

FLAGSHIP 25WG

Version

2.0

Revision Date:

10/13/2020

SDS Number: S00041707849 This version replaces all previous versions.

SECTION 1. IDENTIFICATION

Product name

: FLAGSHIP 25WG

Design code.

: A9584C

Product Registration number

: 100-938

Manufacturer or supplier's details

Company name of supplier

Syngenta Crop Protection, LLC

Address

Post Office Box 18300 Greensboro NC 27419

United States of America (USA)

Telephone

1 800 334 9481

Telefax

1 336 632 2192

Emergency telephone

1 800 888 8372

Recommended use of the chemical and restrictions on use

Recommended use

: Insecticide

Restrictions on use

General Use Pesticide

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Combustible dust

GHS label elements

Signal Word

: Warning

Hazard Statements

: May form combustible dust concentrations in air.

Other hazards

May form combustible dust concentrations in air.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components

| Chemical name | CAS-No. | Concentration (% w/w) |
|---|-------------|-----------------------|
| starch | 9005-25-8 | >= 50 - < 70 |
| thiamethoxam | 153719-23-4 | 25 |
| lignosulfonic acid, ethoxylated, sodi- um salts | 68611-14-3 | >= 5 - < 10 |
| silica | 61790-53-2 | >= 5 - < 10 |
| sulfuric acid, mono-C12-14-alkyl esters, sodium salts | 85586-07-8 | >= 1 - < 5 |

Actual concentration is withheld as a trade secret



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SECTION 4. FIRST AID MEASURES

General advice

: Have the product container, label or Safety Data Sheet with you when calling the emergency number, a poison control center or physician, or going for treatment.

If inhaled

Take the victim into fresh air.

If breathing is irregular or stopped, administer artificial

respiration.

Keep patient warm and at rest.

Call a physician or poison control center immediately.

In case of skin contact

Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.

In case of eye contact

Rinse immediately with plenty of water, also under the eyelids,

for at least 15 minutes. Remove contact lenses.

Immediate medical attention is required.

If swallowed

If swallowed, seek medical advice immediately and show this

container or label.

Do NOT induce vomiting.

Most important symptoms and effects, both acute and Nonspecific

No symptoms known or expected.

delayed

Notes to physician

There is no specific antidote available.

Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Extinguishing media - small fires

Use water spray, alcohol-resistant foam, dry chemical or

carbon dioxide.

Extinguishing media - large fires

Alcohol-resistant foam

Water spray

Unsuitable extinguishing

media

Do not use a solid water stream as it may scatter and spread

Specific hazards during fire

fighting

As the product contains combustible organic ingredients, fire

will produce dense black smoke containing hazardous

products of combustion (see section 10).

Exposure to decomposition products may be a hazard to

health.

Further information

Do not allow run-off from fire fighting to enter drains or water

courses.

Cool closed containers exposed to fire with water spray.

Special protective equipment

for fire-fighters

Wear full protective clothing and self-contained breathing

apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- : tive equipment and emer-

gency procedures

Refer to protective measures listed in sections 7 and 8.

Avoid dust formation.



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Environmental precautions

Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform

respective authorities.

Methods and materials for containment and cleaning up Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13). Do not create a powder cloud by using a brush or compressed

Clean contaminated surface thoroughly. Clean with detergents. Avoid solvents.

Retain and dispose of contaminated wash water.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling This material is capable of forming flammable dust clouds in

> air, which, if ignited, can produce a dust cloud explosion. Flames, hot surfaces, mechanical sparks and electrostatic discharges can serve as ignition sources for this material.

Electrical equipment should be compatible with the flammability characteristics of this material. The flammability

characteristics will be made worse if the material contains traces of flammable solvents or is handled in the presence of

flammable solvents.

Avoid contact with skin and eyes. When using do not eat, drink or smoke. For personal protection see section 8.

Conditions for safe storage

Keep containers tightly closed in a dry, cool and well-

ventilated place.

Keep out of the reach of children.

Keep away from food, drink and animal feedingstuffs.

Further information on stor-

age stability

Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient

temperatures.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

| Components | CAS-No. | Value type (Form of exposure) | Control parame- ters / Permissible concentration | Basis |
|--------------|-------------|-------------------------------------|--|-----------|
| starch | 9005-25-8 | TWA | 10 mg/m3 | ACGIH |
| | | TWA (Res- pirable) | 5 mg/m3 | NIOSH REL |
| | | TWA (total) | 10 mg/m3 | NIOSH REL |
| | | TWA (total dust) | 15 mg/m3 | OSHA Z-1 |
| | | TWA (respir- able fraction) | 5 mg/m3 | OSHA Z-1 |
| thiamethoxam | 153719-23-4 | TWA | 3 mg/m3 | Syngenta |
| silica | 61790-53-2 | TWA (Dust) | 20 Million particles per cubic foot | OSHA Z-3 |



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| | | (Silica) | |
|--|------------|---------------------------------|-----------|
| | TWA (Dust) | 80 mg/m3 / %SiO2 (Silica) | OSHA Z-3 |
| | TWA | 6 mg/m3 (Silica) | NIOSH REL |

Engineering measures

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THE PRODUCT. FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. The extent of these protection measures depends on the actual risks in use.

