

SAFETY DATA SHEET



DELTA® TECHNICAL

Version 3.0 / USA
102000001388

1/11
Revision Date: 03/24/2017
Print Date: 03/24/2017

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

Product identifier

Trade name DELTA® TECHNICAL

Product code (UVP) 05937361

SDS Number 102000001388

EPA Registration No. 432-762

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

Use Insecticide

Restrictions on use See product label for restrictions.

Information on supplier

Supplier Bayer Environmental Science
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
United States

Responsible Department Email: SDSINFO.BCS-NA@bayer.com

Emergency telephone no.

**Emergency Telephone
Number (24hr/ 7 days)** 1-800-334-7577

**Product Information
Telephone Number** 1-800-331-2867

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200

Acute toxicity(Oral): Category 3

Acute toxicity(Inhalation): Category 4

Combustible dust

Labelling in accordance with regulation HCS 29CFR §1910.1200



Signal word: Danger

Hazard statements

Toxic if swallowed.

Harmful if inhaled.

May form combustible dust concentrations in air.

SAFETY DATA SHEET



DELTA® TECHNICAL

Version 3.0 / USA
102000001388

2/11
Revision Date: 03/24/2017
Print Date: 03/24/2017

Conduct Dust Hazard Assessment (DHA).

Precautionary statements

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Avoid breathing dust.

Use only outdoors or in a well-ventilated area.

IF SWALLOWED: Immediately call a POISON CENTER/doctor/ physician.

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

Rinse mouth.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER/doctor/physician if you feel unwell.

Store locked up.

Dispose of contents/container in accordance with local regulation.

Hazards Not Otherwise Classified (HNOC)

No physical hazards not otherwise classified.

No health hazards not otherwise classified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Deltamethrin	52918-63-5	99.0

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
Inhalation	Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.
Skin contact	Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.
Eye contact	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

SAFETY DATA SHEET



DELTA® TECHNICAL

Version 3.0 / USA
102000001388

3/11
Revision Date: 03/24/2017
Print Date: 03/24/2017

Most important symptoms and effects, both acute and delayed

Symptoms

Local:, Skin and eye paraesthesia which may be severe, Usually transient with resolution within 24 hours, Skin, eye and mucous membrane irritation, Cough, Sneezing

Systemic:, discomfort in the chest, Tachycardia, Hypotension, Nausea, Abdominal pain, Diarrhoea, Vomiting, Blurred vision, Headache, Anorexia, Somnolence, Coma, Convulsions, Tremors, Prostration, Airway hyperreaction, Pulmonary oedema, Palpitation, Muscular fasciculation, Apathy, Dizziness

Indication of any immediate medical attention and special treatment needed

Risks

This product contains a pyrethroid. Pyrethroid poisoning should not be confused with carbamate or organophosphate poisoning. Risk of pulmonary oedema.

Treatment

Systemic treatment: Initial treatment: symptomatic. Monitor: respiratory and cardiac functions. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. Keep respiratory tract clear. Oxygen or artificial respiration if needed. In case of convulsions, a benzodiazepine (e.g. diazepam) should be given according to standard regimens. If not effective, phenobarbital may be used. Contraindication: atropine. Contraindication: derivatives of adrenaline. There is no specific antidote. Recovery is spontaneous and without sequelae.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable

High volume water jet

Special hazards arising from the substance or mixture

Accumulation of fine dust may entail the risk of a dust explosion in the presence of air.

Advice for firefighters

Special protective equipment for firefighters

Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

Further information

Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

Flash point

Not applicable

Auto-ignition temperature

No data available

SAFETY DATA SHEET



DELTA® TECHNICAL

Version 3.0 / USA
102000001388

4/11
Revision Date: 03/24/2017
Print Date: 03/24/2017

Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Explosivity	No data available
Dust explosion class	St1 (weak to moderately explosible)

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions Avoid dust formation. Remove all sources of ignition. Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up

Methods for cleaning up Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional advice Use personal protective equipment. If the product is accidentally spilled, do not allow to enter soil, waterways or waste water canal.

Reference to other sections Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid dust formation. Use only in area provided with appropriate exhaust ventilation.

