Issued: Jun-12-2015



Section 1. Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Product Name: Ethyl N-Acetyl-3,5-diiodo-L-tyrosinate

Chemical Name: Ethyl N-acetyl-3,5-diiodo-L-tyrosinate

Synonyms: N-acetyl-3,5-diiodo-L-tyrosine ethyl ester; Levothyroxine Sodium Stage 3

Intermediate; Stage 3 Intermediate; 224242

Drug Code Number: 224242; 66110; 10056537

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

Recommended use: Process Intermediate

Scientific research and development

1.3 Details of the supplier of the safety data sheet

Supplier: AbbVie Inc.

1 North Waukegan Road North Chicago, IL 60064

USA

+1-847-932-7900

E-mail Address: AbbVie.SDS@abbvie.com

1.4 Emergency telephone number

Emergency Telephone: CHEMTREC: 1(800) 424-9300 (in USA and Canada)

or +1-703-527-3887 (international)

Section 2. Hazards identification

2.1 Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute dermal toxicity Category 2 **Serious eye damage/eye** Category 2

irritation

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Indication of danger: Xi - Irritant

2.2 Label elements

Issued: Jun-12-2015



Signal Word: Warning

Hazard Statements: H315 - Causes skin irritation

H319 - Causes serious eye irritation H335 - May cause respiratory irritation

2.3 Other hazards

Not determined

Section 3. Composition/information on ingredients

Chemical Name	Percent	EINECS/ELINCS	EEC Classification	EU - GHS	REACH No.
		Number		Substance	
				Classification	
Ethyl	100	NA		Skin Irrit Cat 2	No data available
N-acetyl-3,5-diiodo-L-tyrosinat				(H315); Eye Irrit	
e				Cat 2 (H319); Resp.	
21959-36-4				Irrit (H335)	

For the full text of the R-phrases mentioned in this Section, see Section 16

For the full text of the H-Statements mentioned in this Section, see Section 16

Section 4. First aid measures

4.1 Description of first aid measures

Eye Contact: Remove from source of exposure. Flush with copious amounts of water. If

irritation persists or signs of toxicity occur, seek medical attention. Provide

symptomatic/supportive care as necessary.

Skin Contact: Remove from source of exposure. Flush with copious amounts of water. If

irritation persists or signs of toxicity occur, seek medical attention. Provide

symptomatic/supportive care as necessary.

Inhalation: Remove from source of exposure. If signs of toxicity occur, seek medical

attention. Provide symptomatic/supportive care as necessary.

Ingestion: Remove from source of exposure. If signs of toxicity occur, seek medical

attention. Provide symptomatic/supportive care as necessary.

Protection of First-aiders: Use personal protective equipment

4.2 Most important symptoms and effects, both acute and delayed

Issued: Jun-12-2015

Signs and Symptoms: No signs and symptoms from occupational exposure are known. Analogy suggests

the following: abnormal thyroid function.

Medical Conditions

No medical conditions aggravated by occupational exposure are known.

Aggravated by Exposure:

Data suggest any pre-existing ailments in the following organs: thyroid.

4.3 Indication of any immediate medical attention and special treatment needed

Notes To Physician: Monitor cardiovascular system function. Monitor thyroid function, as necessary.

Section 5. Firefighting measures

5.1 Extinguishing Media

Suitable Extinguishing Media: Use extinguishing agent suitable for type of surrounding fire

Unsuitable Extinguishing Media: Not determined

5.2 Special hazards arising from the substance or mixture

Special Exposure Hazards: Not determined

5.3 Advice for firefighters

Protective Equipment and

As in any fire, wear self-contained breathing apparatus and full protective gear

Precautions for Firefighters:

Section 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal Precautions: For personal protection see section 8.

6.2. Environmental precautions

Environmental Precautions: Contain material and prevent release to waterways or soil.

6.3. Methods and material for containment and cleaning up

Methods for Cleaning Up: Recover product and place in an appropriate container for disposal.

