				Mixer
				Mixer
PROGRAM				Mixer
VEDSION		(NOVEMBER 1976)	Mixer Mixer
		(APRIL 1981)		Mixer
			*COMPUTER INDEPENDENT VERSION	Mixer
VERSION	84-1		*SPECIAL I/O ROUTINES TO GUARANTEE	Mixer
			ACCURACY OF ENERGY.	Mixer
			*DOUBLE PRECISION TREATMENT OF ENERGY (REQUIRED FOR NARROW RESONANCES).	Mixer Mixer
VERSION	86-1	(JANUARY 1986)	*FORTRAN-77/H VERSION	Mixer
VERSION	88-1	(JULY 1988)	*OPTIONINTERNALLY DEFINE ALL I/O	Mixer
			FILE NAMES (SEE, SUBROUTINE FILIO1	Mixer
			AND FILIO2 FOR DETAILS). *IMPROVED BASED ON USER COMMENTS.	Mixer Mixer
VERSION	89-1			Mixer
			INSURE PROGRAM WILL NOT DO ANYTHING	Mixer
			CRAZY.	Mixer
			*UPDATED TO USE NEW PROGRAM CONVERT KEYWORDS.	Mixer Mixer
			*ADDED LIVERMORE CIVIC COMPILER	Mixer
			CONVENTIONS.	Mixer
VERSION	92-1		*UPDATED BASED ON USER COMMENTS *ADDED PHOTON CROSS SECTIONS	Mixer
				Mixer Mixer
				Mixer
			*COMPLETELY CONSISTENT I/O ROUTINES -	
				Mixer Mixer
			FORMAT.	Mixer
VERSION	94-1	(JANUARY 1994)	*VARIABLE ENDF/B DATA FILENAMES	Mixer
			TO ALLOW ACCESS TO FILE STRUCTURES	Mixer
			(WARNING - INPUT PARAMETER FORMAT HAS BEEN CHANGED)	Mixer Mixer
			*CLOSE ALL FILES BEFORE TERMINATING	Mixer
			(SEE, SUBROUTINE ENDIT)	Mixer
			*INCREASED INCORE PAGE SIZE FROM	Mixer
VERSION	96-1	(JANUARY 1996)	1002 TO 4008. *COMPLETE RE-WRITE	Mixer Mixer
		(,	*IMPROVED COMPUTER INDEPENDENCE	Mixer
			*ALL DOUBLE PRECISION	Mixer
			*ON SCREEN OUTPUT *UNIFORM TREATMENT OF ENDF/B I/O	Mixer Mixer
			*IMPROVED OUTPUT PRECISION	Mixer
				Mixer
			*INCREASED INCORE PAGE SIZE FROM 4008 TO 12000.	Mixer Mixer
VERSION	99-1	(MARCH 1999)		Mixer Mixer
		(POINT READ FOR MORE DIGITS	Mixer
				Mixer
			VERSION BASED ON RECENT FORMAT CHANGE *GENERAL IMPROVEMENTS BASED ON	Mixer Mixer
			USER FEEDBACK	Mixer
VERSION	99-2	(JUNE 1999)	*ASSUME ENDF/B-VI, NOT V, IF MISSING	Mixer
TEDO 00	00 1		MF=1, MT-451.	Mixer
VERS. 20	100-1	(FEBRUARI 2000)*GENERAL IMPROVEMENTS BASED ON USER FEEDBACK	Mixer Mixer
VERS. 20	02-1	(MAY 2002)	*OPTIONAL INPUT PARAMETERS	Mixer
VERS. 20	04-1	(MARCH 2004)		Mixer
			*INCREASED INCORE PAGE SIZE FROM 12000 TO 60000.	Mixer Mixer
VERS. 20	05-1	(OCT. 2005)	*CORRECTED MERGE ERROR	Mixer
		(JAN. 2007)		Mixer
				Mixer
VERS. 20	07-2	(DEC. 2007)	60,000 TO 240,000. *72 CHARACTER FILE NAMES.	Mixer Mixer
		(JUNE 2008)	*ADDED GRAMS OR ATOMS INPUT	Mixer
		(Apr. 2010)	*General update based on user feedback	
VERS. 20	12-1	(Aug. 2012)	*Added CODENAME *32 and 64 bit Compatible	Mixer Mixer
			of and of pic compactnic	TITVET