Advice on protection against fire and explosion Dust may form explosive mixture in air. Keep away from heat and sources of ignition. Take measures to prevent the build up of electrostatic charge.

Hygiene measures Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.
Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

Conditions for safe storage, including any incompatibilities

SAFETY DATA SHEET



DELTA® TECHNICAL

Version 3.0 / USA
102000001388

5/11
Revision Date: 03/24/2017
Print Date: 03/24/2017

Requirements for storage areas and containers

Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area. Keep away from direct sunlight.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Deltamethrin	52918-63-5	0.02 mg/m ³ (TWA)		OES BCS*

*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

Exposure controls

Respiratory protection

When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

Hand protection

Chemical resistant nitrile rubber gloves

Eye protection

Tightly fitting safety goggles

Skin and body protection

Wear long-sleeved shirt and long pants and shoes plus socks.

General protective measures

Eye wash facility and safety shower should be available.
Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water.
Keep and wash PPE separately from other laundry.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	white to beige
Physical State	Crystalline powder
Odor	odourless
Odour Threshold	No data available
pH	5.3 at 10 g/l
Vapor Pressure	2.3 µPa at 25 °C
Vapor Density (Air = 1)	No data available
Bulk density	ca. 550 kg/m ³
Evaporation rate	Not applicable
Boiling Point	Not applicable

SAFETY DATA SHEET



DELTA® TECHNICAL

Version 3.0 / USA
102000001388

6/11
Revision Date: 03/24/2017
Print Date: 03/24/2017

Melting / Freezing Point	98 °C / 208.4 °F
Water solubility	0.27 µg/l at 20 °C
Solubility in other solvents	soluble in most organic solvents
Minimum Ignition Energy	> 10 - < 30 mJ at 23 °C
Molecular weight	505.2 g/mol
Decomposition temperature	from 240 °C , Heating rate: 3 K/min , Decomposition energy: 740 KJ/kg Exothermic decomposition. from 214 °C , Heating rate: 3 K/min , Decomposition energy: 730 KJ/kg Exothermic decomposition. from 205 °C , Heating rate: 3 K/min , Decomposition energy: 800 KJ/kg Exothermic decomposition.
Partition coefficient: n-octanol/water	log Pow: 4.6 at 25 °C
Viscosity	Not applicable
Flash point	Not applicable
Auto-ignition temperature	No data available
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Explosivity	No data available
Dust explosion class	St1 (weak to moderately explosible)
Other information	Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Thermal decomposition	from 240 °C, Heating rate: 3 K/min, Decomposition energy: 740 KJ/kg Exothermic decomposition. from 214 °C, Heating rate: 3 K/min, Decomposition energy: 730 KJ/kg Exothermic decomposition. from 205 °C, Heating rate: 3 K/min, Decomposition energy: 800 KJ/kg Exothermic decomposition.
Chemical stability	Stable under recommended storage conditions.

SAFETY DATA SHEET



DELTA® TECHNICAL

Version 3.0 / USA
102000001388

7/11
Revision Date: 03/24/2017
Print Date: 03/24/2017

Possibility of hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions.
Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatible materials	Strong oxidizing agents
Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Ingestion, Inhalation, Skin Absorption, Eye contact
Immediate Effects	
Eye	May cause eye irritation.
Skin	Harmful if absorbed through skin. Skin contact especially to the face may result in a tingling sensation and reddening of the skin.
Ingestion	May be fatal if swallowed.
Inhalation	Harmful if inhaled.
Information on toxicological effects	
Acute oral toxicity	LD50 (female Rat) 87 mg/kg
Acute inhalation toxicity	LC50 (male/female combined Rat) 2.2 mg/l Exposure time: 4 h (actual)
Acute dermal toxicity	LD50 (male/female combined Rabbit) > 2,000 mg/kg
Skin irritation	No skin irritation (Rabbit)
Eye irritation	Mild eye irritation. (Rabbit)
Sensitisation	Non-sensitizing. (Guinea pig) OECD Test Guideline 406, Magnusson & Kligman test

Assessment STOT Specific target organ toxicity – repeated exposure

Deltamethrin caused neurobehavioral effects and/or neuropathological changes in animal studies. The toxic effects of Deltamethrin are related to transient hyperactivity typical for pyrethroid neurotoxicity.

