Draft Assessment Report

Evaluation of Active Substances

Plant Protection Products

Prepared according to **Regulation (EC) 1107/2009**
as it applies in Great Britain (GB PPP)

Bixlozone (F9600)

Volume 3 – B.2 (AS)

Physical & Chemical Properties

Great Britain

July 2022

Version History

When	What
July 2022	Initial DAR

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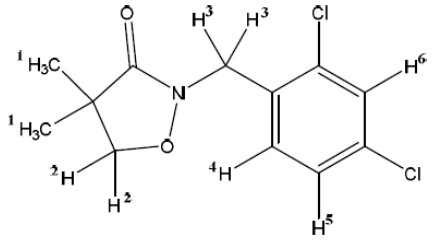
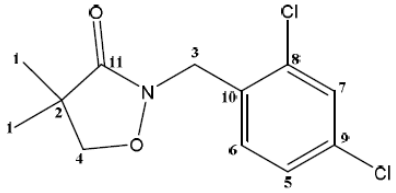
B.2. PHYSICAL AND CHEMICAL PROPERTIES OF THE ACTIVE SUBSTANCE

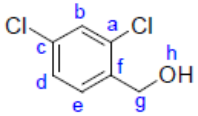
Test or Study Annex Point	Guideline and method	Test material purity and specification	Used methods / Results	Comments (Acceptable / Non acceptable)	GLP	Reference
B.2.1. MELTING POINT AND BOILING POINT						
Melting, freezing or solidification point B.2.1/01	EC Method A.1 OECD Method 102 EPA/OPPTS 830.7200 Melting block confirmation by Differential Scanning Calorimetry (DSC)	Bixlozone pure Purity: 99.8% Batch PL14-0163	Melting point (onset): 81.5°C	Acceptable.	Y	Cowlyn, N. 2017a Study Report No. FP91QY
Boiling point B.2.1/02	EC Method A.2 OECD Method 103 EPA/OPPTS 830.7220 Siwoloboff method	Bixlozone pure Purity: 99.8% Batch PL14-0163	The boiling point of bixlozone was not determinable; the test item decomposed before boiling.	Acceptable.	Y	Cowlyn, N. 2017a Study Report No. FP91QY
Decomposition / Sublimation temperature B.2.1/03	OECD Method 103 EPA/OPPTS 830.7220 Siwoloboff method	Bixlozone pure Purity: 99.8% Batch PL14-0163	In duplicate definitive determinations at a heating rate of 1˚C/minute, the onset of decomposition, as indicated by discoloration of the samples, was observed to be approximately 188˚C.	Acceptable.	Y	Cowlyn, N. 2017a Study Report No. FP91QY

Test or Study Annex Point	Guideline and method	Test material purity and specification	Used methods / Results	Comments (Acceptable / Non acceptable)	GLP	Reference
B.2.2. VAPOUR PRESSURE, VOLATILITY						
Vapour pressure B.2.2/01	EC Method A.4 OECD Method 104 EPA OPPTS 830.7950 Vapour pressure balance	Bixlozone pure Purity: 99.9% Batch PL14-0163	Parameter: Vapour pressure at 20°C — Value: 1.1×10^{-3} Pa Parameter: Vapour pressure at 25°C — Value: 2.3×10^{-3} Pa	Acceptable. Bixlozone is considered slightly volatile.	Y	Cowlyn N. 2016a Study Report No. BM19FW
Volatility (Henry's Law constant) B.2.2/02	Calculation	Bixlozone pure Purity: 99.9% Batch PL14-0163	Henry's law constant at 20°C: 7.2×10^{-3} Pa. $m^3.mol^{-1}$	Acceptable.	Y	Cowlyn N. 2016a Study Report No. BM19FW
B.2.3. APPEARANCE (PHYSICAL STATE, COLOUR)						
Physical state and colour B.2.3/01	EPA/OPPTS 830.302 EPA/OPPTS 830.6303 EPA/OPPTS 830.6304 Visual assessment	Bixlozone pure Purity: 99.8% Batch PL14-0163	Appearance of pure active ingredient *Colour:* Munsell system: N9.5/90.0% R (white) *Physical state: S*olid at 20°C , crystalline with various sized, easily friable, agglomerates. *Odour:* No discernible odour	Acceptable. Pure and manufactured bixlozone tested.	Y	Cowlyn, N. 2017a Study Report No. FP91QY
Physical state and colour B.2.3/01	EPA/OPPTS 830.302 EPA/OPPTS 830.6303 EPA/OPPTS 830.6304 Visual assessment	Bixlozone technical Purity: 96.0% Batch: PL14-0049	Appearance of technical material *Colour:* Pale yellow/brown (2.5Y 9/2 on the Munsell Colour system) *Physical state: S*olid at 20°C , crystalline with various sized, easily friable, agglomerates. *Odour:* No discernible odour	Acceptable. Pure and manufactured bixlozone tested.	Y	Cowlyn, N. 2017b Study Report No.: MF50PJ

