Bayer CropScience

Material Safety Data Sheet

STORCIDE™ II GRAIN, BIN AND WAREHOUSE INSECTICIDE

MSDS Number: 102000012928
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SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product name	STORCIDE™ II GRAIN, BIN AND WAREHOUSE INSECTICIDE
MSDS Number	102000012928
Product code (UVP)	06539149
EPA Registration No.	264-992
Product Use	Insecticide

Bayer CropScience
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
USA

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)
For Product Information call: 1-866-99BAYER (1-866-992-2937)

SECTION 2. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview	Danger! Corrosive - causes irreversible eye damage. Causes skin irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Harmful if inhaled. Do not breathe vapours or spray mist. Do not get in eyes, on skin, or on clothing.
Physical State	liquid, clear
Odor	of mercaptans
Appearance	beige to brown
Exposure routes	Inhalation, Ingestion, Eye contact, Skin contact, Skin Absorption
Immediate Effects	
Eye	Corrosive - causes irreversible eye damage. May cause severe eye irritation. Vapors and mists can cause irritation. Do not get in eyes.
skin	Moderate skin irritation. May cause a transient, localized paresthesia, characterized by tingling, burning or numbness sensation in some individuals. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Do not get on skin or clothing.
Ingestion	Do not take internally. Harmful if swallowed.

Inhalation	Inhalation of high concentrations of solvent vapors can cause nausea, vomiting, dizziness, drowsiness and incoordination. May cause respiratory tract irritation. Harmful if inhaled. Do not breathe vapours or spray mist.
Chronic or Delayed Long-Term	This product contains ingredients that are considered to be probable or suspected human carcinogens (see Section 11 - Chronic). This product or its components may have target organ effects.
Potential Environmental Effect	Extremely toxic to fish. Toxic to birds. Toxic to wildlife. Highly toxic to bees.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Average % by Weight
Chlorpyrifos-methyl	5598-13-0	21.60
Deltamethrin	52918-63-5	3.70
Solvent Naphtha (petroleum), light aromatic	64742-95-6	39.40
1,2,4-Trimethylbenzene	95-63-6	18.60
Xylene	1330-20-7	7.20
Mesitylene	108-67-8	1.90
Ethylbenzene	100-41-4	1.40
Cumene	98-82-8	1.00

SECTION 4. FIRST AID MEASURES

General	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
Eye	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.
skin	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.
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.
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.

Notes to physician	
Hazards	Contains hydrocarbon solvents. May pose an aspiration pneumonia hazard. Cholinesterese inhibitor
Treatment	Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.

SECTION 5. FIRE FIGHTING MEASURES

Flash point	48.9 °C / 120.0 °F
Autoignition temperature	no data available
Lower Flammability Limit	no data available
Upper Flammability Limit	no data available
Explosiveness	Not explosive
Fire and Explosion Hazards	Dangerous gases are evolved in the event of a fire.
Suitable extinguishing media	Foam, Carbon dioxide (CO2), Dry chemical, Water spray
Fire Fighting Instructions	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. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.
Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. 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.

SECTION 7. HANDLING AND STORAGE

Handling procedures

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.

Keep away from heat and sources of ignition.

Storing Procedures

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.

Work/Hygienic Procedures

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.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection

Follow all label instructions. Train employees in safe use of the product.

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.

Eye/Face Protection

Tightly fitting safety goggles

Hand protection

Chemical resistant nitrile rubber gloves

Body Protection

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

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.

Exposure Limits

Deltamethrin	52918-63-5	OES BCS*	TWA	0.02 mg/m3
Solvent Naphtha (petroleum), light aromatic	64742-95-6	TX ESL	ST ESL	250 ppm
		TX ESL	AN ESL	25 ppm

