



# Smart contracts security assessment

Final report

Tariff: Standard

## HRC20 Immort1

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[0xguard.com](https://0xguard.com)



[hello@0xguard.com](mailto:hello@0xguard.com)

## Contents

1. Introduction	3
2. Contracts checked	3
3. Procedure	3
4. Known vulnerabilities checked	4
5. Classification of issue severity	5
6. Issues	5
7. Conclusion	7
8. Disclaimer	8
9. Slither output	9

## Introduction

The report has been prepared for the One Immortl team.

The audited code address [0x550d9923693998a6fe20801abe3f1a78e0d75089](https://0x550d9923693998a6fe20801abe3f1a78e0d75089).

The audited contract is a standard ERC20 token contract with fixed supply and burn function. ERC20 interface is implemented with the use of OpenZeppelin libraries, which is considered the best practices.

Name	HRC20 Immortl
Audit date	2022-03-09 - 2022-03-09
Language	Solidity
Platform	Harmony

## Contracts checked

Name	Address
Immrtl	0x550d9923693998a6fe20801abe3f1a78e0d75089

## Procedure

We perform our audit according to the following procedure:

### Automated analysis

- Scanning the project's smart contracts with several publicly available automated Solidity analysis tools
- Manual verification (reject or confirm) all the issues found by the tools

### Manual audit

- Manually analyse smart contracts for security vulnerabilities
- Smart contracts' logic check

## Known vulnerabilities checked

Title	Check result
<a href="#">Unencrypted Private Data On-Chain</a>	passed
<a href="#">Code With No Effects</a>	passed
<a href="#">Message call with hardcoded gas amount</a>	passed
<a href="#">Typographical Error</a>	passed
<a href="#">DoS With Block Gas Limit</a>	passed
<a href="#">Presence of unused variables</a>	passed
<a href="#">Incorrect Inheritance Order</a>	passed
<a href="#">Requirement Violation</a>	passed
<a href="#">Weak Sources of Randomness from Chain Attributes</a>	passed
<a href="#">Shadowing State Variables</a>	passed
<a href="#">Incorrect Constructor Name</a>	passed
<a href="#">Block values as a proxy for time</a>	passed
<a href="#">Authorization through tx.origin</a>	passed
<a href="#">DoS with Failed Call</a>	passed
<a href="#">Delegatecall to Untrusted Callee</a>	passed
<a href="#">Use of Deprecated Solidity Functions</a>	passed
<a href="#">Assert Violation</a>	passed
<a href="#">State Variable Default Visibility</a>	passed
<a href="#">Reentrancy</a>	passed

<a href="#">Unprotected SELFDESTRUCT Instruction</a>	passed
<a href="#">Unprotected Ether Withdrawal</a>	passed
<a href="#">Unchecked Call Return Value</a>	passed
<a href="#">Floating Pragma</a>	not passed
<a href="#">Outdated Compiler Version</a>	passed
<a href="#">Integer Overflow and Underflow</a>	passed
<a href="#">Function Default Visibility</a>	passed

## Classification of issue severity

<b>High severity</b>	High severity issues can cause a significant or full loss of funds, change of contract ownership, major interference with contract logic. Such issues require immediate attention.
<b>Medium severity</b>	Medium severity issues do not pose an immediate risk, but can be detrimental to the client's reputation if exploited. Medium severity issues may lead to a contract failure and can be fixed by modifying the contract state or redeployment. Such issues require attention.
<b>Low severity</b>	Low severity issues do not cause significant destruction to the contract's functionality. Such issues are recommended to be taken into consideration.

## Issues

### High severity issues

No issues were found

### Medium severity issues

No issues were found

### Low severity issues

No issues were found

## Conclusion

HRC20 Immortl Immrtl contract was audited. No severity issues were found.

## Disclaimer

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This report should not be used in any way to make decisions around investment or involvement with any particular project. This report in no way provides investment advice, nor should be leveraged as investment advice of any sort. This report represents an extensive assessing process intending to help our customers increase the quality of their code while reducing the high level of risk presented by cryptographic tokens and blockchain technology.



## Slither output

ERC20PresetFixedSupply.constructor(string,string,uint256,address).name (Immortl-Library.sol#573)  
shadows:

- ERC20.name() (Immortl-Library.sol#206-208) (function)
- IERC20Metadata.name() (Immortl-Library.sol#131) (function)

ERC20PresetFixedSupply.constructor(string,string,uint256,address).symbol (Immortl-Library.sol#574)  
shadows:

- ERC20.symbol() (Immortl-Library.sol#214-216) (function)
- IERC20Metadata.symbol() (Immortl-Library.sol#136) (function)

Reference: <https://github.com/crytic/slither/wiki/Detector-Documentation#local-variable-shadowing>

Context.\_msgData() (Immortl-Library.sol#24-26) is never used and should be removed

Reference: <https://github.com/crytic/slither/wiki/Detector-Documentation#dead-code>

Pragma version^0.8.0 (Immortl-Library.sol#7) allows old versions

Pragma version^0.8.0 (Immortl-Library.sol#34) allows old versions

Pragma version^0.8.0 (Immortl-Library.sol#119) allows old versions

Pragma version^0.8.0 (Immortl-Library.sol#149) allows old versions

Pragma version^0.8.0 (Immortl-Library.sol#507) allows old versions

Pragma version^0.8.0 (Immortl-Library.sol#551) allows old versions



approve(address,uint256) should be declared external:

- ERC20.approve(address,uint256) (Immortl-Library.sol#276-279)

transferFrom(address,address,uint256) should be declared external:

- ERC20.transferFrom(address,address,uint256) (Immortl-Library.sol#294-308)

increaseAllowance(address,uint256) should be declared external:

- ERC20.increaseAllowance(address,uint256) (Immortl-Library.sol#322-325)

decreaseAllowance(address,uint256) should be declared external:

- ERC20.decreaseAllowance(address,uint256) (Immortl-Library.sol#341-349)

burn(uint256) should be declared external:

- ERC20Burnable.burn(uint256) (Immortl-Library.sol#522-524)

burnFrom(address,uint256) should be declared external:

- ERC20Burnable.burnFrom(address,uint256) (Immortl-Library.sol#537-544)

Reference: <https://github.com/crytic/slither/wiki/Detector-Documentation#public-function-that-could-be-declared-external>