*Added ERROR stop Mixer VERS. 2015-1 (Jan. 2015) *Extended OUT9. Mixer *Replaced ALL 3 way IF Statements. Mixer Mixer OWNED, MAINTAINED AND DISTRIBUTED BY Mixer Mixer THE NUCLEAR DATA SECTION Mixer INTERNATIONAL ATOMIC ENERGY AGENCY Mixer P.O. BOX 100 Mixer A-1400, VIENNA, AUSTRIA Mixer EUROPE Mixer Mixer ORIGINALLY WRITTEN BY Mixer -----Mixer Dermott E. Cullen Mixer Mixer PRESENT CONTACT INFORMATION Mixer _____ Mixer Dermott E. Cullen Mixer 1466 Hudson Way Mixer Livermore, CA 94550 Mixer U.S.A. Mixer Telephone 925-443-1911 Mixer E. Mail RedCullen1@Comcast.net Mixer http://home.comcast.net/~redcullen1 Website Mixer Mixer PURPOSE Mixer _____ Mixer THIS PROGRAM IS DESIGNED TO CALCULATE THE ENERGY DEPENDENT CROSS Mixer SECTION FOR A COMPOSITE MIXTURE OF UP TO 10 DIFFERENT MATERIALS. Mixer Mixer THE PRESENT VERSION WILL ONLY CALCULATE THE CROSS SECTION FOR ONE Mixer FINAL REACTION (ENDF/B SECTION), E.G. TOTAL CROSS SECTION, BUT NOT Mixer ANY OTHER REACTION. Mixer Mixer NOTE, THIS PROGRAM WILL NOT COMBINE ALL REACTIONS FOR A MIXTURE Mixer OF MATERIALS DURING A SINGLE RUN - ONLY ONE REACTION WILL BE Mixer CREATED PER RUN. Mixer Mixer EVALUATED DATA FORMAT Mixer ------Mixer THE CROSS SECTIONS ARE READ FROM THE ENDF/B FORMAT AND THE Mixer COMPOSITE CROSS SECTION IS CONVERTED TO AN EQUIVALENT BARNS/ATOM Mixer FORM AND OUTPUT IN THE ENDF/B FORMAT WITH AN EQUIVALENT ATOMIC Mixer WEIGHT. THE USER MUST SPECIFY THE COMPOSITION BY GIVING THE ZA, Mixer MT AND GRAMS OR ATOMS OF EACH CONSTITUENT. IN ADDITION THE USER Mixer IDENTIFY THE COMPOSITE CROSS SECTION BY SPECIFYING THE ZA, MAT Mixer AND MT TO BE USED IN THE ENDF/B FORMATTED OUTPUT. Mixer Mixer SINCE ONLY THE CROSS SECTIONS IN FILE 3 AND 23 ARE USED, AND THE Mixer FORMAT FOR FILE 3/23 IS THE SAME IN ALL VERSIONS ON ENDF/B, THIS Mixer PROGRAM MAY BE USED WITH ANY VERSION OF ENDF/B DATA (I.E., Mixer ENDF/B-I, II, III, IV, V OR VI). DURING A SINGLE RUN IT MAY EVEN Mixer BE USED TO READ AND COMBINE EVALUATIONS WHICH ARE IN DIFFERENT Mixer VERSIONS OF THE ENDF/B FORMAT. Mixer Mixer ENDF/B FORMATTED OUTPUT WILL BE IN THE ENDF/B-VI FORMAT REGARDLESS Mixer OF THE FORMAT OF THE INPUT ENDF/B DATA. THIS WILL ONLY EFFECT THE Mixer HOLLERITH SECTION (MF=1, MT=451). THE FORMAT OF CROSS SECTIONS Mixer (MF=3) IS THE SAME IN ALL VERSION OF THE ENDF/B FORMAT. Mixer Mixer IN ORDER TO GUARANTEE PROPER OPERATION OF THIS PROGRAM THE DATA Mixer MUST BE PROPERLY CODED IN THE ENDF/B FORMAT. NO ERROR CHECKING IS Mixer PERFORMED. IT IS PARTICULARLY IMPORTANT THAT THE FOLLOWING DATA Mixer BE CORRECT Mixer Mixer (1) ZA, MF, MT - MUST BE CORRECT IN ORDER TO ALLOW PROGRAM TO Mixer SELECT THE APPROPRIATE SECTIONS TO BE COMBINED. Mixer (2) AWRE - ATOMIC WEIGHT RATIO MUST BE CORRECT TO ALLOW PROGRAM Mixer TO CONVERT THE USER SPECIFIED GRAMS INTO ATOMS FOR Mixer PROPER ATOM RATIO MIXING. Mixer