6.4. Reference to other sections

Refer to Sections 8, 12, and 13 for further information.

Section 7. Handling and storage

7.1. Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Store according to label instructions.

7.3. Specific end use(s)

Issued: Jun-12-2015

Recommended use: Process Intermediate

Scientific research and development

Section 8. Exposure controls/personal protection

8.1. Control parameters

Exposure limits:

Chemical Name	Employee Exposure Limit	Skin Notation	
Ethyl N-acetyl-3,5-diiodo-L-tyrosinate	Not Applicable	None	
21959-36-4			

8.2. Exposure controls

Engineering Controls: Use local exhaust. Use inside a hood, glovebox or process enclosure.

Respiratory Protection: An approved respirator (i.e. NIOSH, EN, etc.) should be worn when exposures are

expected to exceed the applicable limits.

Eyes: Wear eye protection appropriate to handling activities.

Gloves: Impervious gloves.

Other PPE Data: Wear appropriate body coverings if contact may occur.

Environmental Exposure

Controls:

Not determined

Section 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance: White to light brown Solid

Odor: Odorless. **Odor Threshold:** Not determined Not determined. pH: Not determined. **Boiling Pt.** @ 760 mm Hg (°C): **Melting/Freezing Point (°C):** Not determined Flash Point (°C): Not determined. **Evaporation Rate at 20°C:** Not determined. Flammability (Solid): Not determined. **Lower Explosive Limit:** Not determined. **Upper Explosive Limit:** Not determined. **Vapor Pressure (mm Hg):** Not determined. Vapor Density (Air = 1): Not determined. **Specific Gravity:** Not determined.

Solubility(ies): Soluble in: acetone, acetic acid, ethanol. Not soluble in: toluene, water.

Partition coefficient: Not determined.

n-octanol/water

Autoignition Temp. (°C): Not determined. **Decomposition temperature** Not determined.

(°C):

Issued: Jun-12-2015

Viscosity (centipoise): Not determined. Explosion Severity: Not determined. Oxidizer Properties: Not determined.

9.2. Other information

Not determined

Min. Ignition Energy-Cloud

> 1000

(mJ):

Section 10. Stability and reactivity

10.1. Reactivity

Not determined

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

Hazardous reactions: Not determined.

Self-Heating Tendency: No exotherms seen below 200 deg C in DSC testing.

10.4. Conditions to avoid

Not determined.

10.5 Incompatible materials

Not determined

10.6 Hazardous decompostion products

Carbon oxides, Nitrogen oxides (NOx), Hydrogen iodide

Section 11. Toxicological information

11.1. Information on toxicological effects

Routes of Exposure:

Oral: Yes
Dermal: Unlikely
Inhalation: Unlikely

Acute Toxicity - Oral: Not determined.

Acute Toxicity - Dermal: Not determined.

Acute Toxicity - Inhalation: Not determined.

Corrosivity: Not determined.

Dermal Irritation: Skin irritant

Issued: Jun-12-2015

Eye Irritation: Eye irritant

Sensitization: Not determined.

Toxicokinetics/Metabolism: Not determined.

Target Organ Effects: Not determined.

Reproductive Effects: Not determined.

Carcinogenicity: Not determined.

Mutagenicity: Not determined.

Aspiration hazard: Not determined

Notes:

1. ALD: Approximate lethal dosage

2. LC50: Concentration in air that produces 50% mortality

3. LD50: Oral or dermal dosage that produces 50% mortality

Section 12. Ecological information

12.1. Toxicity

Not determined.

12.2. Persistence and degradability

Not determined.

12.3. Bioaccumulative potential

Not determined

12.4. Mobility in soil

Not determined.

12.5. Results of PBT or vPvB assessment

Chemical safety report is not required for this substance/product.

12.6. Other adverse effects

Do not allow undiluted material or large quantities to reach groundwater, bodies of water or sewer system.