B.2.4. SPECTRA (UV/VIS, IR, NMR, MS), MOLAR EXTINCTION AT RELEVANT WAVELENGTHS, OPTICAL PURITY						
Ultraviolet/visible (UV/VIS) B.2.4/01	OECD Method 101 OCSPP 830.7050 UV-Visible Spectrophotometer	Bixlozone pure Purity: 99.8% Batch PL14-0163	**Neutral (Purified water at 20.43 mg/L, pH 6.4)** λ max: 218 nm (ε = 14100 L mol^{-1} cm^{-1}) λ max: 226 nm (ε = 12500 L mol^{-1} cm^{-1}) λ max: 233 nm (ε = 7050 L mol^{-1} cm^{-1}) **Neutral (Purified water at 999.2 mg/L, pH 6.8)** λ max: 261 nm (ε = 445 L mol^{-1} cm^{-1}) λ max: 271 nm (ε = 361 L mol^{-1} cm^{-1}) λ max: 280 nm (ε = 259 L mol^{-1} cm^{-1}) λ max: 290 nm (ε = 4.64 L mol^{-1} cm^{-1}) **Acidic (0.1M HCl at 20.43 mg/L, pH 1.1)** λ max: 218 nm (ε = 14300 L mol^{-1} cm^{-1}) λ max: 226 nm (ε = 12700 L mol^{-1} cm^{-1}) λ max: 233 nm (ε = 7140 L mol^{-1} cm^{-1}) **Acidic (0.1M HCl at 999.2 mg/L, pH 1.2)** λ max: 261 nm (ε = 444 L mol^{-1} cm^{-1}) λ max: 271 nm (ε = 359 L mol^{-1} cm^{-1}) λ max: 280 nm (ε = 258 L mol^{-1} cm^{-1}) λ max: 290 nm (ε = 1.54 L mol^{-1} cm^{-1}) **Basic (0.1M NaOH at 20.43 mg/L, pH 13.0)** λ max: 226 nm (ε = 12300 L mol^{-1} cm^{-1}) λ max: 233 nm (ε = 6920 L mol^{-1} cm^{-1}) **Basic (0.1M NaOH at 999.2 mg/L, pH 13.2)** λ max: 261 nm (ε = 445 L mol^{-1} cm^{-1}) λ max: 271 nm (ε = 361 L mol^{-1} cm^{-1}) λ max: 280 nm (ε = 259 L mol^{-1} cm^{-1}) λ max: 290 nm (ε = 1.62 L mol^{-1} cm^{-1})	Acceptable. All maxima wavelengths reported in the range of 200 – 800 nm. It is noted that the test concentration at approximately 20 and 999 mg/L were diluted in water with 2 and 50 % methanol respectively as a co-solvent to aid dissolution.	Y	Cowlyn, N. 2017c Study Report No. WP36VB

