

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Description:	Tinidazole
Cat No. :	463510000; 463510050; 463510250
Synonyms	1-[2-(Ethylsulfonyl)ethyl]-2-methyl-5-nitroimidazole
CAS No	19387-91-8
Molecular Formula	C8 H13 N3 O4 S

Relevant identified uses of the substance or mixture and uses advised against

Recommended Use	Laboratory chemicals.
Uses advised against	No Information available

Details of the supplier of the safety data sheet

Importer	Supplier
Fisher Scientific Korea	Acros Organics BVBA
D5,D6, Incheon Airport Logistics Complex	Janssen Pharmaceuticaaan 3a
150, Gonghangdong-Ro 296 Beon-Gil	2440 Geel, Belgium
Jung-Gu, Incheon	
Tel: +82-1661-9555	
Fax: +82-2-2023-0603	

E-mail address	Chem.KR@thermofisher.com
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Emergency Telephone Number

Emergency telephone: Medical: +(82) 070-7686-0086 or + 1-703-741-5970
 CHEMTREC: 080 822 1374 (Local), CHEMTREC: 1-800-424-9300 or + 1-703-527-3887
 Korea: 00-308-13-2549 (24 hours a day, 7 days a week)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture
Physical hazards

Based on available data, the classification criteria are not met

Health hazards

Acute Dermal Toxicity	Category 4
Acute Inhalation Toxicity - Dusts and Mists	Category 4
Germ Cell Mutagenicity	Category 2
Carcinogenicity	Category 2

Environmental hazards

Based on available data, the classification criteria are not met

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Label Elements



Signal Word

Warning

Hazard Statements

H341 - Suspected of causing genetic defects if inhaled

H351 - Suspected of causing cancer if inhaled

H312 + H332 - Harmful in contact with skin or if inhaled

Precautionary Statements

Prevention

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P271 - Use only outdoors or in a well-ventilated area

P201 - Obtain special instructions before use

P202 - Do not handle until all safety precautions have been read and understood

Response

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P312 - Call a POISON CENTER or doctor if you feel unwell

P321 - Specific treatment (see supplemental first aid instructions on this label)

P362 + P364 - Take off contaminated clothing and wash it before reuse

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P308 + P313 - IF exposed or concerned: Get medical advice/attention

Storage

P405 - Store locked up

Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant

Other Hazards

Toxic to terrestrial vertebrates

This product does not contain any known or suspected endocrine disruptors

NFPA

Health
2

Flammability
1

Instability
0

Physical hazards
N/A

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Component	Common Name	CAS No	Index No	Weight %
Tinidazole	1-[2-(Ethylsulfonyl)ethyl]-2-methyl-5-nitroimidazole	19387-91-8	KE-14058	99 - 100

SECTION 4: FIRST AID MEASURES

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Description of first aid measures

General Advice

If symptoms persist, call a physician.

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

Ingestion

Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

Self-Protection of the First Aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

Most important symptoms and effects, both acute and delayed

None reasonably foreseeable.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

Water spray, carbon dioxide (CO₂), dry chemical, alcohol-resistant foam.

Extinguishing media which must not be used for safety reasons

No information available.

Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products

Carbon monoxide (CO), Carbon dioxide (CO₂), Nitrogen oxides (NO_x), Sulfur oxides.

Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation.

Environmental precautions

Should not be released into the environment.

Methods and Material for Containment and Cleaning Up

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Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal.

Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation.

Conditions for Safe Storage, Including any Incompatibilities

To maintain product quality; Keep refrigerated.

Specific End Uses

Use in laboratories.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Component	CAS No	Korea	ACGIH TLV	OSHA PEL
Tinidazole	19387-91-8	Not listed	Not listed	Not listed

Component	CAS No	European Union	The United Kingdom	Germany
Tinidazole	19387-91-8	Not listed	Not listed	Not listed

ACGIH - Biological Exposure Indices

Component	CAS No	ACGIH - Biological Exposure Indices
Tinidazole	19387-91-8	Not listed

Exposure Controls

Engineering Measures

Ensure adequate ventilation, especially in confined areas.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection

Wear safety glasses with side shields (or goggles)

Hand Protection

Protective gloves

Skin and body protection

Long sleeved clothing

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves.

(Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Personal protective equipment

Respiratory Protection

Use only those certified by the Korea Occupational Safety and Health Administration.

