD)	°C	51 ~ 57	55.0
8	HLB VALUE	-	-	-	12.8

SD : Scientific Design Method  
 \*CP : 1 Wt% IN AQUA. SOLUTION

Jakarta, 03 March 2020

**PT. POLYCHEM INDONESIA TBK.**



**Djunali D.**  
 General Manager

**PT Polychem Indonesia Tbk.**