Maintain air concentrations below occupational exposure standards.

Where necessary, seek additional occupational hygiene

advice.

Personal protective equipment

Respiratory protection

No personal respiratory protective equipment normally

required.

When workers are facing concentrations above the exposure

limit they must use appropriate certified respirators.

Hand protection

Remarks

Eve protection

Skin and body protection

No special protective equipment required.

No special protective equipment required. No special protective equipment required.

Select skin and body protection based on the physical job

requirements.

Protective measures

The use of technical measures should always have priority

over the use of personal protective equipment. When selecting personal protective equipment, seek

appropriate professional advice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

granules

Color

beige to brown

Odor

musty

Odor Threshold

No data available

pΗ

7 - 11

Concentration: 1 % w/v

Melting point/range

No data available

Boiling point/boiling range

No data available



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Flash point

No data available

Evaporation rate

No data available

Flammability (solid, gas)

May form combustible dust concentrations in air.

Burning number

5 (212 °F / 100 °C)

2 (68 °F / 20 °C)

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower

flammability limit

No data available

Vapor pressure : No data available

Relative vapor density

No data available

Bulk density

0.42 - 0.52 g/cm3

Solubility(ies)

Solubility in other solvents

not soluble

Partition coefficient: n-

octanol/water

No data available

Autoignition temperature

> 248 °F / > 120 °C

Minimum ignition temperature

Viscosity

: 400 °C

Viscosity, dynamic

No data available

Explosive properties

Not explosive

Oxidizing properties

The substance or mixture is not classified as oxidizing.

Self-heating substances

The substance or mixture is not classified as self heating.

Surface tension

46.0 - 47.6 mN/m, 68 °F / 20 °C

Minimum ignition energy

30 - 100 mJ

SECTION 10. STABILITY AND REACTIVITY

Possibility of hazardous reac-

tions

Stable at normal ambient temperature and pressure.

Hazardous polymerization does not occur.

At elevated temperatures it will undergo rapid, gas evolving

thermal decomposition.

Hazardous decomposition

products

Combustion or thermal decomposition will evolve toxic and

irritant vapors.



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SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Ingestion Inhalation Skin contact Eye contact

Acute toxicity

Product:

Acute oral toxicity

LD50 (Rat, male and female): > 5,000 mg/kg

Acute inhalation toxicity

LC50 (Rat, male and female): > 5.29 mg/m3

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Acute dermal toxicity

LD50 (Rat, male and female): > 5,000 mg/kg

Components:

thiamethoxam:

Acute oral toxicity

: LD50 (Rat, male and female): 1,563 mg/kg

Acute inhalation toxicity

LC50 (Rat, male and female): > 3.72 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Acute dermal toxicity

LD50 (Rat, male and female): > 2,000 mg/kg

Assessment: The substance or mixture has no acute dermal

toxicity

sulfuric acid, mono-C12-14-alkyl esters, sodium salts:

Acute oral toxicity

Assessment: The component/mixture is moderately toxic after

single ingestion.

Skin corrosion/irritation

Product:

Species

Rabbit

Result

No skin irritation

Components:

thiamethoxam:

Species

Rabbit

Result

No skin irritation



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lignosulfonic acid, ethoxylated, sodium salts:

Result

Irritating to skin.

sulfuric acid, mono-C12-14-alkyl esters, sodium salts:

Result

: Irritating to skin.

Serious eye damage/eye irritation

Product:

Species

Rabbit

Result No eye irritation

Components:

thiamethoxam:

Species

Rabbit

Result

No eye irritation

lignosulfonic acid, ethoxylated, sodium salts:

Result

: Eye irritation

sulfuric acid, mono-C12-14-alkyl esters, sodium salts:

Result

: Risk of serious damage to eyes.

Respiratory or skin sensitization

Product:

Test Type

Maximization Test

Species

Guinea pig

Result

Did not cause sensitization on laboratory animals.

Components:

thiamethoxam:

Species

Guinea pig

Result

Did not cause sensitization on laboratory animals.

Germ cell mutagenicity

Components:

thiamethoxam:

Germ cell mutagenicity -

: Animal testing did not show any mutagenic effects.

Assessment

Carcinogenicity

Components:

thiamethoxam:

Carcinogenicity - Assess-

: Liver tumors noted in mice that are not relevant to humans.,



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ment

No evidence of carcinogenicity in animal studies.

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is

on OSHA's list of regulated carcinogens.

NTP

No ingredient of this product present at levels greater than or equal to 0.1% is

identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Components:

thiamethoxam:

Reproductive toxicity - As-

: No toxicity to reproduction

STOT-single exposure

Components:

lignosulfonic acid, ethoxylated, sodium salts:

Assessment

The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract

irritation.

