SAFETY DATA SHEET

1. Identification

Product identifier **Cymbalta®**

Other means of identification

Item Code UC9671, PU3271, UC9670, PU3270

Synonyms 2-Thiophenepropanamine, N-methyl-gamma-(1-naphthalenyloxy)-, hydrochloride (gammaS)-

LY Number LY248686

Recommended use Pharmaceutical

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Eli Lilly and Company

Address Lilly Corporate Center
Indianapolis, IN 46285
United States

Telephone Phone: +1-317-276-2000

E-mail lilly_sds@lilly.com

Emergency phone number CHEMTREC: +1-800-424-9300

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards

Acute toxicity, oral	Category 4
Serious eye damage/eye irritation	Category 1
Reproductive toxicity	Category 2
Reproductive toxicity	Effects on or via lactation
Specific target organ toxicity, single exposure	Category 3 narcotic effects
Specific target organ toxicity, repeated exposure	Category 2 (liver)

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement

H410	Very toxic to aquatic life with long lasting effects.
H302	Harmful if swallowed.
H318	Causes serious eye damage.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child.
H362	May cause harm to breast-fed children.
H373	May cause damage to organs (Liver) through prolonged or repeated exposure.

Precautionary statement

Prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P263	Avoid contact during pregnancy/while nursing.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Response

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/attention.

Storage Not available.

Disposal Not available.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Duloxetine Hydrochloride	LY248686 Hydrochloride (3S)-N-methyl-3-(naphthalen-1-yloxy)-3-thiophen-2-ylpropan-1-amine hydrochloride 2-Thiophenepropanamine, N-methyl-gamma-(1-naphthalenyloxy)-, hydrochloride, (gammaS)-	136434-34-9	32

Composition comments Remaining components of this product are non-hazardous and/or are present at concentrations below reportable levels.

4. First-aid measures

Inhalation Remove to fresh air. If breathing stops, provide artificial respiration. Get medical attention immediately.

Skin contact Wash off with plenty of water. Continue to rinse for at least 15 minutes. Immediately take off all contaminated clothing. Get medical attention if irritation develops and persists.

Eye contact In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Ingestion Immediately give large quantities of water to drink. Never give anything by mouth to a victim who is unconscious or is having convulsions. Call a physician immediately.

Most important symptoms/effects, acute and delayed Causes eye burns. May cause reproductive effects.

Indication of immediate medical attention and special treatment needed No specific antidote is known. An airway should be established. Monitoring of cardiac and vital signs is recommended, along with appropriate symptomatic and supportive measures. Gastric lavage may be indicated if performed soon after ingestion or in symptomatic patients. Activated charcoal may be useful in limiting absorption. Duloxetine has a large volume of distribution and forced diuresis, hemoperfusion, and exchange perfusion are unlikely to be beneficial.

General information Capsules and tablets are intended for human consumption under guidance of a physician.

5. Fire-fighting measures

Suitable extinguishing media Carbon dioxide, dry chemical or water.

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical Hazardous decomposition products formed under fire conditions.

Special protective equipment and precautions for firefighters Wear self-contained breathing apparatus and protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Wear suitable protective clothing, gloves and eye/face protection. See Section 8 of the SDS for Personal Protective Equipment.

Methods and materials for containment and cleaning up The recommendations in this section are intended for manufacturing or other situations where exposure to contents may occur. Do not sweep. Collect spill using a vacuum cleaner with a HEPA filter. Be aware of potential for dust explosion when using electrical equipment. If vacuum is not available, lightly mist/wet material and remove by mopping or wet wiping.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling. See Section 8 of the SDS for Personal Protective Equipment.

Conditions for safe storage, including any incompatibilities Keep container tightly closed in a dry and well-ventilated place.

8. Exposure controls/personal protection

Occupational exposure limits

Lilly (LEG)

Components	Type	Value
Duloxetine Hydrochloride (CAS 136434-34-9)	Excursion Limit	300 ug/m3
	TWA (12hrs)	25 ug/m3
	TWA (8hrs)	40 ug/m3

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls The recommendations in this section are intended for manufacturing or other situations where exposure to contents may occur.

