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SAFETY DATA SHEET

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

1.1 Product Identifier

Product Name: N-Acetyl-3,5-diiodo-L-tyrosine

Synonyms: Levothyroxine Sodium Stage 2 Intermediate: 224241: Stage 2 Intermediate

Drug Code Number: 224241; 31628; 10056535

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

1-800-255-5162 +1-847-937-7433

Customer Service Telephone: 1-800-255-5162 (US and Canada only)

+1-847-937-7433

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

Based on available data, not classified as hazardous according to the criteria of the Globally Harmonized System. EU notification not required.

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

Indication of danger: Not classified

2.2 Label elements

Based on available data, not classified as hazardous according to the criteria of the Globally Harmonized System. EU notification not required.

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Section 2. Hazards identification

2.3 Other hazards

Not determined

Section 3. Composition/information on ingredients

Chemical Name	Percent	EINECS/ELINCS Number	EEC Classification	EU - GHS Substance Classification	REACH No.
N-acetyl-3,5-diiodo-L-tyrosine 1027-28-7	100	213-837-3		Not Hazardous*	No data available

Not Hazardous* - Based on available data, not classified as hazardous according to the criteria of the Globally Harmonized System.

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

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.

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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: The bulk powder was not readily combustible in a burning rate test.

5.3 Advice for firefighters

Protective Equipment and Precautions for Firefighters:

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

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)

Recommended use: Process Intermediate

Scientific research and development

Section 8. Exposure controls/personal protection

8.1. Control parameters

Exposure limits:

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Chemical Name	Employee Exposure Limit	Skin Notation
N-acetyl-3,5-diiodo-L-tyrosine	Not Applicable	None
1027-28-7		

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 pH: Not determined. **Boiling Pt.** @ 760 mm Hg (°C): Not determined. **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: acetic acid, ethanol, dilute alkaline solutions. Not soluble in: toluene,

water.

Partition coefficient: n- Not determined.

octanol/water

Autoignition Temp. (°C): Not determined.

Decomposition temperature (°C): Not determined.

Viscosity (centipoise): Not determined.

Explosion Severity: Not determined.

Oxidizer Properties: Not determined.

9.2. Other information

Not determined

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Min. Ignition Energy-Cloud

(mJ):

> 1000

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: Decomposes exothermically above 141 deg C in ARC 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: Yes
Inhalation: Yes

Acute Toxicity - Oral: Not determined.

Acute Toxicity - Dermal: Not determined.

Acute Toxicity - Inhalation: Not determined.

Corrosivity: Not determined.

Dermal Irritation: Not determined.

Eye Irritation: Not determined.

Sensitization: Not determined.

Toxicokinetics/Metabolism: Not determined.

Target Organ Effects: By analogy, possible target organs include: thyroid.

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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

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

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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 Not applicable

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
N-acetyl-3,5-diiodo-L-tyrosine	213-837-3	=	-	Not listed.	-
1027-28-7					

Chemical Name	ENCS	ISHL	IECSC	AICS	KECL	New Zealand
N-acetyl-3,5-diiodo-L-tyrosine	-	-	-	-	-	
1027-28-7						

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

 $\pmb{DSL/NDSL}\ -\ Canadian\ Domestic\ Substances\ List/Non-Domestic\ Substances\ List/Non-Dom$

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:
N-acetyl-3,5-diiodo-L-tyrosine	100	Not Listed	Not Listed	Not Listed

SARA 313 Information

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

Immediate Health:YesDelayed Health:NoFire:NoSudden Pressure:NoReactivity:No

RCRA Status: Not determined.

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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

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Supersedes the SDS dated: Feb-10-2003

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