(3)	(ENERGIES	S, CROSS	SECTIONS)	- MUST	BE CORR		EARLY	Mixer Mixer
	INTERPOL	ABLE, IN	ASCENDING	ENERGY	ORDER C			Mixer
								Mixer
	TO CONVER	יאַרואים דאַר		י בידי ברו ר	т∩ тнह в	FUITBED	INPUT FORM	Mixer Mixer
			OGRAMS MAY			LDQ011(LDD	INFOT FORM	Mixer
	LINEAR -		TABULATED		SECTIONS	TO LINE	ARLY	Mixer
	DECENT -		LABLE FORM		דיינוסדסיייי		TO BACKGROUND	Mixer
	KECENI -					-	IN LINEARLY	Mixer
			LABLE FORM					Mixer
	SIGMA1 -		BROADEN CI THE RESULT				MPERATURE AND	
		OUIPUI	INE RESULI		BARLI IN	ILERPULAE	LE FORM.	Mixer Mixer
DOCI	UMENTATION	I						Mixer
		- 	DOCDAM HAG	COMPTN				Mixer
			ROGRAM HAS FORMAT IN					Mixer Mixer
							, IN THE FORM	
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THI	S IS FOLLO	OWED BY	COMPOSITIO	N INPUT	BY THE	USER.		Mixer
NEU	TRON OR PH	יבת מסידסנ	тъ					Mixer Mixer
								Mixer
							OR PHOTON	Mixer
			YOU CANNO				ETHER. BY 23 (PHOTONS)	Mixer Mixer
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WHI	CH WILL BE	E PROCES	SED BY THIS	S PROGRA	AM.			Mixer
ם שח	INING THE	COMDOGT	TTON					Mixer Mixer
								Mixer
			UP TO 10 1					Mixer
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			AL IN THE (Mixer Mixer
			JME FRACTIO					Mixer
	SITY OF EA UT ATOM FE		RIAL BY IT:	S VOLUMI	E FRACTI	ON. NOTE	, DO NOT	Mixer Mixer
TINE	UI AIOM FI	VACIIONS	•					Mixer Mixer
THE	LIST OF S	SECTIONS	TO BE COM	BINED MA	AY BE SF	ECIFIED	IN ANY	Mixer
	,		D NOT BE IN				THAT THE	Mixer
EVA.	LUATED DAI	ГА АРРЕА.	RS ON THE I	SNDF/B 1	FORMATTE	D TAPE.		Mixer Mixer
			TION OF DAT					Mixer
			E, THE PRO					Mixer
			TERMINATE LL PRODUCE					Mixer Mixer
							SITE SECTION	
WIL:	L NOT BE 7	CHINNED.						Mixer
PRI	OR TO LATE	ER USE II	N ANY APPL	ICATION	THE NUM	IBER OF E	NERGY POINTS	Mixer Mixer
IN '	THE COMPOS	SITE CRO	SS SECTION	MAY BE	MINIMIZ	ED BY US	ING PROGRAM	Mixer
LIN	EAR, UCRL-	-50400,	VOL. 17, PA	ART B TO	C THIN T	'HE DATA.		Mixer
ONI,	Y LINEARL	(INTERP	OLABLE DATA	A				Mixer Mixer
								Mixer
							INTERPOLABLE	
TAB	ULATED FOR	~1~1 (ㅣ. 또	., FILE 3 (JK 23,	INTERPOL	ATION LA	w ∠).	Mixer Mixer
TO (CONVERT TA	ABULATED	CROSS SEC	FIONS TO) LINEAR	LY INTER	POLABLE FORM	
SEE	, PROGRAM	LINEAR,	UCRL-50400), VOL.	17, PAR	T A.		Mixer
TO 1	ONVERT PI	SONANCE	PARAMETER	יד. ד מיד ב	NEARLY T	NTERPOIN	BLE FORM SEE,	Mixer Mixer
			-50400, VO				, 110 I I I I I I I I I I I I I I I I I I	Mixer
								Mixer
'I'O I	DOPPLER BI	KUADEN L	INEARLY IN	LEKLOTY	BLE DATA	I'I'O ANY	TEMPERATURE	Mixer