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators

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Recommended Filter type: Particulates filter conforming to EN 143
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly
When RPE is used a face piece Fit Test should be conducted

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice

Environmental exposure controls No information available

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance (Physical State, Color, etc.) White Light yellow Solid

Odor Odorless
Odor Threshold No data available
pH No information available

Melting Point/Range No data available
Softening Point No data available
Boiling Point/Range No information available
Flash Point No information available **Method -** No information available

Evaporation Rate Not applicable Solid
Flammability (solid,gas) No information available
Explosion Limits No data available

Vapor Pressure No data available
Vapor Density Not applicable Solid
Specific Gravity / Density No data available
Bulk Density No data available
Water Solubility Insoluble
Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

Component	CAS No	log Pow
Tinidazole	19387-91-8	-0.35

Autoignition Temperature No data available
Decomposition Temperature No data available
Viscosity Not applicable Solid
Explosive Properties No information available
Oxidizing Properties No information available

Molecular Formula C8 H13 N3 O4 S
Molecular Weight 247.27

SECTION 10: STABILITY AND REACTIVITY

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Reactivity

None known, based on information available

Chemical Stability

No information available.

Possibility of Hazardous Reactions

Hazardous Polymerization

No information available.

Hazardous Reactions

None under normal processing.

Conditions to Avoid

Incompatible products.

Incompatible Materials

Oxidizing agent.

Hazardous Decomposition Products

Carbon monoxide (CO). Carbon dioxide (CO₂). Nitrogen oxides (NO_x). Sulfur oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Product Information

Information on expected route of exposure

Inhalation

Not an expected route of exposure.

Ingestion

May be harmful if swallowed.

Eyes

Avoid contact with eyes.

Skin

Avoid contact with skin. Harmful in contact with skin.

Information on Health Hazards

(a) acute toxicity;

Oral

Based on available data, the classification criteria are not met

Dermal

Category 4

Inhalation

Category 4

Component	CAS No	LD50 Oral	LD50 Dermal	LC50 Inhalation
Tinidazole	19387-91-8	LD50 = 2710 mg/kg (Rat)	No data available	No data available

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;

Respiratory

No data available

Skin

No data available

Component	CAS No	Test method	Test species	Study result
Tinidazole	19387-91-8	No data available	No data available	No data available

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(e) germ cell mutagenicity; Category 2

Component	CAS No	Test method	Test species	Study result
Tinidazole	19387-91-8	No data available	No data available	No data available

May cause heritable genetic damage

(f) carcinogenicity; Category 2

Component	CAS No	Test method	Test species / Duration	Study result
Tinidazole	19387-91-8	No data available	No data available	No data available

May cause cancer by inhalation

Component	CAS No	IARC	NTP	ACGIH	OSHA	UK
Tinidazole	19387-91-8	Not listed	Not listed	Not listed	Not listed	Not listed

(g) reproductive toxicity; No data available

Component	CAS No	Test method	Test species / Duration	Study result
Tinidazole	19387-91-8	No data available	No data available	No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available

Target Organs No information available.

(j) aspiration hazard; Not applicable
Solid

Other Adverse Effects

No information available.

Component	CAS No	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Tinidazole	19387-91-8	Not applicable	Not applicable	Not applicable

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity effects Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

Component	CAS No	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Tinidazole	19387-91-8	No data available	No data available	No data available	No data available

Persistence and degradability

Persistence Persistence is unlikely.

Bioaccumulative potential Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Tinidazole	-0.35	No data available

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Mobility in soil Spillage unlikely to penetrate soil Is not likely mobile in the environment due its low water solubility.

Ozone Depletion Potential

Component	CAS No	Ozone Depletion Potential
Tinidazole	19387-91-8	Not listed

Other adverse effects No information available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from Residues/Unused Products Waste is classified as hazardous. Dispose in accordance with the Wastes Control Act (폐기물관리법).

Contaminated Packaging Dispose of this container to hazardous or special waste collection point.

Other Information Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.