Test or Study Annex Point	**Guideline and method**	**Test material purity and specification**	**Used methods / Results**	**Comments (Acceptable / Non acceptable)**	**GLP**	**Reference**
Infrared (IR) B.2.4/02	Infrared (FT-IR) Spectrometer fitted with a diamond single bounce attenuated total reflectance (ATR) accessory	Bixlozone pure Purity: 99.8% Batch PL14-0163	Wavenumber (cm^{-1}) — Assignment 3000 – 3100: CH (aromatic) stretches 2800 – 3000: C-H (alkyl) stretches 1695: C=O stretch 1200 – 1600: C=C (aromatic) stretches C-O stretches C-N stretches N-O stretches CH_2, CH_3 deformations 1000 – 1200: C-H (aromatic) in plane deformations C-Cl skeletal vibrations <1000: C-H (aromatic) out of plane deformations	Acceptable. The obtained IR spectra are in agreement with the proposed structure.	Y	Cowlyn, N. 2017c Study Report No. WP36VB
Nuclear magnetic resonance (NMR) B.2.4/03	Bruker 400 MHz Nuclear Magnetic Resonance (NMR) Spectrometer.	Bixlozone pure Purity: 99.8% Batch PL14-0163	Proton Spectra ($CDCl_3$ solvent): 	Acceptable. The obtained NMR spectra are in agreement with the proposed structure.	-	Cowlyn, N. 2017c Study Report No. WP36VB

Test or Study Annex Point	Guideline and method	Test material purity and specification	Used methods / Results	Comments (Acceptable / Non acceptable)	GLP	Reference
			Chemical Shift (ppm) / Obervation / Assignment 1.30 Singlet 1 4.0 Singlet 2 4.8 Singlet 3 7.2 – 7.3 Multiple 4,5 7.4 Doublet 6 Carbon-13 Spectra:  Chemical Shift (ppm) / Obervation / Assignment 22 Singlet 1 43 Singlet 2 46 Singlet 3 77 Multiple Solvent 79 Singlet 4 127 – 134 Series of singlets 5-10 175 Singlet 11			
Mass spectra (MS) B.2.4/04	Quattro LC Mass Spectrometer	Bixlozone pure Purity: 99.8%	m/z = 274: protonated molecular ion m/z = 159: loss of $C_5H_8NO_2$	Acceptable. The obtained MS spectra are	-	Cowlyn, N. 2017c

Test or Study Annex Point	**Guideline and method**	**Test material purity and specification**	**Used methods / Results**	**Comments (Acceptable / Non acceptable)**	**GLP**	**Reference**
		Batch PL14-0163		in agreement with the proposed structure.		Study Report No. WP36VB
Spectra for impurities B.2.4/05 Ultraviolet/visible (UV/VIS)	HPLC- UV	(2,4-dichlorophenyl) methanol FMC-61644	The UV spectrum of the major peak from the HPLC analysis was provided. Absorbance maxima have not been reported and molar extinction values at the maxima in acidic, neutral and basic conditions are also required.	**Data for the UV/visible absorption spectra in accordance with OECD 101 are required.**	N	Wang, J. 2018 Study report No R-1815
Spectra for impurities B.2.4/05 Infrared (IR)	Infrared (FT-IR) Spectrometer fitted with a diamond single bounce attenuated total reflectance (ATR) accessory	(2,4-dichlorophenyl) methanol FMC-61644	Wavenumber (cm^{-1}) — Assignment 3212 – 3299: O-H stretch, alcohol 2861 – 2907: C-H stretch, aliphatic 1442 – 1594: C=C aromatic ring stretch 1354 – 1386: C-H bend, aliphatic 1035 – 1275: C-O stretch 646 – 875: C-H bend, aromatic	Acceptable. The obtained IR spectra are in agreement with the structure.	-	Wang, J. 2018 Study report No R-1815
Spectra for impurities B.2.4/05 Nuclear magnetic resonance (NMR)	Bruker 400 MHz Nuclear Magnetic Resonance (NMR) Spectrometer.	(2,4-dichlorophenyl) methanol FMC-61644	 Proton Spectra Chemical Shift (ppm) — Obervation — Assignment 7.55- 7.57 — Multiple — b 7.55- 7.57 — Multiple — e 7.43 – 7.46 — Multiple — d 4.53 – 4.54 — Multiple — g 5.49 – 5.51 — Multiple — h	Acceptable. The obtained NMR spectra are in agreement with the structure.	-	Wang, J. 2018 Study report No R-1815