Assessment mutagenicity

Deltamethrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Deltamethrin was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH

None.

NTP

SAFETY DATA SHEET



DELTA® TECHNICAL

Version 3.0 / USA
102000001388

8/11
Revision Date: 03/24/2017
Print Date: 03/24/2017

None.

IARC

Deltamethrin

52918-63-5

Overall evaluation: 3

OSHA

None.

Assessment toxicity to reproduction

Deltamethrin did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

Deltamethrin caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Deltamethrin are related to maternal toxicity.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) 0.15 µg/l Exposure time: 96 h
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) 0.0131 µg/l Exposure time: 48 h
Toxicity to aquatic plants	EC50 (Algae) > 9.1 mg/l Exposure time: 96 h
Biodegradability	Deltamethrin: Not rapidly biodegradable
Koc	Deltamethrin: Koc: 10240000
Bioaccumulation	Deltamethrin: Bioconcentration factor (BCF) 1,400 Does not bioaccumulate.
Mobility in soil	Deltamethrin: Immobile in soil
Additional ecological information	No other effects to be mentioned.
Environmental precautions	Do not allow to get into surface water, drains and ground water. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product as specified on the label.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

SAFETY DATA SHEET



DELTA® TECHNICAL

Version 3.0 / USA
102000001388

9/11
Revision Date: 03/24/2017
Print Date: 03/24/2017

Product	Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of on site or at an approved waste disposal facility.
Contaminated packaging	Do not re-use empty containers. Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities. If burned, stay out of smoke. Consult state and local regulations regarding the proper disposal of container. Follow advice on product label and/or leaflet.
RCRA Information	Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

SECTION 14: TRANSPORT INFORMATION

49CFR

UN number	3349
Class	6.1
Packaging group	III
Proper shipping name	PYRETHROID PESTICIDE, SOLID, TOXIC (DELTAMETHRIN)

IMDG

UN number	3349
Class	6.1
Packaging group	III
Marine pollutant	YES
Proper shipping name	PYRETHROID PESTICIDE, SOLID, TOXIC (DELTAMETHRIN)

IATA

UN number	3349
Class	6.1
Packaging group	III
Environm. Hazardous Mark	NO
Proper shipping name	PYRETHROID PESTICIDE, SOLID, TOXIC (DELTAMETHRIN)

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

Freight Classification:	INSECTICIDES OR FUNGICIDES, N.O.I., POISON, OTHER THAN GASES THAT ARE POISONOUS BY INHALATION
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SAFETY DATA SHEET



DELTA® TECHNICAL

Version 3.0 / USA
102000001388

10/11
Revision Date: 03/24/2017
Print Date: 03/24/2017

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 432-762

US Federal Regulations

TSCA list

None.

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

None.

SARA Title III - Section 302 - Notification and Information

None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

None.

US States Regulatory Reporting

CA Prop65

This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients

None.

Canadian Regulations

Canadian Domestic Substance List

None.

Environmental

CERCLA

None.

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

EPA/FIFRA Information:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

SAFETY DATA SHEET



DELTA® TECHNICAL

Version 3.0 / USA
102000001388

11/11
Revision Date: 03/24/2017
Print Date: 03/24/2017

Signal word: Warning!

Hazard statements: May be fatal if swallowed.
Harmful if inhaled or absorbed through skin.
Causes substantial but temporary eye injury.
Avoid breathing dust.
Avoid contact with skin, eyes and clothing.
Contact with product may result in transient tingling and reddening of the skin.
Remove and wash contaminated clothing before re-use.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

49CFR	Code of Federal Regulations, Title 49
ACGIH	US. ACGIH Threshold Limit Values
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
N.O.S.	Not otherwise specified
NTP	US. National Toxicology Program (NTP) Report on Carcinogens
OECD	Organization for Economic Co-operation and Development
TDG	Transportation of Dangerous Goods
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

NFPA 704 (National Fire Protection Association):

Health - 2 Flammability - 1 Instability - 0 Others - none

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 2 Flammability - 1 Physical Hazard - 0 PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: Revised according to the current OSHA Hazard Communication Standard (29CFR1910.1200)

Revision Date: 03/24/2017

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