Repeated dose toxicity

Components:

thiamethoxam:

Remarks

Did not show neurotoxicity in animal experiments.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish

LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Chironomus riparius (harlequin fly)): 0.154 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

ErC50 (Pseudokirchneriella subcapitata (green algae)): > 100

Exposure time: 72 h

Components:

thiamethoxam:

Toxicity to fish

LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l



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Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 100 mg/l

Exposure time: 48 h

EC50 (Cloeon sp.): 0.014 mg/l

Exposure time: 48 h

EC50 (Chironomus riparius (harlequin fly)): 0.035 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

ErC50 (Raphidocelis subcapitata (freshwater green alga)): >

81.8 mg/l

Exposure time: 72 h

NOEC (Raphidocelis subcapitata (freshwater green alga)):

81.8 mg/l

End point: Growth rate Exposure time: 72 h

Toxicity to fish (Chronic tox-

icity)

NOEC (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l

Exposure time: 28 d

Test Type: flow-through test

NOEC (Oncorhynchus mykiss (rainbow trout)): > 20 mg/l

Exposure time: 88 d Test Type: Early-life Stage

Toxicity to daphnia and other :

aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 100 mg/l

Exposure time: 21 d

NOEC (Chironomus riparius (Midge larvae)): 0.01 mg/l

Exposure time: 30 d

Toxicity to microorganisms

EC50 (activated sludge): > 100 mg/l

Exposure time: 3 h

sulfuric acid, mono-C12-14-alkyl esters, sodium salts:

Ecotoxicology Assessment

Chronic aquatic toxicity

Harmful to aquatic life with long lasting effects.

Persistence and degradability

Components:

thiamethoxam:

Biodegradability

Result: Not readily biodegradable.

Stability in water

Degradation half life: 11 d

Remarks: Product is not persistent.

silica:

Biodegradability

Result: Not readily biodegradable.



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Bioaccumulative potential

Components:

thiamethoxam:

Bioaccumulation

Remarks: Low bioaccumulation potential.

Partition coefficient: n-

octanol/water

log Pow: -0.13 (77 °F / 25 °C)

Mobility in soil

Components:

thiamethoxam:

Distribution among environ-

mental compartments

Stability in soil

Remarks: Moderately mobile in soils

Dissipation time: 51 d

Percentage dissipation: 50 % (DT50) Remarks: Product is not persistent.

Other adverse effects

Components:

silica:

Results of PBT and vPvB

assessment

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be

very persistent and very bioaccumulating (vPvB).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues

Do not contaminate ponds, waterways or ditches with

chemical or used container.

Do not dispose of waste into sewer.

Where possible recycling is preferred to disposal or

incineration.

If recycling is not practicable, dispose of in compliance with

local regulations.

Contaminated packaging

Empty remaining contents.
Triple rinse containers.

Empty containers should be taken to an approved waste

handling site for recycling or disposal.

Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number

UN 3077

Proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,

N.O.S.



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(THIAMETHOXAM)

Class Packing group

Ш Labels 9

IATA-DGR

UN/ID No.

UN 3077

Proper shipping name

Environmentally hazardous substance, solid, n.o.s.

(THIAMETHOXAM)

Class

Packing group

Ш

9

Labels

Miscellaneous

Packing instruction (cargo

956

aircraft)

Packing instruction (passen-

956

ger aircraft)

Environmentally hazardous

yes

IMDG-Code

UN number

UN 3077

Proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,

N.O.S.

(THIAMETHOXAM)

Class

Packing group Ш Labels 9 **EmS Code**

Marine pollutant

F-A, S-F ves

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR

Not regulated as a dangerous good

Remarks

Shipment by ground under DOT is non-regulated; however it may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY 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 as required on the pesticide label: Caution

Harmful if absorbed through skin.

Harmful if swallowed.

Harmful if inhaled.

Causes moderate eye irritation.

Avoid contact with skin, eyes or clothing.



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Avoid breathing spray mist.

Avoid breathing dust.

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

Remove and wash contaminated clothing before re-use.

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards

: Combustible dust

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

The ingredients of this product are reported in the following inventories:

TSCA

On or in compliance with the active portion of the TSCA

inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information



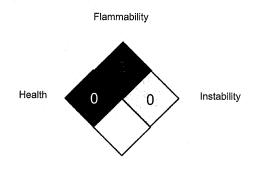
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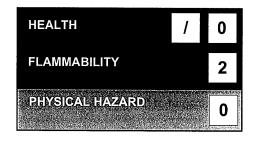
This version replaces all previous versions.

NFPA 704:



Special hazard

HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)

NIOSH REL : USA. NIOSH Recommended Exposure Limits

OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Lim-

its for Air Contaminants

OSHA Z-3 : USA. Occupational Exposure Limits (OSHA) - Table Z-3 Min-

eral Dusts

ACGIH / TWA : 8-hour, time-weighted average

NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour

workday during a 40-hour workweek

OSHA Z-1 / TWA : 8-hour time weighted average OSHA Z-3 / TWA : 8-hour time weighted average

. o-nour time weighted average

AICS - Australian Inventory of Chemical Substances; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA -Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation: DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG -Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships: MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL -No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization



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for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / Z8