<table>
<tr><th>Test or Study
Annex Point</th><th>Guideline and method</th><th>Test material purity and specification</th><th>Used methods / Results</th><th>Comments (Acceptable / Non acceptable)</th><th>GLP</th><th>Reference</th></tr>
<tr><td></td><td></td><td></td><td>Carbon-13 Spectra:

<table><tr><th>Chemical Shift (ppm)</th><th>Obervation</th><th>Assignment</th></tr><tr><td>132.2</td><td>-</td><td>a*</td></tr><tr><td>132.28</td><td>-</td><td>c*</td></tr><tr><td>128.65</td><td>upward</td><td>b</td></tr><tr><td>127.68</td><td>upward</td><td>d</td></tr><tr><td>129.78</td><td>upward</td><td>e</td></tr><tr><td>139.24</td><td>-</td><td>f</td></tr><tr><td>60.25</td><td>downward</td><td>g</td></tr></table>* Carbons at a and c to close to be indentified separately</td><td></td><td></td><td></td></tr>
<tr><td>Spectra for impurities
B.2.4/05
Mass spectra (MS)</td><td>GC Mass Spectrometer</td><td>(2,4-dichlorophenyl) methanol
FMC-61644</td><td>m/z = 176 protonated molecular ion</td><td>Acceptable.
The obtained MS spectra is in agreement with the structure.</td><td>-</td><td>Wang, J. 2018
Study report No R-1815</td></tr>
<tr><td colspan="7">B.2.5. SOLUBILITY IN WATER</td></tr>
<tr><td>Solubility in water
B.2.5/01</td><td>EC Method A.6
OECD Method 105
EPA OPPTS 830.7840
Shake flask method</td><td>Bixlozone pure
Purity: 99.9%
Batch PL14-0163</td><td>The following results were obtained at 20°C:
<table><tr><th>Media</th><th>Concentration (mg/L)</th><th>Mean Solubility (mg/L)</th></tr><tr><td>Purified water</td><td>41.95, 42.45, 41.94, 41.63, 42.04</td><td>42.0 ± 0.3 mg/L</td></tr><tr><td>pH 4 buffer</td><td>44.74, 44.77, 42.75, 40.30, 39.59, 41.52</td><td>42.3 ± 2.2 mg/L</td></tr></table></td><td>Acceptable.
The water solubility of bixlozone was not significantly affected by pH. Bixlozone is moderately soluble.

Analysis of samples by HPLC-UV. Method is</td><td>Y</td><td>Cowlyn, N. 2016b
Study Report No. SD77GL</td></tr>
</table>

<table>
<tr><th>Test or Study
Annex Point</th><th>Guideline and method</th><th>Test material purity and specification</th><th>Used methods / Results</th><th>Comments (Acceptable / Non acceptable)</th><th>GLP</th><th>Reference</th></tr>
<tr><td></td><td></td><td></td><td><table>
<tr><td>pH 7 buffer</td><td>40.58, 42.54, 38.93, 38.93, 38.56, 38.22</td><td>39.6 ± 1.6 mg/L</td></tr>
<tr><td>pH 9 buffer</td><td>42.88, 48.35, 43.02, 43.78, 40.29, 39.77</td><td>41.9 ± 1.8 mg/L</td></tr>
</table></td><td>acceptably validated (See Vol 3 B.5.1.2.7).</td><td></td><td></td></tr>
<tr><td colspan="7">B.2.6. SOLUBILITY IN ORGANIC SOLVENTS</td></tr>
<tr><td>Solubility in organic solvents
B.2.6/01</td><td>CIPAC MT 181
EC Method A6
OCSPP 830.7840</td><td>Bixlozone technical
Purity: 96.0%
Batch: PL14-0049</td><td><table>
<tr><td>Solvent</td><td>Solubility (g/L) at 20 °C</td></tr>
<tr><td>Methanol</td><td>120</td></tr>
<tr><td>Acetone</td><td>>250</td></tr>
<tr><td>Toluene</td><td>>250</td></tr>
<tr><td>Dichloromethane</td><td>>250</td></tr>
<tr><td>Ethyl acetate</td><td>>250</td></tr>
<tr><td>n-Heptane</td><td>14</td></tr>
<tr><td>n-Octanol</td><td>52</td></tr>
</table></td><td>Acceptable.
Analysis of methanol, n-heptane and n-octanol was by the flask method (based on Method A.6) and analysed by HPLC-UV. Method is acceptably validated (See Vol 3 B.5.1.2.7).</td><td>Y</td><td>Cowlyn, N. 2017d.
Study Report No. WT84BM</td></tr>
<tr><td colspan="7">B.2.7. PARTITION COEFFICIENT N-OCTANOL/WATER</td></tr>
<tr><td>Partition coefficient n-octanol/water
B.2.7/01</td><td>EC Method A.8
OECD Method 107
EPA OPPTS 830.7550
Shake flask method</td><td>Bixlozone pure
Purity: 99.9%
Batch PL14-0163</td><td>The following results were obtained at 20°C:<table>
<tr><td>Compound</td><td>Buffer solution</td><td>Pow</td><td>Log Pow</td></tr>
<tr><td rowspan="3">Bixlozone</td><td>pH 4</td><td>2100</td><td>3.3</td></tr>
<tr><td>pH 7</td><td>2160</td><td>3.3</td></tr>
<tr><td>pH 9</td><td>2060</td><td>3.3</td></tr>
</table></td><td>Acceptable.
Bixlozone has the potential to be fat soluble. No pH dependence was observed. Log Pow <4 hence no potential to bioaccumulate.
Analysis of samples by HPLC-UV. Method is acceptably validated (See Vol 3 B.5.1.2.7).</td><td>Y</td><td>Cowlyn, N. 2016c
Study Report No. RY85CN</td></tr>
</table>