1,2,4-Trimethylbenzene	95-63-6	NIOSH	REL	25 ppm
		TX ESL	ST ESL	250 ppm
		TX ESL	AN ESL	25 ppm
Xylene	1330-20-7	ACGIH	TWA	100 ppm
		ACGIH	STEL	150 ppm
		OSHA Z1	PEL	100 ppm
		OSHA Z1A	TWA	100 ppm
		OSHA Z1A	STEL	150 ppm
		US CA OEL	TWA PEL	100 ppm
		US CA OEL	Ceiling	300 ppm
		US CA OEL	STEL	150 ppm
		TX ESL	ST ESL	3700 ug/m3
		TX ESL	AN ESL	370 ug/m3
		OES BCS*	TWA	100 ppm
		TX ESL	ST ESL	850 ppb
		TX ESL	AN ESL	85 ppb
		TN OEL	TWA	100 ppm
		TN OEL	STEL	150 ppm
Mesitylene	108-67-8	NIOSH	REL	25 ppm
		TX ESL	ST ESL	250 ppm
		TX ESL	AN ESL	25 ppm
Ethylbenzene	100-41-4	ACGIH	TWA	100 ppm
		ACGIH	STEL	125 ppm
		NIOSH	REL	100 ppm
		NIOSH	STEL	125 ppm
		OSHA Z1	PEL	100 ppm
		OSHA Z1A	TWA	100 ppm
		OSHA Z1A	STEL	125 ppm
		US CA OEL	TWA PEL	100 ppm
		US CA OEL	STEL	125 ppm
		TX ESL	ST ESL	2000 ug/m3
		TX ESL	AN ESL	200 ug/m3
		ACGIH NIC	TWA	20 ppm
		ACGIH NIC	STEL	125 ppm
		TN OEL	TWA	100 ppm
		TN OEL	STEL	125 ppm
		TX ESL	ST ESL	460 ppb
		TX ESL	AN ESL	46 ppb
Cumene	98-82-8	ACGIH	TWA	50 ppm
		NIOSH	REL	50 ppm
		OSHA Z1	PEL	50 ppm
		OSHA Z1A	TWA	50 ppm
		US CA OEL	TWA PEL	50 ppm
		TX ESL	ST ESL	500 ug/m3
		TX ESL	AN ESL	50 ug/m3
		TX ESL	ST ESL	100 ppb
		TX ESL	AN ESL	10 ppb

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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	beige to brown
Physical State	liquid, clear
Odor	of mercaptans
pH	3 - 4 (1 %)
Vapor Pressure	no data available
Vapor Density (Air = 1)	no data available
Density	0.99 g/cm³ at 20 °C
Evaporation rate	no data available
Boiling Point	no data available
Melting / Freezing Point	no data available
Water solubility	miscible
Minimum Ignition Energy	no data available
Decomposition temperature	no data available
Partition coefficient: n-octanol/water	no data available
Viscosity	no data available

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	Heat, flames and sparks.
Incompatibility	Strong bases Oxidizing agents
Hazardous Decomposition Products	Thermal decomposition can lead to release of: Sulphides Nitrogen oxides (NOx) Hydrogen cyanide (hydrocyanic acid)

Hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions.
Chemical Stability	Stable under recommended storage conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

The non-acute information pertains to the two technical-grade active ingredients, chlorpyrifos-methyl and deltamethrin.

Acute oral toxicity	rat: LD50: 150 mg/kg
Acute dermal toxicity	rat: LD50: > 5,000 mg/kg
Acute inhalation toxicity	rat: LC50: 0.53 - 2.58 mg/l Exposure time: 4 h
Skin irritation	Moderate skin irritation.
Eye irritation	Severe eye irritation.
Sensitisation	guinea pig: Sensitising
Chronic toxicity	Chlorpyrifos-methyl caused effects in the adrenal gland and/or in the liver when tested in rats, mice and dogs.
Chronic 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 Carcinogenicity
Chlorpyrifos-methyl was not carcinogenic in lifetime feeding studies in rats and mice.

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

ACGIH		
Xylene	1330-20-7	Group A4
Ethylbenzene	100-41-4	Group A3
NTP		
None.		
IARC		
Deltamethrin	52918-63-5	Overall evaluation: 3
Xylene	1330-20-7	Overall evaluation: 3
Ethylbenzene	100-41-4	Overall evaluation: 2B
OSHA		
None.		

