



Material Safety Data Sheet (MSDS) ***Acicam Super***

IDENTIFICATION OF THE SUPPLIER:

AGRO CHEMICALS INDUSTRIES LTD

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PRODUCT IDENTIFICATION:

Trade Name: Acicam Super

Common Name: Deltamethrin

Chemical Name: (S)- α -cyano-3-phenoxybenzyl (1R,3R)-3-(2,2-dibromovinyl)-2,2-dimethylcyclopropanecarboxylate

Molecular Weight: 505.2

Chemical Formula: C₂₂H₁₉Br₂NO₃

PRODUCT COMPOSITION:

Active Ingredient: Deltamethrin 0.05% w/w

Inert ingredient:: UP to 1 kg

HAZARDS IDENTIFICATION:

Classification in accordance with regulation HCS 29CFR §1910.1200

This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Other hazards

No other hazards known.

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.

Most important symptoms and effects, both acute and delayed

Symptoms

To date no symptoms are known.

Indication of any immediate medical attention and special treatment needed

Treatment

Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.

ACCIDENTAL RELEASE MEASURES:

Personal precautions, protective equipment and emergency procedures

Precautions

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. Do not allow to enter soil, waterways or waste water canal.

FIREFIGHTING MEASURES

Extinguishing media

Suitable

Carbon dioxide (CO₂), Dry chemical, Foam, Water

Unsuitable

None known.

Advice for firefighters

Special protective equipment for fire-fighters

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. Contain the spread of the fire-fighting media.

Flash point

Not applicable

Autoignition temperature

No data available

Lower explosion limit

Not applicable

Upper explosion limit

Not applicable

Explosivity

No data available

Dust explosion class

No data available

HANDLING AND STORAGE:

Precautions for safe handling

Advice on safe handling

Handle and open container in a manner as to prevent spillage. Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.

Hygiene measures



Wash hands thoroughly with soap and water after handling and before eating, drinking, and 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

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.

EXPOSURE CONTROLS AND PERSONAL:

Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Deltamethrin	52918-63-5	0.02 mg/m ³ (TWA)		OES BCS*
Crystalline quartz (respirable) (Respirable fraction.)	14808-60-7	0.025 mg/m ³ (TWA)	02 2012	ACGIH
Crystalline quartz (respirable) (Respirable dust.)	14808-60-7	0.05 mg/m ³ (REL)	2010	NIOSH
Crystalline quartz (respirable) (Respirable dust.)	14808-60-7	0.1 mg/m ³ (TWA)	1989	OSHA Z1A
Crystalline quartz (respirable) (Respirable dust.)	14808-60-7	0.1 mg/m ³ (TWA)	06 2008	TN OEL
Crystalline quartz (respirable)	14808-60-7	0.27ug/m ³ (AN ESL)	03 2014	TX ESL
Crystalline quartz (respirable)	14808-60-7	14ug/m ³ (ST ESL)	03 2014	TX ESL
Crystalline quartz (respirable) (Respirable dust.)	14808-60-7	0.1 mg/m ³ (TWA PEL)	08 2010	US CA OEL
Crystalline quartz (respirable) (Total dust.)	14808-60-7	0.3 mg/m ³ (TWA PEL)	08 2010	US CA OEL
Crystalline quartz (respirable) (Respirable.)	14808-60-7	0.1 mg/m ³ (TWA)	2000	Z3
Crystalline quartz (respirable) (Total dust.)	14808-60-7	0.3 mg/m ³ (TWA)	2000	Z3
Crystalline quartz (respirable) (Respirable.)	14808-60-7	2.4millions of particles per cubic foot of air (TWA)	2000	Z3
Calcium carbonate (Respirable.)	1317-65-3	5 mg/m ³ (REL)	2010	NIOSH
Calcium carbonate (Total)	1317-65-3	10 mg/m ³ (REL)	2010	NIOSH
Calcium carbonate (Respirable fraction.)	1317-65-3	5 mg/m ³ (PEL)	02 2006	OSHA Z1
Calcium carbonate (Total dust.)	1317-65-3	15 mg/m ³ (PEL)	02 2006	OSHA Z1
Calcium carbonate	1317-65-3	5 mg/m ³	1989	OSHA Z1A