Open handling is not recommended. Use appropriate control measures such as fume hood, ventilated enclosure, local exhaust ventilation, or down-draft booth.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear goggles/face shield.

Skin protection

Hand protection Chemical-resistant gloves and impermeable body covering to minimize skin contact.

Other Chemical-resistant gloves and impermeable body covering to minimize skin contact.

Respiratory protection Use an approved respirator. Select appropriate respirator for physical characteristics of material. Select respirator with appropriate protection factor. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the respirator.

General hygiene considerations In production settings, airline-supplied, hood-type respirators are preferred. Shower and change clothing if skin contact occurs.

9. Physical and chemical properties

Appearance

Physical state Solid.

Form Capsule

Color Not available.

Odor Odorless

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point Not applicable.

Evaporation rate Not available.

Flammability (solid, gas) No test data available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure Not available.

Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	The substance or mixture is not classified as oxidizing.

10. Stability and reactivity

Reactivity	Not water reactive.
Chemical stability	Stable at normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	None known.
Incompatible materials	Strong oxidizing substances.
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions.

11. Toxicological information

Information on toxicological effects

Acute toxicity Harmful if swallowed.

Components	Species	Test Results
Duloxetine Hydrochloride (CAS 136434-34-9)		
Acute		
Dermal		
LD	Rabbit	> 1000 mg/kg
Oral		
LD50	Rat	491 mg/kg , (male) (Tremors. Convulsions)
		279 mg/kg , (female) (Tremors. Convulsions)

Skin corrosion/irritation	Rabbit: Slight irritation. (Duloxetine Hydrochloride) Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation	Rabbit: Corrosive. (Duloxetine Hydrochloride)
Respiratory or skin sensitization	
Respiratory sensitization	Due to lack of data the classification is not possible.
Skin sensitization	Negative in active systemic anaphylaxis and passive cutaneous anaphylaxis tests. (Duloxetine Hydrochloride) Based on available data, the classification criteria are not met.
Germ cell mutagenicity	In vitro and in vivo tests did not show mutagenic effects. (Duloxetine) Based on available data, the classification criteria are not met.
Carcinogenicity	Not listed by IARC, NTP, ACGIH or OSHA. Duloxetine was administered in the diet to rats and mice for 2 years. In rats, duloxetine did not increase the incidence of tumors. In female mice, there was an increased incidence of hepatocellular adenomas and carcinomas at the high dose only (144 mg/kg/day), but these were considered to be secondary to hepatic enzyme induction and not relevant to human risk. Based on available data, the classification criteria are not met.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity

Duloxetine administered to rats at doses up to 45 mg/kg/day did not affect male or female mating or fertility. There was no evidence of teratogenicity in animal studies. When duloxetine was administered orally to pregnant rats throughout gestation and lactation, decreases in maternal body weights and food consumption were observed, and the survival of pups to 1 day postpartum and pup body weights at birth and during the lactation period were decreased at a dose of 30 mg/kg/day; the no-effect dose was 10 mg/kg/day. Furthermore, behaviors consistent with increased reactivity, such as increased startle response to noise and decreased habituation of locomotor activity, were observed in pups following maternal exposure to 30 mg/kg/day. Post-weaning growth and reproductive performance of the progeny were not affected adversely by maternal duloxetine treatment. Duloxetine and/or its metabolites are excreted into the milk of lactating rats.

Specific target organ toxicity - single exposure

May cause drowsiness or dizziness. (Duloxetine Hydrochloride)

Specific target organ toxicity - repeated exposure

Dilation of the pupil and slow pupillary light response reported in dogs administered 3 mg/kg/day orally for 1 year. Liver effects (tissue changes, enzyme induction) was reported in rats administered up to 0.08% in diet (47 mg/kg/day) for 6 months and dogs dosed orally with 10 mg/kg/day or more for one year. (Duloxetine Hydrochloride)

Aspiration hazard

No aspiration toxicity classification

Further information

Capsules and tablets are intended for human consumption under guidance of a physician. Adverse events commonly observed during therapeutic administration of Duloxetine include nausea, dry mouth, constipation, decreased appetite, fatigue, dizziness, drowsiness, headache, insomnia, and increased sweating. In animal studies, the major signs of overdose toxicity would be related to the central nervous (tremors, clonic convulsions, ataxia) and gastrointestinal (emesis, decreased appetite) systems.