SEE PROGRAM SIGMA1, UCRL-50400, VOL. 17, PART B. Mixer Mixer PAGING SYSTEM Mixer Mixer THERE IS NO LIMIT TO THE THE NUMBER OF DATA POINTS IN EACH OF THE Mixer SECTIONS TO BE COMBINED, NOR IS THERE A LIMIT TO THE NUMBER OF Mixer DATA POINTS IN THE COMPOSITE MIXTURE CROSS SECTION. Mixer Mixer ALL REQUIRED SECTIONS OF DATA ARE READ FROM THE ORIGINAL ENDF/B Mixer FORMATTED FILE. ANY SECTION OF 60000 OR FEWER POINTS WILL BE Mixer TOTALLY CORE RESIDENT. LARGER SECTIONS ARE LOADED INTO A PAGING Mixer SYSTEM USING A SCRATCH FILE WITH ONLY 60000 POINTS PER SECTION Mixer CORE RESIDENT AT ANY ONE TIME. SIMILARLY THE COMPOSITE SECTION Mixer WILL BE TOTALLY CORE RESIDENT IF IT CONTAINS 60000 OR FEWER POINTS Mixer AND LARGER COMPOSITE SECTIONS WILL BE LOADED INTO A PAGING Mixer SYSTEM WHERE ONLY 60000 POINTS ARE CORE RESIDENT AT ANY TIME. SINC Mixer A PAGING SYSTEM MAY BE USED BY ANY SECTION OF DATA THERE IS NO Mixer LIMIT TO THE SIZE OF EITHER THE ORIGINAL SECTIONS, NOR TO THE Mixer COMPOSITE SECTION, E.G. A SECTION MAY CONTAIN 100,000 ENERGIES Mixer AND CROSS SECTIONS TO DESCRIBE A GIVEN REACTION. Mixer Mixer PAGE SIZE Mixer _____ Mixer THE PAGE SIZE USED IN THIS PROGRAM IS DEFINED BY THE PARAMETER Mixer NPAGE AND THE DIMENSIONS OF THE ARRAYS XTAB AND YTAB. IN ORDER Mixer TO ADAPT THIS PROGRAM FOR USE ON ANY COMPUTER THE PAGE SIZE MAY Mixer BE INCREASED OR DECREASED BUT THE FOLLOWING RULES MUST BE FOLLOWED Mixer ==== Mixer Mixer (1) NPAGE - MUST BE A MULTIPLE OF 3 IN ORDER TO ALLOW THE PROGRAM Mixer TO READ FULL CARDS OF ENDF/B DATA (3 POINTS PER LINE). FAILURE Mixer TO FOLLOW THIS RULE CAN LEAD TO LOSS OF DATA AND/OR PROGRAM Mixer ERRORS DURING EXECUTION. Mixer (3) YTAB - THE DIMENSION OF YTAB MUST BE (NPAGE, 11). Mixer (4) XTAB - THE DIMENSION OF XTAB MUST BE (NPAGE,11). Mixer Mixer DOPPLER BROADENING Mixer Mixer THE COMPOSITE CROSS SECTION OUTPUT FROM THIS PROGRAM SHOULD NOT Mixer BE DOPPLER BROADENED USING PROGRAM SIGMA1, OR THE EQUIVALENT. THE Mixer ATOMIC WEIGHT USED TO IDENTIFY THE COMPOSITE MIXTURE IS BASED ON Mixer THE ATOM FRACTION OF EACH CONSTITUENT AND CANNOT BE USED TO Mixer CHARACTERIZE THE BROADENING OF ANY GIVEN RESONANCE IN THE MIXTURE Mixer DUE TO THE CONTRIBUTION OF ONE CONSTITUENT. IN ORDER TO CONSIDER Mixer DOPPLER BROADENING FIRST USE PROGRAM SIGMA1 TO BROADEN THE CROSS Mixer SECTION FOR EACH OF THE CONSTITUENTS AND THEN COMBINE THE Mixer BROADENED DATA USING PROGRAM MIXER. Mixer Mixer EXAMPLE USE Mixer Mixer THE OUTPUT FROM THIS PROGRAM HAS BEEN FOUND TO BE EXTREMELY Mixer USEFUL IN THE FOLLOWING APPLICATIONS... Mixer Mixer (1) CALCULATE A COMPOSITE