<table>
<tr><th>Test or Study
Annex Point</th><th>Guideline and method</th><th>Test material purity and specification</th><th>Used methods / Results</th><th>Comments (Acceptable / Non acceptable)</th><th>GLP</th><th>Reference</th></tr>
<tr><td></td><td>KOWWIN v1.68 (EPI Suite v4.11, US EPA) Software Estimation of K_{ow}</td><td>N/A</td><td>Estimation of log K_{ow} (EPI Suite Prediction)<table><tr><th>Compound</th><th>Log K_{ow} Estimation</th></tr><tr><td>Bixlozone</td><td>3.51</td></tr><tr><td>5-hydroxy-bixlozone</td><td>1.97</td></tr><tr><td>4-hydroxymethyl-bixlozone</td><td>2.04</td></tr><tr><td>Bixlozone-3-OH-propanamide</td><td>2.20</td></tr><tr><td>4-carboxy-bixlozone</td><td>2.27</td></tr><tr><td>Bixlozone-dimethylmalonamide</td><td>2.43</td></tr><tr><td>Bixlozone-hydroxy-isobutyramide</td><td>2.51</td></tr><tr><td>2,4-dichlorobenzoic acid</td><td>2.82</td></tr><tr><td>5'-hydroxy- bixlozone</td><td>3.03</td></tr></table></td><td>The estimated values across the metabolites ranged from 1.97 to 3.03. The predicted log Kow for the parent compound bixlozone compared well with the experimentally determined value.</td><td></td><td>Jackson, S.A. 2018
Report No. 2018PCP-ISX4331</td></tr>
<tr><td colspan="7">B.2.8. DISSOCIATION IN WATER</td></tr>
<tr><td>Dissociation constant
B.2.8/01</td><td>-</td><td>Scientific justifcation</td><td>Not applicable as bixlozone does not contain any groups that are ionisable within an environmentally relevant pH range. Water solubility and partition coefficient determinations at different pH’s support this, as no pH dependence of these properties observed</td><td>Justifcation is acceptable</td><td>N</td><td>Guo, J. 2018
Report No. 2018WHP-ISX4284</td></tr>
<tr><td colspan="7">B.2.9. FLAMMABILITY AND SHELF-HEATING</td></tr>
<tr><td>Flammability
B.2.9/01</td><td>EC Method A.10</td><td>Bixlozone technical
Purity: 96.0%
Batch: PL14-</td><td>Bixlozone technical material melted and burned with a yellow sooty flame, which extinguished immediately after the removal of the burner flame. Combustion did not propagate along the train. As a negative result was obtained in the preliminary</td><td>Acceptable.</td><td>Y</td><td>Cowlyn, N. 2017e
Study Report No. FD69CW</td></tr>
</table>

