



# Open Babel chemkinformat.cpp

## ReadReactionQualifierLines null pointer dereference

[MITRE](#)[NVD](#)[CVE.ORG](#)[JSON API](#)[Print: PDF](#)

### Summary

<b>CVE</b>	CVE-2025-10998
<b>State</b>	PUBLISHED
<b>Assigner</b>	VulDB
<b>Source Priority</b>	CVE Program / NVD first with legacy fallback
<b>Published</b>	2025-09-26 03:15:43 UTC
<b>Updated</b>	2026-04-29 01:00:01 UTC
<b>Description</b>	A vulnerability has been found in Open Babel up to 3.1.1. The affected element is the function ChemKinFormat::ReadReactionQualifierLines. The vulnerability is a null pointer dereference. The vulnerability is caused by the fact that the function ReadReactionQualifierLines does not check for a null pointer before dereferencing it. This can lead to a crash of the application.

### Risk And Classification

**Primary CVSS:** v4.0 1.9 LOW from cna@vulldb.com

CVSS:4.0/AV:L/AC:L/AT:N/PR:L/UI:N/VC:N/VI:N/VA:L/SC:N/SI:N/SA:N/E:P/CR:X/IR:X/AR:X/MAV:X/MAC:X/MAT:X/MPR:X/MUI:X/MVC:X/MVI:X/MVA:X/MSX/MSI:X/MSA:X/S:X/AU:X/R:X/V:X/RE:X/U:X

**Problem Types:** CWE-404 | CWE-476 | CWE-476 NULL Pointer Dereference | CWE-404 Denial of Service

Version	Source	Type	Score	Severity	Vector
4.0	cna@vulldb.com	Secondary	1.9	LOW	CVSS:4.0/AV:L/AC:L/AT:N/PR:L/UI:N/VC:N/VI:N/VA:L/SC:N/SI:N/SA:N/E:P/CR:X/IR:X/AR:X/MAV:X/MAC:X/MAT:X/MPR:X/MUI:X/MVC:X/MVI:X/MVA:X/MSX/MSI:X/MSA:X/S:X/AU:X/R:X/V:X/RE:X/U:X
4.0	CNA	DECLARED	4.8	MEDIUM	CVSS:4.0/AV:L/AC:L/AT:N/PR:L/UI:N/VC:N/VI:N/VA:L/SC:N/SI:N/SA:N/E:P/CR:X/IR:X/AR:X/MAV:X/MAC:X/MAT:X/MPR:X/MUI:X/MVC:X/MVI:X/MVA:X/MSX/MSI:X/MSA:X/S:X/AU:X/R:X/V:X/RE:X/U:X
3.1	nvd@nist.gov	Primary	5.5	MEDIUM	CVSS:3.1/AV:L/AC:L/PR:L/UI:N/S:U/C:N/I:N/A:H
3.1	cna@vulldb.com	Secondary	3.3	LOW	CVSS:3.1/AV:L/AC:L/PR:L/UI:N/S:U/C:N/I:N/A:L
3.1	CNA	DECLARED	3.3	LOW	CVSS:3.1/AV:L/AC:L/PR:L/UI:N/S:U/C:N/I:N/A:L/E:P/RL:X/RC:R
3.0	CNA	DECLARED	3.3	LOW	CVSS:3.0/AV:L/AC:L/PR:L/UI:N/S:U/C:N/I:N/A:L/E:P/RL:X/RC:R
2.0	cna@vulldb.com	Secondary	1.7	LOW	AV:L/AC:L/Au:S/C:N/I:N/A:P
2.0	CNA	DECLARED	1.7	LOW	AV:L/AC:L/Au:S/C:N/I:N/A:P/E:POC/RL:ND/RC:UR

### CVSS v4.0 Breakdown

Attack Vector

Local

Attack Complexity

Low

Attack Requirements

None

Privileges Required

Low

User Interaction

None

Confidentiality

None

Integrity

None

Availability

Low

Sub Conf.

None

Sub Integrity

None

Sub Availability

None

CVSS:4.0/AV:L/AC:L/AT:N/PR:L/UI:N/VC:N/VI:N/VA:L/SC:N/SI:N/SA:N/E:P/CR:X/IR:X/AR:X/MAV:X/MAC:X/MAT:X/MPR:X/MUI:X/MVC:X/MVI:X/MVA:X/MS:C:X/MSI:X/MSA:X/S:X/AU:X/R:X/V:X/RE:X/U:X

### CVSS v3.1 Breakdown

Attack Vector

Local

Attack Complexity

Low

Privileges Required

Low

User Interaction

None

Scope

Unchanged

Confidentiality

None

Integrity

None

Availability

High

CVSS:3.1/AV:L/AC:L/PR:L/UI:N/S:U/C:N/I:N/A:H

### CVSS v3.0 Breakdown

Attack Vector

Attack Vector

Local

Attack Complexity

Low

Privileges Required

Low

User Interaction

None

Scope

Unchanged

Confidentiality

None

Integrity

None

Availability

Low

CVSS:3.0/AV:L/AC:L/PR:L/UI:N/S:U/C:N/I:N/A:L/E:P/RL:X/RC:R

### NVD Known Affected Configurations (CPE 2.3)

Type	Vendor	Product	Version	Update	Edition	Language
Application	Openbabel	Open Babel	All	All	All	All

### Vendor Declared Affected Products

Source	Vendor	Product	Version	Platforms
CNA	Na	Open Babel	affected 3.1.0	Not specified
CNA	Na	Open Babel	affected 3.1.1	Not specified

### References

Reference	Source	Link	Tags
github.com/user-attachments/files/22318526/poc.zip	cna@vuldb.com	github.com	Exploit
vuldb.com	cna@vuldb.com	vuldb.com	Permissions Required, VDB Entry
vuldb.com	cna@vuldb.com	vuldb.com	Third Party Advisory, VDB Entry
github.com/openbabel/openbabel/issues/2829	cna@vuldb.com	github.com	Exploit, Issue Tracking
vuldb.com	cna@vuldb.com	vuldb.com	Third Party Advisory, VDB Entry
CVE Program record	CVE.ORG	www.cve.org	canonical
NVD vulnerability detail	NVD	nvd.nist.gov	canonical, analysis

### Vendor Comments And Credit

Discovery Credit

**CNA:** ahuo (VulDB User) (en)

### Additional Advisory Data

Source	Time	Event
CNA	2025-09-25T00:00:00.000Z	Advisory disclosed
CNA	2025-09-25T02:00:00.000Z	VulDB entry created
CNA	2025-09-25T20:10:21.000Z	VulDB entry last update

There are currently no legacy QID mappings associated with this CVE.

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