TOTAL CROSS SECTON FOR LATER USE AS Mixer A WEIGHTING FUNCTION IN SELF-SHIELDING THE CROSS SECTIONS Mixer OF EACH CONSTITUENT OF THE MIXTURE SEPARATELY. Mixer Mixer PROGRAM GROUPIE CAN USE THE CALCULATED COMPOSITE TOTAL CROSS Mixer SECTION AS THE TOTAL CROSS SECTION FOR EACH CONSTITUENT OF Mixer THE MIXTURE IN ORDER TO CALCULATE SELF-SHIELDED CROSS SECTION Mixer FOR EACH CONSTITUENT OF THE MIXTURE. Mixer Mixer (2) CALCULATE COMPOSITE TOTAL AND FISSION CROSS SECTIONS IN Mixer ORDER TO CALCULATE THE TRANSMISSION AND SELF-INDICATION Mixer THROUGH COMPOSITE MATERIALS. GENERALLY IN THIS CASE THE Mixer TOTAL CROSS SECTION WILL BE CALCULATED FOR THE COMPOSITION Mixer OF THE SAMPLE AND THE FISSION CROSS SECTION WILL BE Mixer CALCULATED FOR THE COMPOSITION OF THE FISSION CHAMBER Mixer (WHICH GENERALLY WILL HAVE A DIFFERENT COMPOSITION THAN THE Mixer SAMPLE). Mixer Mixer

PROGRAM VIRGIN CAN USE THE OUTPUT FROM THIS PROGRAM TO Mixer PERFORM TRANSMISSION AND SELF-INDICATION CALCULATIONS. Mixer PROGRAM VIRGIN WILL ANALYTICALLY CALCULATE THE UNCOLLIDED Mixer (I.E. VIRGIN) FLUX TRANSMITTED AND REACTION RATE DUE TO ANY Mixer TABULATED LINEARLY INTERPOLABLE INCIDENT SPECTRUM. RESULTS Mixer WILL BE PRESENTLY FOR UP TO 10 DIFFERENT SAMPLE THICKNESSES Mixer AND BINNED INTO ENERGY GROUPS IN ORDER TO SIMULATE AN Mixer EXPERIMENTAL MEASUREMENT. Mixer Mixer (3) THE OUTPUT FROM THIS PROGRAM IS VERY USEFUL TO PLOT IN ORDER Mixer TO SEE THE IMPORTANCE OF SPECIFIC CROSS SECTION FEATURES IN Mixer THE COMPOSITE CROSS SECTION. Mixer Mixer PROGRAM COMPLOT CAN BE USED TO PLOT THE OUTPUT FROM THIS Mixer PROGRAM AND IF REQUIRED EXAMINE ANY PARTICULAR ENERGY RANGE Mixer IN DETAIL. IN ORDER TO DO THIS THE (ZA, MT) EQUIVALENCE OPTION Mixer OF PROGRAM COMPLOT SHOULD BE USED. TO COMPARE ANY CONSTITUENT Mixer CROSS SECTION TO THE COMPOSITE CROSS SECTION THE INPUT TO Mixer COMPLOT SHOULD EQUATE THE (ZA,MT) OF THE COMPOSITE TO THE Mixer (ZA, MT) OF ONE CONSTITUENT AND THE MULTIPLIER INPUT TO Mixer COMPLOT SHOULD BE THE ATOM FRACTION FOR THE CONSTITUENT (THE Mixer ATOM FRACTIONS ARE DEFINED IN THE OUTPUT LISTING FROM PROGRAM Mixer MIXER). Mixer Mixer INPUT FILES Mixer _____ Mixer UNIT DESCRIPTION Mixer _____ ____ Mixer 2 INPUT CARDS (BCD - 80 CHARACTERS/RECORD) Mixer ORIGINAL EVALUATED DATA IN ENDF/B FORMAT 10 Mixer (BCD - 80 CHARACTERS/RECORD) Mixer Mixer OUTPUT FILES Mixer _____ Mixer UNIT DESCRIPTION Mixer Mixer 3 OUTPUT LISTING (BCD - 120 CHARACTERS/RECORD) Mixer 11 COMPOSITE EVALUATED DATA IN ENDF/B FORMAT Mixer (BCD - 80 CHARACTERS/RECORD) Mixer Mixer SCRATCH FILES Mixer _____ Mixer