Here is a compatibility list of Java versions, Eclipse versions, and Maven versions to help you ensure that your tools work seamlessly together.

**Java Version Compatibility with Eclipse**

|  |  |
| --- | --- |
| **Java Version** | **Eclipse Version** |
| Java 8 | Eclipse Luna (4.4) and later |
| Java 9 | Eclipse Oxygen (4.7) and later |
| Java 10 | Eclipse Photon (4.8) and later |
| Java 11 (LTS) | Eclipse 2018-09 (4.9) and later |
| Java 12 | Eclipse 2019-03 (4.11) and later |
| Java 13 | Eclipse 2019-09 (4.13) and later |
| Java 14 | Eclipse 2020-03 (4.15) and later |
| Java 15 | Eclipse 2020-09 (4.17) and later |
| Java 16 | Eclipse 2021-03 (4.19) and later |
| Java 17 (LTS) | Eclipse 2021-09 (4.21) and later |
| Java 18 | Eclipse 2022-03 (4.23) and later |
| Java 19 | Eclipse 2022-09 (4.25) and later |
| Java 20 | Eclipse 2023-03 (4.27) and later |

**Java Version Compatibility with Maven**

|  |  |
| --- | --- |
| **Java Version** | **Maven Version** |
| Java 8 | Maven 3.2.1 and later |
| Java 9 | Maven 3.5.0 and later |
| Java 10 | Maven 3.5.4 and later |
| Java 11 (LTS) | Maven 3.6.0 and later |
| Java 12 | Maven 3.6.1 and later |
| Java 13 | Maven 3.6.2 and later |
| Java 14 | Maven 3.6.3 and later |
| Java 15 | Maven 3.6.3 and later |
| Java 16 | Maven 3.8.1 and later |
| Java 17 (LTS) | Maven 3.8.2 and later |
| Java 18 | Maven 3.8.4 and later |
| Java 19 | Maven 3.8.6 and later |
| Java 20 | Maven 3.9.0 and later |

For **Java 17**, the **latest versions of TestNG** are compatible, as they support modern Java versions. However, to ensure full compatibility and access to recent features, it's best to use **TestNG version 7.4.0 or later**.

**Recommended TestNG Versions for Java 17:**

* **TestNG 7.4.0**: Introduced support for Java 16+.
* **TestNG 7.7.0** (or the latest): Ensures compatibility with Java 17 and includes additional bug fixes and features.

To ensure compatibility with **Java 17**, you need to use appropriate versions of the **maven-compiler-plugin** and **maven-surefire-plugin**. Here are the recommended versions:

### ****maven-compiler-plugin****

The **maven-compiler-plugin** is responsible for compiling your source code with the specified Java version.

* **Version:** Use **3.8.1** or later.  
  (Version 3.8.1 added robust support for Java 9 and later, including Java 17.)

Configuration Example for Java 17:

<plugin>

<groupId>org.apache.maven.plugins</groupId>

<artifactId>maven-compiler-plugin</artifactId>

<version>3.10.1</version> <!-- Latest recommended version -->

<configuration>

<source>17</source>

<target>17</target>

</configuration>

</plugin>

### ****maven-surefire-plugin****

The **maven-surefire-plugin** is used for running unit tests. Ensure it supports the desired Java version.

* **Version:** Use **3.0.0-M5** or later.  
  (Version 3.0.0-M5 and above ensures compatibility with Java 17.)

#### **Configuration Example:**

<plugin>

<groupId>org.apache.maven.plugins</groupId>

<artifactId>maven-surefire-plugin</artifactId>

<version>3.1.0</version> <!-- Latest recommended version -->

<configuration>

<suiteXmlFiles>

<suiteXmlFile>testng.xml</suiteXmlFile>

</suiteXmlFiles>

</configuration>

</plugin>