12. Ecological information

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

Components		Species	Test Results
Duloxetine Hydrochloride (CAS 136434-34-9)			
Acute			
	EC50		> 1000000 ug/kg, 14 d , Eisenia fetida (earthworms)
			36500 µg/l, 3 hr , Respiration inhibition of activated sludge (1.5 g solids/L)
Other	EC50	Pseudokirchnerella subcapitata	200 µg/l, 72 hr , (average specific growth rate)
			64 µg/l, 72 hr , (biomass)
Chronic			
	NOEC		92000 ug/kg, 28 d , C. riparius (highest concentration tested)
			2000 µg/l, 3 hr , Respiration inhibition of activated sludge
Other	NOEC	Pseudokirchnerella subcapitata	7 µg/l, 72 hr , (average specific growth rate)
			4.3 µg/l, 72 hr , (biomass)
Aquatic			
Acute			
Crustacea	EC50	Daphnia magna	2400 µg/l, 48 hr
			280 µg/l, 21 d (reproduction)
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	1300 µg/l, 96 hr
	NOEC	Fathead minnow (Pimephales promelas)	12 µg/l, 28 d , (embryo and 28 days post hatch)

Components		Species	Test Results
Chronic			
Crustacea	NOEC	Daphnia magna	1100 µg/l, 48 hr
			11 µg/l, 21 d

LILLY AQUATIC EXPOSURE GUIDELINES:

Duloxetine Hydrochloride

Drinking water LAEG (at the point where surface water is taken for drinking water):	20 µg/l
Acute LAEG (at the edge of the acute mixing zone):	15 µg/l
Chronic LAEG (at the edge of the chronic mixing zone):	1.7 µg/l

Persistence and degradability Aerobic degradation in sewage sludge (8 days): not significant
Aerobic degradation in aquatic sediment(100 days):
5-11% CO_2 evolution
DT50 from overlying water: 3 days
Up to 45 degradation products observed
DT50 from total water-sediment system: 78 and 241 days(2 different water systems evaluated)
Photolysis: Theoretical loss of 100% over 1 month Hydrolysis half-life: 30 C: 42, 101, 72 days (pH 4, 7, 9)
40 C: 16, 32, 23 days (pH 4, 7, 9)

Bioaccumulative potential log Kow: < 4.

Partition coefficient n-octanol / water (log Kow)

Duloxetine Hydrochloride	0.781 (pH 4)
	1.54 (pH 9)
	3.35 (pH 7)

Mobility in soil Not available.

Other adverse effects Not available.

13. Disposal considerations

Disposal instructions Dispose in accordance with all applicable regulations.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

UN number UN3077
UN proper shipping name Environmentally hazardous substance, solid, n.o.s. (Duloxetine Hydrochloride)
Transport hazard class(es)
Class 9
Subsidiary risk -
Packing group III
Environmental hazards Yes
ERG Code 9L
Special precautions for user Not available.
Other information
Passenger and cargo aircraft Allowed with restrictions.
Cargo aircraft only Allowed with restrictions.

IMDG

UN number UN3077
UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Duloxetine Hydrochloride)
Transport hazard class(es)
Class 9
Subsidiary risk -
Packing group III
Environmental hazards
Marine pollutant Yes
EmS F-A, S-F
Special precautions for user Not available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

IATA; IMDG

Marine pollutant

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
One or more components are not listed on TSCA.

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Classified hazard categories
Acute toxicity (any route of exposure)
Serious eye damage or eye irritation
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 02-16-2015

Revision date 01-13-2021

Version # 06

List of abbreviations LEG: Lilly Exposure Guideline.
NOEC: No Observed Effect Concentration TWA: Time Weighted Average

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For additional information contact:
Eli Lilly and Company
Hazard Communication
+1-317-651-9533

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