UNIT DESCRIPTION Mixer ____ _____ Mixer 12 SCRATCH FILE FOR EACH OF THE 10 SECTIONS WHICH Mixer 13 WILL BE ADDED TOGETHER TO DEFINE THE FINAL Mixer SECTION (BINARY - 60000 AND 480000 WORDS/RECORD) . Mixer . . Mixer Mixer 20 . Mixer 21 . Mixer 2.2 SCRATCH FILE FOR COMBINED SECTION. Mixer (BINARY - 2004 WORDS/RECORD) Mixer Mixer STANDARD FILE NAMES (SEE SUBROUTINES FILIO1 AND FILIO2) Mixer _____ Mixer UNIT FILE NAME Mixer _____ Mixer ____ 2 MIXER.INP Mixer 3 MIXER LST Mixer 10 ENDFB.IN Mixer 11 ENDFB.OUT 12-22 (SCRATCH) Mixer Mixer Mixer INPUT CARDS Mixer Mixer LINE COLS. FORMAT NAME DESCRIPTION Mixer ____ ----- ------ ------Mixer 1-2 1-66 16A4, A2 TITLE TWO LINE TITLE DESCRIBING PROBLEM Mixer (THIS TITLE IS USED TO IDENTIFY THE Mixer OUTPUT LISTING AND IS ALSO WRITTEN Mixer

			IN MF=1, MT=451 (HOLLERITH SECTION)	Mixer
			OF THE ENDF/B FORMATTED OUTPUT TO IDENTIFY THE COMPOSITE MIXTURE).	Mixer Mixer
3	1-72		ENDF/B INPUT DATA FILENAME	Mixer
			(STANDARD OPTION = ENDFB.IN)	Mixer
4	1-72		ENDF/B OUTPUT DATA FILENAME	Mixer
5	1-11	I11	(STANDARD OPTION = ENDFB.OUT) IZAOUT ZA IDENTIFICATION FOR COMBINATION	Mixer Mixer
	12-17	IG	MATOUT MAT IDENTIFICATION FOR COMBINATION	Mixer
5	18-19	I2	MFOUT MF IDENTIFICATION FOR COMBINATION	Mixer
	20-22		MTOUT MT IDENTIFICATION FOR COMBINATION	Mixer
5	23-33	I11	DEFINE INPUT DENSITY = 0 = GRAMS = BACKWARDS COMPATIBLE	Mixer Mixer
			> 0 = ATOMS = DACKWARDS COMPATIBLE > 0 = ATOMS = NEW IN 2008	Mixer
6-N	1-11	I11	IZAGET ZA (1000*Z+A) OF MATERIAL	Mixer
	12-22		MTGET MT OF REACTION	Mixer
6-N	23-33	E11.4	DENSE MATERIAL DENSITY (ATOMS OR GRAMS)	Mixer Mixer
THE S	тхтн т.т	NE TS RE	PEATED FOR EACH SECTION (FROM 2 TO 10).	Mixer Mixer
			MATTED OUTPUT IS IN BARNS/ATOM FORM A MINIMUM	
			BE COMBINED (I.E., IF ONLY ONE SECTION IS	Mixer
			WOULD BE IDENTICAL TO THE INPUT AND AS SUCH SIDER THIS TO BE AN ERROR AND NOT PERFORM THE	Mixer Mixer
			SIDER THIS TO BE AN ERROR AND NOT PERFORM THE ST OF SECTIONS IS TERMINATED BY A BLANK LINE.	Mixer Mixer
				Mixer
			TO BE COMBINED MAY BE SPECIFIED IN ANY	Mixer
			D NOT BE IN ZA ORDER OR THE ORDER THAT THE RS ON THE ENDF/B FORMATTED TAPE.	Mixer
EVALU.	ATED DA	TA APPLA	RS ON THE ENDE/B FORMATTED TAPE.	Mixer Mixer
EXAMP	LE INPU	T NO. 1		Mixer
				Mixer
			SS SECTION (MT=1) FOR STAINLESS STEEL AND	Mixer
			D MATERIAL WITH ZA=26800 AND MAT=4000, OLUME OF THE STEEL WILL BE	Mixer Mixer
11111 0	0111 0011	ION DI V		Mixer
			6\K300\LIBRARY.DAT AND WRITE DATA TO	Mixer
\MIXE	R\STEEL	.DAT		Mixer
TRÓN	_	74.8 PER	- CFNT	Mixer Mixer
	IUM -			Mixer
NICKE	L –	6.0		Mixer
	NESE -			Mixer
	ON - N -			Mixer Mixer