Test or Study Annex Point	Guideline and method	Test material purity and specification	Used methods / Results	Comments (Acceptable / Non acceptable)	GLP	Reference
		0049	test, a definitive burning rate test was not required. Bixlozone technical material was not highly flammable.			
Self-heating B.2.9/02	EC Method A.15	Bixlozone technical Purity: 96.0% Batch: PL14-0049	The auto-ignition temperature was found to be 382°C.	Acceptable. Bixlozone is a solid hence Method A.16 should be used. However, bixlozone was observed to melt at around 81 ºC which resulted in material flowing out of the wire mesh cage, preventing measurement. Test A.15 was used as it employed a glass vessel. The use of test A.15 is considered acceptable.	Y	Cowlyn, N. 2017f Study Report No. CX51MQ
B.2.10. FLASH POINT						
Flash point B.2.10/01	-	-	-	Not applicable as bixlozone melting point is > 40°C.	-	-
B.2.11. EXPLOSIVE PROPERTIES						
Explosive properties B.2.11/01	EC Method A.14 EPA OPPTS 830.6316	Bixlozone technical Purity: 96.0% Batch: PL14-0049	- No shock sensitivity No reaction observed in six tests using BAM drop hammer (mass 10 kg, drop height 40 cm).	Acceptable. No explosive properties.	Y	Cowlyn, N. 2017g Study Report No. MV81XS

Test or Study Annex Point	Guideline and method	Test material purity and specification	Used methods / Results	Comments (Acceptable / Non acceptable)	GLP	Reference
			- No friction sensitivity No reaction observed in six tests using BAM friction apparatus with a force of 360 N. - No thermal sensitivity No reaction observed in the range135-285 ºC in a 6 mm or 2 mm orifice. Technical bixlozone does not show a danger of explosion.			
B.2.12. SURFACE TENSION						
Surface tension B.2.12/01	EC Method A.5 OECD Method 115	Bixlozone pure Purity: 99.8% Batch PL14-0163	90% saturated aqueous solution at 20°C: 66.5mN/m	Acceptable. The substance is not considered surface active.	Y	Cowlyn, N. 2017a Study Report No. FP91QY
B.2.13. OXIDISING PROPERTIES						
Oxidizing properties B.2.13/01	EC Method A.17	Bixlozone technical Purity: 96.0% Batch: PL14-0049	Mixtures of 2:1, 1:1 or 1:2 bixlozone /cellulose only burned slowly and did not burn to completion. Bixlozone technical has no oxidising properties.	Acceptable.	Y	Cowlyn, N. 2017h Study Report No.VK89JJ

Test or Study Annex Point	Guideline and method	Test material purity and specification	Used methods / Results	Comments (Acceptable / Non acceptable)	GLP	Reference
B.2.14. OTHER STUDIES						
Relative Density B.2.14/01	EC Method A.3 OECD Method 109 EPA OPPTS 830.7300	Bixlozone pure Purity: 99.8% Batch PL14-0163	The relative density (D_4^{20}) of bixlozone was found to be 1.37.	Acceptable.	Y	Cowlyn,N. 2017i Study Report No. WS55DS

Summary of physical and chemical properties of the active substance

Bixlozone (pure) is a white, crystalline solid with a melting range of 81.5-83.5°C. It has a vapour pressure of 1.1×10^{-3} Pa at 20°C and a moderate water solubility of 42.0 mg/L. It is readily soluble in organic solvents and has a Log P_{ow} of 3.3, indicating there is a possibility for bioaccumulation, It is not considered surface active. Bixlozone has a self-ignition temperature of 382°C and does not possess explosive or oxidising properties. There are no implications for classification on the basis of the physico-chemical properties.

Data to address the UV/visible absorption spectra of the relevant impurity (2,4-dichlorophenyl)methanol (FMC 61644; 2,4-dichlorobenzyl alcohol) are required.