(Respirable fraction.)		(TWA)		
Calcium carbonate (Total dust.)	1317-65-3	15 mg/m3 (TWA)	1989	OSHA Z1A
Calcium carbonate (Total dust.)	1317-65-3	15 mg/m3 (TWA)	06 2008	TN OEL
Calcium carbonate (Respirable fraction.)	1317-65-3	5 mg/m3 (TWA)	06 2008	TN OEL
Calcium carbonate	1317-65-3	5ug/m3 (AN ESL)	03 2014	TX ESL
Calcium carbonate	1317-65-3	50ug/m3 (ST ESL)	03 2014	TX ESL

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

Exposure controls

Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

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

Safety glasses or Goggles

Skin and body protection

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

General protective measures

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.

PHYSICAL AND CHEMICAL PROPERTIES:

Appearance

white

Physical State

powder

Odor

weak characteristic

Odour Threshold

No data available

pH

No data available

Vapor Pressure



No data available

Vapor Density (Air = 1)

No data available

Bulk density

ca. 55.5 lb/ft³(loose)

Evaporation rate

Not applicable

Boiling Point

Not applicable

Melting / Freezing Point

Not applicable

Water solubility

Soluble

Minimum Ignition Energy

No data available

Decomposition temperature

No data available

Partition coefficient: n-octanol/water

No data available

Viscosity

Not applicable

Flash point

Not applicable

Autoignition temperature

No data available

Lower explosion limit

Not applicable

Upper explosion limit

Not applicable

Explosivity

No data available

Dust explosion class

No data available

STABILITY AND REACTIVITY:

Reactivity

Thermal decomposition

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions





No hazardous reactions known.

Conditions to avoid

No data available

Incompatible materials

Strong acids

Hazardous decomposition products

No data available

TOXICOLOGICAL INFORMATION:

Exposure routes

Skin contact, Eye contact

Immediate Effects

Skin

May be harmful if absorbed through skin.

Information on toxicological effects

Acute oral toxicity LD50 (rat) > 5,050 mg/kg

Acute inhalation toxicity LC50 (rat) > 26.1 mg/l
Exposure time: 4 h
Determined in the form of dust.

LC50 (rat) > 100 mg/l
Exposure time: 1 h
Determined in the form of dust.
Extrapolated from the 4 hr LC50.

Acute dermal toxicity LD50 (rabbit) > 2,020 mg/kg

Skin irritation No skin irritation (rabbit)

Eye irritation No eye irritation (rabbit)

Sensitisation Non-sensitizing. (guinea pig)

Assessment repeated dose toxicity

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

Crystalline quartz (respirable)	14808-60-7	Group A2
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NTP

Crystalline quartz (respirable)	14808-60-7
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IARC

Deltamethrin	52918-63-5	Overall evaluation: 3
Crystalline quartz (respirable)	14808-60-7	Overall evaluation: 1

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.



ECOLOGICAL INFORMATION: -

Toxicity to fish

LC50 (Oncorhynchus mykiss (rainbow trout)) 0.00091 mg/l

Exposure time: 96 h

The value mentioned relates to the active ingredient deltamethrin.

Toxicity to aquatic invertebrates

EC50 (Daphnia magna (Water flea)) 0.00056 mg/l

Exposure time: 48 h

The value mentioned relates to the active ingredient deltamethrin.

Toxicity to aquatic plants

EC50 (Algae) > 9.1 mg/l

Exposure time: 96 h

The value mentioned relates to the active ingredient deltamethrin.

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

Environmental precautions

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark.

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.

DISPOSAL CONSIDERATIONS:

Waste treatment methods

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.

Follow advice on product label and/or leaflet.

Contaminated packaging

Triple rinse containers.





Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State/Provincial and local authorities, by burning.

If burned, stay out of smoke.

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.

TRANSPORT INFORMATION:

49CFR

Not dangerous goods / not hazardous material

IMDG

UN number

3077

Class

9

Packaging group

III

Marine pollutant

YES

Proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(DELTAMETHRIN MIXTURE)

IATA

UN number

3077

Class

9

Packaging group

III

Environm. Hazardous Mark

YES

Proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(DELTAMETHRIN MIXTURE)

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., OTHER THAN POISON