SECTION 14: TRANSPORT INFORMATION

Road and Rail Transport Not Regulated

IATA Not regulated

IMDG/IMO Not regulated
Marine Pollutant No hazards identified

Special Precautions for User No special precautions required

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Legend: X - Listed '-' - Not Listed

International Inventories

Component	CAS No	KECL	TSCA	EINECS	IECSC	DSL	NDSL	PICCS	ENCS	ISHL	AICS
Tinidazole	19387-91-8	KE-14058	-	243-014-4	-	-	-	-	-	-	-

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Tinidazole	19387-91-8	Not applicable	Not applicable	Not applicable	Not applicable

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential
Tinidazole	19387-91-8	Not applicable	Not applicable	Not applicable

Korean National Regulations

Component	CAS No	Act on Registration and Evaluation of Chemical Substances (K-REACH)	Authorised Chemicals	Existing Substances Subject to Registration

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Tinidazole	19387-91-8	Annex 1 - KE-14058	Not applicable	Not applicable
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Component	CAS No	Chemical Control Act - Toxic Chemicals	Chemical Control Act - Prohibited Chemicals	Chemical Control Act - Use Restricted Chemicals
Tinidazole	19387-91-8	Not applicable	Not applicable	Not applicable

Component	CAS No	Chemical Control Act - Accident Precaution Chemicals (% in mixtures)	Chemical Control Act - Accident Precaution Chemicals - Quantity limits Storage (% in mixtures)	Chemical Control Act - Accident Precaution Chemicals - Quantity limits Manufacture/Use (% in mixtures)
Tinidazole	19387-91-8	Not applicable	Not applicable	Not applicable

Component	CAS No	Waste Control Law	Ministry of Environment CMR risk	Ministry of Environment - Critically Controlled Substance
Tinidazole	19387-91-8	Not applicable	Not applicable	Not applicable

Component	CAS No	ISHA - Harmful Agents Subject to Work Environment Monitoring	ISHA - Prohibited substances	ISHA - Substances requiring permission
Tinidazole	19387-91-8	Not applicable	Not applicable	Not applicable

Component	CAS No	ISHA - Substances subject to control	ISHA - Harmful Agents Requiring Health Examination	ISHA - Permissible Exposure Limits
Tinidazole	19387-91-8	Not applicable	Not applicable	Not applicable

Component	CAS No	ISHA - Subject to Process Safety Reports (minimum quantity)	ISHA - Threshold Limit Values (TLVs) Chemicals	ISHA - Special management materials
Tinidazole	19387-91-8	Not applicable	Not applicable	Not applicable

National Fire Association - Dangerous Substances Minimum quantity requiring a permit

Component	CAS No	Class 1 - Oxidising solids	Class 2 - Flammable solid	Class 3 - Spontaneously Combustible Substances and Dangerous Substances When Wet	Class 4 - Flammable liquids	Class 5 - Self-reactive substances	Class 6 - Oxidising liquids
Tinidazole	19387-91-8	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Control Parameters

Component	CAS No	Korea	ACGIH - Biological Exposure Indices
Tinidazole	19387-91-8	Not listed	Not listed

US Management Information

OSHA - Occupational Safety and Health Administration

Not applicable

Component	CAS No	Specifically Regulated Chemicals	Highly Hazardous Chemicals
Tinidazole	19387-91-8	Not applicable	Not applicable

CERCLA Not applicable

Component	CAS No	CERCLA Extremely Hazardous Substances	Hazardous Substances RQs	SARA 313 - Threshold Values %
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		RQs		
Tinidazole	19387-91-8	Not applicable	Not applicable	Not applicable

GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

Warning.

H312 + H332 - Harmful in contact with skin or if inhaled. H341 - Suspected of causing genetic defects. H351 - Suspected of causing cancer.

P201 - Obtain special instructions before use. P280 - Wear protective gloves/protective clothing/eye protection/face protection. P302 + P352 - IF ON SKIN: Wash with plenty of soap and water. P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 - Call a POISON CENTER or doctor if you feel unwell.

SECTION 16: OTHER INFORMATION

Legend

CAS - Chemical Abstracts Service

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit

ACGIH - American Conference of Governmental Industrial Hygienists

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

POW - Partition coefficient Octanol:Water

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

OECD - Organisation for Economic Co-operation and Development

BCF - Bioconcentration factor

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from Ships

ATE - Acute Toxicity Estimate

VOC - (Volatile Organic Compound)

Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Creation Date 03-Jul-2017

Revision Date 08-Jun-2024

Revision Number 6

Revision Summary SDS sections updated.

MOEL's Public Notice No. 2023-9 (Standards for Classification and Labeling of Chemical Substances and Safety Data Sheets)

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Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet