

COMMERCIAL CHEMICALS
ANALYTICAL REPORT #346

To: E. G. GORTNER - RIKER SAFETY EVALUATION - 218-3S-03
From: R. M. PAYFER - COMMERCIAL CHEMICALS - 236-2B
Subject: FINAL EVALUATION OF FM-3924 (T-2999CoC) FOR RIKER STUDY
NO. 0681TR0362
Date: June 22, 1982

3M

References: Commercial Chemicals Analytical Requests #16474, 18319,
Analytical Report #318

A light, straw-colored waxy solid labeled FM-3924, Lot 547 was received for analysis for Riker teratology study #0681TR0362. The material has been analyzed with the following results:

Gas Chromatography of Sample As Received

		All in Area %			
	QC(14310	12/3/80	3/31/81	3/5/82	5/27/82
Inerts		0.4	0.7	0.4	0.7
Amide	0.5	0.6	0.6	0.6	0.2
C3		1.2	1.3	1.2	1.3
C4	10.6 for	1.8	1.7	1.8	2.2
C5	all low	1.5	1.6	1.5	1.9
C6	boilers	4.8	4.3	4.8	4.9
C7,C8	88.9	88.9	88.9	88.9	88.9
High Boilers	-	0.6	0.8	0.6	0.2

All values are within experimental and integration parameters. Values meet QC specifications.

Elemental Analysis

	% Theor.	% Found 3/5/82	% Found 5/27/82
C	25.2	24.6	25.0
H	1.75	1.5	1.8
N	2.45	2.6	2.7
S	5.6	5.3	6.1
F	56.66	57.0	55.3
O by difference	8.4	9.0	9.1

MW = 571

Melting Point: Initial 38-48°C
Recheck 38-48°C
5/28/82 38-48°C

Spectroscopic:

Infrared spectra 16474-2,3,4 and 18318-1 are identical to each other and match reference spectra.

16474-2 was obtained	11/14/80
16474-3 was obtained	3/31/81
16474-4 was obtained	3/5/82
18318-1 was obtained	5/28/82.

NMR spectra H8385, H8387, F8390, F8391 were obtained on 12/1/80 and 12/2/80. These were to confirm structure and not repeated. Structure was confirmed. The isomer distribution was found to be 69.6% straight chain, 10.9% (CF₃)₂CF branched, and 19.5% backbone branching.

Conclusions:

FM-3924, Lot 547 has an analysis within specifications, is stable and is representative of commercial material.

RMP/hc

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