B.2.15. REFERENCES RELIED ON

Data Point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner	Previous evaluation
KCA 2.1/01-03 KCA 2.3/01 KCA 2.12/01	Cowlyn, N.	2017a	Title: F9600: Physicochemical Properties Study Report No.: FP91QY FMC Report No.: 2016PCP-ISX3022 GLP Unpublished	N	Y	Study to support new active approval in GB	FMC	None (new active)
KCA 2.2/01-02	Cowlyn, N.	2016a	Title: F9600: Vapour Pressure Study Report No.: BM19FW FMC Report No.: 2015PCP-ISX2327 GLP Unpublished	N	Y	Study to support new active approval in GB	FMC	None (new active)
KCA 2.3/01	Cowlyn, N.	2017b	F9600 Technical: Appearance Study Report No.: MF50PJ FMC Report No.: 2016PCP-ISX3021 GLP Unpublished	N	Y	Study to support new active approval in GB	FMC	None (new active)
KCA 2.4/01-04	Cowlyn, N.	2017c	Title: F9600: Spectra (UV/Vis, IR, NMR and MS) Report No.: WP36VB FMC Report No.: 2016PCP-ISX3019 GLP Unpublished	N	Y	Study to support new active approval in GB	FMC	None (new active)
KCA 2.4/05	Wang, J.	2018	Identification of FMC-61644 (CAS No. 1777-82-8), Reference No. G384:12-1 FMC (Shanghai) CTC Study No. R-1815	N	N	Not applicable	FMC	None (new active)

Data Point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner	Previous evaluation
			Non-GLP Unpublished					
KCA 2.5/01	Cowlyn, N.	2016b	Title: F9600: Water Solubility Study Report No.: SD77GL FMC Report No.: 2015PCP-ISX2325 GLP Unpublished	N	Y	Study to support new active approval in GB	FMC	None (new active)
KCA 2.6/01	Cowlyn, N.	2017d	Title: F9600: Organic Solvent Solubility Study Report No.: WT84BM FMC Report No.: 2016PCP-ISX3018 GLP Unpublished	N	Y	Study to support new active approval in GB	FMC	None (new active)
KCA 2.7/01	Cowlyn, N.	2016c	Title: F9600: Partition Coefficient(n-octanol/water) Study Report No.: RY85CN FMC Report No.: 2015PCP-ISX2326 GLP Unpublished	N	Y	Study to support new active approval in GB	FMC	None (new active)
KCA 2.7/02	S. A. Jackson	2018	Title: F9600: Partition Coefficient (log K_{ow}) for Metabolites of F9600 FMC Report No.: 2018PCP-ISX4331 Non-GLP Unpublished	N	N	Not applicable	FMC	None (new active)
KCA 2.8/01	Guo, J.	2018	F9600: Waiver Request for Study on Dissociation Constants in Water FMC Report No: 2018WHP-ISX4284 Non-GLP, Unpublished	N	N	Not applicable	FMC	None (new active)
KCA	Cowlyn, N.	2017e	Title: F9600: Flammability (solids)	N	Y	Study to support new active	FMC	None

Data Point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner	Previous evaluation
2.9/01			Study Report No.: FD69CW FMC Report No.: 2016PCP-ISX3017 GLP Unpublished			approval in GB		(new active)
KCA 2.9/02	Cowlyn, N.	2017f	Title: F9600: Auto-Ignition Temperature Study Report No.: CX51MQ FMC Report No.: 2017PCP-ISX3136 GLP Unpublished	N	Y	Study to support new active approval in GB	FMC	None (new active)
KCA 2.11/01	Cowlyn, N.	2017g	Title: F9600: Explosive Properties Study Report No.: MV81XS FMC Report No.: 2016PCP-ISX3014 GLP Unpublished	N	Y	Study to support new active approval in GB	FMC	None (new active)
KCA 2.13/01	Cowlyn, N.	2017h	Title: F9600: Oxidising Properties Study Report No.: VK89JJ 2016PCP-ISX3015 GLP Unpublished	N	Y	Study to support new active approval in GB	FMC	None (new active)
KCA 2.14/01	Cowlyn, N.	2017i	Title: F9600: Relative Density Study Report No.: WS55DS 2016PCP-ISX3020 GLP Unpublished	N	Y	Study to support new active approval in GB	FMC	None (new active)