

**Substance Name: imidazolidine-2-thione
(2-imidazoline-2-thiol)**

EC Number: 202-506-9

CAS Number: 96-45-7

SUPPORT DOCUMENT FOR IDENTIFICATION OF

IMIDAZOLIDINE-2-THIONE (2-IMIDAZOLINE-2-THIOL)

**AS A SUBSTANCE OF VERY HIGH CONCERN BECAUSE OF ITS
CMR¹ PROPERTIES**

¹ CMR means carcinogenic, mutagenic or toxic for reproduction

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ABBREVIATIONS AND ACRONYMS

The list includes abbreviations and acronyms used in this report.

CMR	Carcinogenic, Mutagenic and toxic for Reproduction
EC	European Commission
ETU	Ethylene thiourea
EU	European Union
SVHCs	Substances of Very High Concern

Substance Name: imidazolidine-2-thione (imidazoline-2-thiol)

EC Number: 202-506-9

CAS Number: 96-45-7

- The substance is identified as substance meeting the criteria of Article 57 (c) of Regulation (EC) 1907/2006² (REACH) owing to its classification as toxic for reproduction category 1B³, which corresponds to classification as toxic for reproduction category 2⁴.

Summary of how the substance meets the criteria set out in Article 57 (c) of REACH (Repr. 1B)

The substance is covered by Index number 613-039-00-9 in Regulation (EC) No 1272/2008⁵ and classified in Annex VI, part 3, Table 3.1 (the list of harmonised classification and labelling of hazardous substances) as toxic for reproduction, Repr. 1B (H360D: "May damage the unborn child"). The corresponding classification in Annex VI to this regulation, part 3, Table 3.2 (the list of harmonised classification and labelling of hazardous substances from Annex I to Council Directive 67/548/EEC⁶) is Repr. Cat. 2, R61 ("May cause harm to the unborn child").

Therefore, this classification of the substance in Regulation (EC) No 1272/2008 shows that it meets the criteria for classification as toxic for reproduction in accordance with Article 57 (c) of REACH.

Registration dossier(s) submitted for the substance? Yes

² REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

³ Classification in accordance with Regulation (EC) No 1272/2008 Annex VI, part 3, Table 3.1 List of harmonised classification and labelling of hazardous substances.

⁴ Classification in accordance with Regulation (EC) No 1272/2008, Annex VI, part 3, Table 3.2 List of harmonized classification and labelling of hazardous substances (from Annex I to Council Directive 67/548/EEC).

⁵ REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

⁶ Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances.

JUSTIFICATION

1 Identity of the substance and physical and chemical properties

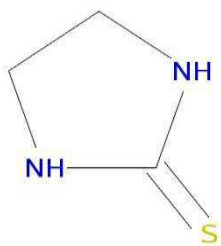
1.1 Name and other identifiers of the substance

Table 1: Substance identity

EC number:	202-506-9
EC name:	imidazolidine-2-thione*
CAS number (in the EC inventory):	96-45-7
CAS number(s):	96-45-7 Deleted CAS numbers: 96-46-8, 12261-94-8 26856-29-1, 71836-04-9 90613-75-5, 875479-38-2
CAS name:	2-imidazolidinethione
IUPAC name:	imidazolidine-2-thione
Index number in Annex VI of the CLP Regulation	613-039-00-9
Molecular formula:	C ₃ H ₆ N ₂ S
Molecular weight range:	102.1581 g/mol
Synonyms:	ethylene thiourea ETU 2-imidazoline-2-thiol

*Please note that this dossier concerns imidazolidine-2-thione (imidazoline-2-thiol), including any of its tautomeric forms

Structural formula:



1.2 Composition of the substance

Name: imidazolidine-2-thione (imidazoline-2-thiol)

Description: -

Degree of purity: 80 – 100 % (w/w). The substance is a monoconstituent substance.

1.3 Physico-chemical properties

Not relevant.

2 Harmonised classification and labelling

The substance is covered by Index number 613-039-00-9 in Annex VI, part 3 of Regulation (EC) No 1272/2008 as follows:

Table 2: Classification according to part 3 of Annex VI, Table 3.1 (the list of harmonised classification and labelling of hazardous substances) of Regulation (EC) No 1272/2008.

Index No	International Chemical Identification	EC No	CAS No	Classification		Labelling		Specific Conc. Limits / M-factors
				Hazard Class and Category Code(s)	Hazard statement code(s)	Pictogram Signal Word Code(s)	Hazard statement code(s)	
613-039-00-9	ethylene thiourea; imidazolidine-2-thione; 2-imidazoline-2-thiol	202-506-9	96-45-7	Repr. 1B Acute Tox. 4 *	H360D *** H302	GHS08 GHS07 Dgr	H360D *** H302	

* Indicates that the classification corresponds to the minimum classification for a category.

*** In order not to lose information from the harmonised classifications for fertility and developmental effects under Directive 67/548/EEC, the classifications have been translated only for those effects classified under that Directive.

H360D: May damage the unborn child

H302: Harmful if swallowed

Table 3: Classification according to part 3 of Annex VI, Table 3.2 (the list of harmonised classification and labelling of hazardous substances from Annex I to Council Directive 67/548/EEC) of Regulation (EC) No 1272/2008.

Index No	International Chemical Identification	EC No	CAS No	Classification	Labelling	Concentration Limits	Notes
613-039-00-9	ethylene thiourea; imidazolidine-2-thione; 2-imidazoline-2-thiol	202-506-9	96-45-7	Repr. Cat. 2; R61 Xn; R22	T R61; R22 S45; S53		E

Note E: Substances with specific effects on human health (see Chapter 4 of Annex VI to Directive 67/548/EEC) that are classified as carcinogenic, mutagenic and/or toxic for reproduction in categories 1 or 2 are ascribed Note E if they are also classified as very toxic (T+), toxic (T) or harmful (Xn). For these substances, the risk phrases R20, R21, R22, R23, R24, R25, R26, R27, R28, R39, R68 (harmful), R48 and R65 and all combinations of these risk phrases shall be preceded by the word 'Also'.

R61: May cause harm to the unborn child

R22: Harmful if swallowed

3 Environmental fate properties

Not relevant.

4 Human health hazard assessment

See section 2 on harmonised classification and labelling.

5 Environmental hazard assessment

Not relevant.

6 Conclusions on the SVHC Properties

6.1 CMR assessment

The substance is covered by Index number 613-039-00-9 in Regulation (EC) No 1272/2008 and classified in Annex VI, part 3, Table 3.1 (the list of harmonised classification and labelling of hazardous substances) as toxic for reproduction, Repr. 1B (H360D: "May damage the unborn child"). The corresponding classification in Annex VI to this regulation, part 3, Table 3.2 (the list of harmonised classification and labelling of hazardous substances from Annex I to Council Directive 67/548/EEC) is Repr. Cat. 2, R61 ("May cause harm to the unborn child").

Therefore, this classification of the substance in Regulation (EC) No 1272/2008 shows that it meets the criteria for classification as toxic for reproduction in accordance with Article 57 (c) of REACH.