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- Log in at *NIST Structural Materials Data Demonstration Project ASM* Repository
 - <http://nist.matdl.org/dspace/xmlui/handle/11115/153>
- Select a Collection to submit or view: Diffusion Data

6061 Aluminum Alloys: Diffusion Data

Data relating to the migration of host and foreign species through a material due to a variety of gradients such as electrical, chemical, thermal and mechanical, which provide the driving forces for diffusion. [Based on: "Definitions of Terms for Diffusion in the Solid State" Pure Appl. Chem., Vol. 71, No. 7, pp. 1307–1325, 1999. (IUPAC Recommendations 1999)]

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SMDDP Repository: Instructions to Authors

Provide metadata so others can find your data

1. Author: Click on "Add More" to add as many as needed.
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4. Title: All submissions must have a title.
5. Primary Publication Citation: Include title, date, volume, & page.
6. DOI: Add the Digital Object Identifier if known.
7. Related Publication(s) by Author: Add related works.
8. URL: Add public websites where submitted or related work is available.
9. Type: Select as many types of resources included in your submission.
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11. Provide Supplemental Background Information e.g, abstract, support
12. Select Private or Embargo Access Settings if needed.

Select & Describe Files to be Uploaded

Recommendations to Authors:

Consider providing a ReadMe file in a plain text file to describe the submitted files and analysis performed.

Information to include:

- *Who collected the data and whom to contact with questions
- *Disclaimers – individual and/or institutional
- *Each filename and a short description of the data included

Identify:

- *Column headings for any tabular data
- *Units of measurement
- *Specialized file formats and software

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- Complete Submission:
 - You will receive an email with a link to your work after it has been added to SMDDP Repository with an assigned data citation and persistent identifier.

Completed Entry Sample

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Data
Citation &
Persistent
Identifier
for data

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Data Citation:
Rowland, T. J.; Fradin, F. Y.
Al Self-Diffusion Fradin, Rowland 1967
(2013-10-01)
<http://hdl.handle.net/11115/149>

Affiliation: Department of Mining, Metallurgy and Petroleum Engineering, University of Illinois, Urbana, Illinois
Materials Research Laboratory, University of Illinois, Urbana, Illinois
Contact Email: carelyn.campbell@nist.gov


Primary Publication Citation:

Fradin, F. Y. and Rowland, T. J. (1967) NMR MEASUREMENT OF THE DIFFUSION COEFFICIENT OF PURE ALUMINUM, Appl. Phys. Lett. 11, 207
<http://dx.doi.org/10.1063/1.1755100>

Abstract:


Using a radio-frequency field pulse technique which enables measurement of slow atomic diffusion by means of nuclear magnetic resonance we have obtained, for nominally 6–9's pure Al, an activation energy for self-diffusion of 28.75 ± 0.8 kcal/mole. Data was obtained over a range of 5 decades in atomic jump rate (240°C to 550°C) and joins smoothly with other diffusion coefficient measurements at the extremes. © 1967 The American Institute of Physics

Files in this item

	Name: Fradin-Rowland-19 ... Size: 10.33Kb Format: Microsoft Excel 2007 Description: Al self-diffusion data reported by Fradin and Rowland 1967	View/Open
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This item appears in the following Collection(s)

- [Diffusion Data](#)

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Data Citations & Persistent IDs

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Citation
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Data Citation:

Demond, F. J.; Kalbitzer, S.; Mannsperger, H.; Damjantschitsch, H.
Study of Si self-diffusion by nuclear techniques
(2014-02-10)

<http://hdl.handle.net/11115/237>

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- Recognize funders' support and comply with requirements
- Reduce duplication of effort

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