



INTERNATIONAL ATOMIC ENERGY AGENCY

NUCLEAR DATA SERVICES

DOCUMENTATION SERIES OF THE IAEA NUCLEAR DATA SECTION

IAEA-NDS-42

(Rev. 1)

ENDF/B-5 GAS PRODUCTION FILE (Revision 2)

Abstract

This document summarizes the contents of the ENDF/B-5 (Rev. 2) Gas Production File released by the US National Nuclear Data Center in March 1984. Upon request, this file is available on magnetic tape and in listing form, free of charge, from the IAEA Nuclear Data Section.

V.G. Pronyaev
July 1984

ENDF/B-5 Gas Production File

CONTENTS

The ENDF/B-5 Gas Production File contains data for 9 nuclides ranging from 3-Li-6 to 29-Cu. For the list of nuclides, accession-numbers (MAT-No) and data types covered, refer to Tables I and II.

The file was originally distributed by the US National Nuclear Data Center in November 1981. The present revised version (Rev. 2) was released in March 1984 and includes

- A complete reevaluation for 3-Li-7. The evaluation MAT=5272 by L. Stewart (Nov. 1981) was superseded by a new one, MAT=5397 by P.G. Young (Dec. 1981);
- minor corrections (which do not affect numerical values) for other materials.

The ENDF/B-5 (Rev. 2) Gas Production File is written in the ENDF-5 computerized format which is documented in ENDF-102, 2nd ed., Oct. 1979 (BNL-NCS-50496), rev. by R. Kinsey, available as microfiche IAEA-NDS-10/102. For quick reference of the ENDF/B format (file numbers and reaction type numbers of the most important data types) refer to document IAEA-NDS-10.

The library has 2564 logical records.

TABLE I

MAT No.	Nuclide	Reaction Types *)	Date of evaluation or last revision
5160	5-B-11	(n,p), (n,t), (n, α)	Sep71
5275	7-N-14	(n,p), (n, α)	Jun75
5303	3-Li-6	(n,p), (n,d), (n,t), (n, α)	Dec78
5304	4-Be-9	(n,p), (n,d), (n,t), (n, α)	Oct80
5305	5-B-10	(n,p), (n,d), (n, α)	Jan79
5306	6-C	(n,p), (n, α)	Nov79
5309	9-F-19	(n,p), (n, α)	Dec80
5313	13-Al-27	(n,p), (n, α)	Aug77
5314	14-Si-28	(n,p), (n, α)	May80
5322	22-Ti	(n,p), (n, α)	Aug77
5323	23-V	(n,p), (n, α)	Jan77
5324	24-Cr	(n,p), (n,d), (n,t), (n,He3), (n, α)	Dec77
5325	25-Mn-55	(n,p), (n, α)	Oct80
5326	26-Fe	(n,p), (n, α)	Nov79
5327	27-Co-59	(n,p), (n, α)	Jun77
5328	28-Ni	(n,p), (n,d), (n, α)	Mar77
5329	29-Cu	(n,p), (n, α)	Nov79
5397	3-Li-7	(n,p), (n,d), (n,t), (n, α)	Dec61 new

*) The cross-sections (n,p), (n,d), (n,t), (n,He3) and (n, α) always represent the total production cross-sections of p, d, t, He3 and α respectively. The corresponding MT numbers are 203, 204, 205, 206, 207 respectively.