Reproductive toxicity	REPRODUCTION: Chlorpyrifos-methyl was not a reproductive toxicant in three-generation reproduction studies in rats. DEVELOPMENTAL TOXICITY: Chlorpyrifos-methyl was not a developmental toxicant in rats and rabbits.
Reproductive toxicity	Deltamethrin did not cause reproductive toxicity in a two-generation study in rats.
Developmental Toxicity	Deltamethrin caused developmental toxicity only at doses toxic to the dams. The developmental effects seen with Deltamethrin are related to maternal toxicity.
Assessment neurotoxicity	Chlorpyrifos-methyl did not cause delayed neurotoxicity in hens.
Mutagenicity	Chlorpyrifos-methyl was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.
Mutagenicity	Deltamethrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

SECTION 12. ECOLOGICAL INFORMATION

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 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. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area. Apply this product as specified on the label.
Ecological Information	Exposed treated seed may be hazardous to birds.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance	Open dumping is prohibited. Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.
Container Disposal	Do not re-use empty containers. Triple rinse containers. Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or incineration, or if allowed by State 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.

SECTION 14. TRANSPORT INFORMATION

49CFR	
UN-Number	**2903**
Class	6.1 (3)
Packaging group	III
Description of the goods	PESTICIDES, LIQUID, TOXIC, FLAMMABLE, N.O.S. (CHLORPYRIFOS-METHYL, PETROLEUM DISTILLATES, XYLENE)
RQ	Reportable Quantity is reached with 1,388 lb of product.
IMDG	
UN-Number	**2903**
Class	6.1 (3)
Packaging group	III
Marine pollutant	YES
Description of the goods	PESTICIDE, LIQUID, TOXIC, FLAMMABLE, N.O.S. (CHLORPYRIFOS-METHYL, PETROLEUM DISTILLATES SOLUTION)
IATA	
UN-Number	**2903**
Class	6.1 (3)
Packaging group	III
Environm. Hazardous Mark	NO
Description of the goods	PESTICIDE, LIQUID, TOXIC, FLAMMABLE, N.O.S. (CHLORPYRIFOS-METHYL, PETROLEUM DISTILLATES SOLUTION)

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

SECTION 15. REGULATORY INFORMATION

EPA Registration No. 264-992

US Federal Regulations

TSCA list

Solvent Naphtha (petroleum), light aromatic	64742-95-6
1,2,4-Trimethylbenzene	95-63-6
Xylene	1330-20-7
Mesitylene	108-67-8
Ethylbenzene	100-41-4
Cumene	98-82-8

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

Chlorpyrifos-methyl	5598-13-0	1.0%
1,2,4-Trimethylbenzene	95-63-6	1.0%
Xylene	1330-20-7	1.0%
Ethylbenzene	100-41-4	0.1%
Cumene	98-82-8	1.0%

US States Regulatory Reporting

CA Prop65

This product contains a chemical known to the State of California to cause cancer.

Ethylbenzene	100-41-4

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

US State Right-To-Know Ingredients

Chlorpyrifos-methyl	5598-13-0	NJ
1,2,4-Trimethylbenzene	95-63-6	NJ, PA
Xylene	1330-20-7	CA, CT, IL, MI, NJ, RI
Ethylbenzene	100-41-4	CA, CT, IL, MN, NJ, RI
Cumene	98-82-8	CA, CT, IL, MN, NJ, RI

Canadian Regulations

Canadian Domestic Substance List

Solvent Naphtha (petroleum), light aromatic	64742-95-6
1,2,4-Trimethylbenzene	95-63-6

Xylene	1330-20-7
Mesitylene	108-67-8
Ethylbenzene	100-41-4
Cumene	98-82-8

Environmental

CERCLA

Xylene	1330-20-7	100 lbs
Ethylbenzene	100-41-4	1,000 lbs
Cumene	98-82-8	5,000 lbs

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

International Regulations

European Inventory of Existing Commercial Substances (EINECS)

Chlorpyrifos-methyl	5598-13-0
Deltamethrin	52918-63-5
Solvent Naphtha (petroleum), light aromatic	64742-95-6
1,2,4-Trimethylbenzene	95-63-6
Xylene	1330-20-7
Mesitylene	108-67-8
Ethylbenzene	100-41-4
Cumene	98-82-8

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 3 Flammability - 2 Instability - 1 Others - none

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

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

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

Reason for Revision: The following sections have been revised: Section 3: Composition / Information on Ingredients. Section 8: Exposure Controls / Personal Protection. Section 14: Transport Information. Reviewed and updated for general editorial purposes.

Revision Date: 02/14/2012

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