Notes:

- 1. EC50: Concentration in water that produces 50% mortality in Daphnia sp.
- 2. LC50: Concentration in water that produces 50% mortality in fish.
- 3. EbC50/ErC50: Concentration in water that produces 50% inhibition of growth and in algae.

Section 13. Disposal considerations

13.1 Waste treatment methods

Issued: Jun-12-2015

Waste Disposal Methods: Disposal should be made in accordance with country, federal, state and local

regulations.

Section 14. Transport information

ADR, DOT, ICAO/IATA, IMDG/IMO

Status: Not regulated

14.1. UN Number: Not applicable
14.2. Proper shipping name: Not applicable
14.3. Hazard class: Not applicable
14.4. Packing group: Not applicable
14.5. Environmental hazard: Not applicable
14.6. Special Provisions: Not applicable
14.7. Transport in bulk

according to Annex II of MARPOL 73/78 and the IBC

Code:

Section 15. Regulatory Information

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

International Inventories

Chemical Name	EINECS/ ELINCS	TSCA	DSL	NDSL	PICCS
Ethyl	-	-	-	Not listed.	-
N-acetyl-3,5-diiodo-L-tyrosinate					
21959-36-4					

Chemical Name	ENCS	ISHL	IECSC	AICS	KECL	New Zealand
Ethyl N-acetyl-3,5-diiodo-L-tyrosin	-	-	-	-	-	
ate 21959-36-4						

Legend

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

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

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

PICCS - Philippines Inventory of Chemicals and Chemical Substances

ENCS - Japan Existing and New Chemical Substances

ISHL - Japan Industrial Safety and Health Law

IECSC - China Inventory of Existing Chemical Substances

AICS - Australian Inventory of Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

Carcinogenicity Rating:

Chemical Name	Percent	NTP:	IARC:	ACGIH:
Ethyl N-acetyl-3,5-diiodo-L-tyrosinate	100	Not Listed	Not Listed	Not Listed

SARA 313 Information

Chemical Name	Percent	SARA 313 Chemical:	CERCLA RQ/SARA	SARA EHS TPQ
			EHS RQ (lbs):	(lbs):
Ethyl N-acetyl-3,5-diiodo-L-tyrosinate	100	No	Not Applicable	Not applicable

Immediate Health: Yes

Issued: Jun-12-2015

Delayed Health:NoFire:NoSudden Pressure:NoReactivity:No

RCRA Status: Not determined.

Proposition 65 Status: Does not contain chemicals known to the state of California to cause cancer or

reproductive harm.

WHMIS Hazard Class: Not determined.

NFPA Rating:

Health: 1 Fire: 1 Reactivity: 0

Notes:

1. SARA = Superfund Amendments and the Reauthorization Act.

2. CERCLA = Comprehensive Environmental Response, Compensation and Liability Act.

3. FIFRA = Federal Insecticide, Fungicide and Rodenticide Act.

4. TSCA = Toxic Substances Control Act.

5. EC = European Community.

6. WHMIS = Canadian Workplace Hazardous Materials Information System.

7. UN GHS = United Nations Globally Harmonized System for Hazard Identification.

15.2. Chemical safety assessment

Chemical safety assessment has not been conducted on the substance/product.

Section 16. Other information

Document Authored By: Global Occupational Toxicology (D-03QC)

Issued: Jun-12-2015

Supersedes the SDS dated: Dec-18-2012

Disclaimer:

The information and recommendations contained herein are based upon tests believed to be reliable. However, AbbVie Inc. does not guarantee their accuracy or completeness NOR SHALL ANY OF THIS INFORMATION CONSTITUTE A WARRANTY, WHETHER EXPRESSED OR IMPLIED, AS TO THE SAFETY OF THE GOODS, THE MERCHANTABILITY OF THE GOODS, OR THE FITNESS OF THE GOODS FOR A PARTICULAR PURPOSE. Adjustment to conform to actual conditions of usage may be required. AbbVie Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.