CIIIDO		0.2		Mixer
THE I	NPUT MU	ST SPECI	FY THE COMPOSITION BY GRAMS OR ATOMS. THIS IS	Mixer
			CT OF THE STANDARD DENSITY (GRAMS)	Mixer
		ARE REQU	CTION. FOR THIS EXAMPLE THE FOLLOWING 12	Mixer Mixer
1111 0 1	OTHEDO	ning nggo		Mixer
STAIN	LESS ST	EEL. COM	POSITION BY PER-CENT VOLUME IS 74.8-IRON,	Mixer
			2-MANGANESE, 1-SILICON, 0.2-CARBON	Mixer
	B6\K3UU R\STEEL	\LIBRARY	. DAT	Mixer Mixer
		4000 3	1 0	Mixer
	26000		1 5.88676 (NOTE, GRAMS INPUT FOR EACH	Mixer
	24000		1 1.150448 CONSTITUENT, E.G. FOR IRON THE 1 0.533928 STP DENSITY IS 7.87 GRAMS.	Mixer
	28000 25055		1 0.533928 STP DENSITY IS 7.87 GRAMS. 1 0.1486 THE INPUT VALUE OF 5.88676 IS	Mixer Mixer
	14000		1 0.0233 0.748 X 7.87, I.E. VOLUME	Mixer
	6012		1 0.0044958 FRACTION TIMES STP DENSITY).	Mixer
			(BLANK LINE TERMINATES INPUT LIST)	
EXAMP	LE INDI	T NO. 2		Mixer Mixer
				Mixer
			THE ABOVE PROBLEM, ONLY USE THE STANDARD	Mixer
			S - ENDFB.IN AND ENDFB.OUT (THIS CAN BE	Mixer Mixer
				Mixer Mixer
STAIN	LESS ST	EEL. COM	POSITION BY PER-CENT VOLUME IS 74.8-IRON,	Mixer

26000 1 5.88676 (NOTE, GRAMS INPUT FOR EACH Mixer 24000 1 1.150448 CONSTITUENT, E.G. FOR IRON THE Mixer 28000 1 0.533928 STP DENSITY IS 7.87 GRAMS. Mixer 25055 1 0.1486 THE INPUT VALUE OF 5.88676 IS Mixer 14000 1 0.0233 0.748 X 7.87, I.E. VOLUME Mixer 6012 1 0.0044958 FRACTION TIMES STP DENSITY). Mixer (BLANK LINE TERMINATES INPUT LIST) Mixer	16-CHROME, 6-NICKEL, (NOTE - THIS LINE IS (NOTE - THIS LINE IS 26800 4000 3	,	Mixer Mixer Mixer Mixer
28000 1 0.533928 STP DENSITY IS 7.87 GRAMS. Mixer 25055 1 0.1486 THE INPUT VALUE OF 5.88676 IS Mixer 14000 1 0.0233 0.748 X 7.87, I.E. VOLUME Mixer 6012 1 0.0044958 FRACTION TIMES STP DENSITY). Mixer BLANK LINE TERMINATES INPUT LIST) Mixer	26000	1 5.88676 (NOTE, GRAMS INPUT FOR EACH	Mixer
25055 1 0.1486 THE INPUT VALUE OF 5.88676 IS Mixer 14000 1 0.0233 0.748 X 7.87, I.E. VOLUME Mixer 6012 1 0.0044958 FRACTION TIMES STP DENSITY). Mixer (BLANK LINE TERMINATES INPUT LIST) Mixer	24000	1.150448 CONSTITUENT, E.G. FOR IRON THE	Mixer
1400010.02330.748 x 7.87, I.E.VOLUMEMixer601210.0044958FRACTION TIMES STP DENSITY).Mixer(BLANK LINE TERMINATES INPUT LIST) Mixer	28000	L 0.533928 STP DENSITY IS 7.87 GRAMS.	Mixer
6012 1 0.0044958 FRACTION TIMES STP DENSITY). Mixer (BLANK LINE TERMINATES INPUT LIST) Mixer	25055	L 0.1486 THE INPUT VALUE OF 5.88676 IS	Mixer
(BLANK LINE TERMINATES INPUT LIST) Mixer	14000	L 0.0233 0.748 X 7.87, I.E. VOLUME	Mixer
	6012	L 0.0044958 FRACTION TIMES STP DENSITY).	Mixer
		(BLANK LINE TERMINATES INPUT LIST)	Mixer
Mixer			Mixer
Mixer	=======================================		Mixer