2019-3294
2020-01-07

GROUP	4	INSECTICIDE

STRESS SHIELD® for cereals and soybeans

Stress Shield for cereals and soybeans is a systemic seed treatment insecticide for protection of wheat, barley, oats and soybeans against listed insect pests.

Insecticide

COMMERCIAL

Suspension

ACTIVE INGREDIENT: Imidacloprid …… 480 g/L

REGISTRATION NO. 29610 PEST CONTROL PRODUCTS ACT

READ THE LABEL AND BOOKLET BEFORE USING

PROTECT FROM FREEZING

NET CONTENTS: 0.25 - 1000 L

BAYER CROPSCIENCE INC.
200-160 Quarry Park Blvd., SE
Calgary, Alberta T2C 3G3

24 HOUR EMERGENCY PHONE: 1-800-334-7577

GROWER INFORMATION: 1-888-283-6847

SPECIAL USE RESTRICTIONS: This product contains no colourant. Seed treated with Stress Shield for cereals and soybeans must be conspicuously coloured. Regulations pertaining to the *Seeds Act* must be strictly adhered to when using this product.

NOTICE TO USER: This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label.

PRECAUTIONS: KEEP OUT OF REACH OF CHILDREN.
Harmful if swallowed, absorbed through skin or inhaled. Avoid breathing vapour or spray mist. When handling Stress Shield for cereals and soybeans or seed treated with Stress Shield for cereals and soybeans, work in a well-ventilated area and wear a long-sleeved shirt, long pants, chemical-resistant gloves, and shoes plus socks. DO NOT use leather or cloth gloves. Wear goggles and a suitable dust mask approved by NIOSH/MSHA when handling this product. In commercial facilities, soybean treaters and baggers must wear a NIOSH/MSHA/BHSE-approved respirator.
Use good personal hygiene, washing hands and exposed skin before eating, drinking or smoking. No food, drink or tobacco should be allowed in areas of chemical storage or use.
If this pest control product is to be used on a commodity that may be exported and you require information regarding Maximum Residue Limits for an importing country, please contact Bayer CropScience Canada Inc. at 1-888-283-6847 or www.cropscience.bayer.ca.

FIRST AID: Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

If swallowed	Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.
If on skin or clothing	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.
If inhaled	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.
If in eyes	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 poison control centre or doctor for treatment advice.

TOXICOLOGICAL INFORMATION: Treat symptomatically.

ENVIRONMENTAL PRECAUTIONS: This product is highly toxic to birds and aquatic invertebrates. Do not apply directly to water or to areas where surface water is present. Do not contaminate water when disposing of equipment wash waters. Left over treated seed should be double-sown around the headland, or buried away from water sources.
Imidacloprid is toxic to bees. Bees can be exposed to product residues in flowers, leaves, pollen and/or nectar resulting from seed treatment applications. When used according to label directions minimal exposure or risk is expected. Dust generated during planting of treated seed may be

harmful to bees and other pollinators. To help minimize the dust generated during planting, refer to the complete guidance "Pollinator Protection and Responsible Use of Treated Seed- Best Management Practices" on the Health Canada webpage on pollinator protection at www.canada.ca/pollinators .When using a seed flow lubricant with soybean seed treated with Stress Shield, only a dust-reducing fluency agent is permitted. Talc and graphite are not permitted to be used as a seed flow lubricant for soybean seed treated with this insecticide. Carefully follow use directions for the seed flow lubricant. Do not load or clean planting equipment near bee colonies, and avoid places where bees may be foraging, such as flowering crops or weeds. When turning on the planter, avoid engaging the system where emitted dust may contact honey bee colonies Spilled or exposed seeds and dust must be incorporated into the soil or cleaned up from the soil surface.

STORAGE: Store product in original container only, away from other pesticides, fertilizer, food or feed. Keep container closed.
Do not store Stress Shield in direct sunlight.
Do not store Stress Shield above 35ºC.

DISPOSAL OF CONTAINER
FOR NON-RETURNABLE CONTAINERS:
1. Triple- or pressure-rinse the empty container. Add the rinsings to the mixture in the tank. (See below for specific instructions.)
2. Follow provincial instructions for any required additional cleaning of the container prior to its disposal.
3. Make the empty container unsuitable for further use.
4. Dispose of the container in accordance with provincial requirements.

FOR RECYCLABLE CONTAINERS:
Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

1. Triple- or pressure-rinse the empty container. Add the rinsings to the mixture in the tank. (See below for specific instructions.)
2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

FOR RETURNABLE CONTAINERS:
Do not reuse this container for any purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer).

FOR REFILLABLE CONTAINERS:
For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose.

TRIPLE RINSE INSTRUCTIONS FOR CONTAINER DISPOSAL (FOR RECYCLABLE AND DISPOSABLE CONTAINERS ONLY): This container should be triple-rinsed prior to its disposal. The rinsate can be added to the seed treatment provided the total volume of water does not exceed 6 % of the container size. Add 1/3 of the rinse water to the container and swish the contents thoroughly. Empty the rinsate into the seed treater holding tank and repeat this process two more times making sure the total volume of rinsate does not exceed 6%. Make sure rinsate is thoroughly mixed with seed treatment before treating. Close the container.
CAUTION: Do not dilute beyond 6% or excess seed wetness may result in seed handling difficulties. Using excess water can also cause Stress Shield to thin resulting in settling of solids in the product. Be sure to adjust the undiluted application rate by up to 6% to compensate for the dilution of the product caused by the addition of rinsate.

DISPOSAL OF UNUSED, UNWANTED PRODUCT: For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

GROUP	4	INSECTICIDE

STRESS SHIELD® for cereals and soybeans

Stress Shield for cereals and soybeans is a systemic seed treatment insecticide for protection of wheat, barley, oats and soybeans against listed insect pests.

Insecticide

COMMERCIAL

Suspension

ACTIVE INGREDIENT: Imidacloprid …… 480 g/L

REGISTRATION NO. 29610 PEST CONTROL PRODUCTS ACT

READ THE LABEL AND BOOKLET BEFORE USING

PROTECT FROM FREEZING

NET CONTENTS: 0.25 - 1000 L

BAYER CROPSCIENCE INC.
200-160 Quarry Park Blvd., SE
Calgary, Alberta T2C 3G3

24 HOUR EMERGENCY PHONE: 1-800-334-7577

GROWER INFORMATION: 1-888-283-6847

SPECIAL USE RESTRICTIONS: This product contains no colourant. Seed treated with Stress Shield for cereals and soybeans must be conspicuously coloured. Regulations pertaining to the *Seeds Act* must be strictly adhered to when using this product.

Table of Contents: Section Number

GENERAL INFORMATION

SECTION 1: NOTICE TO USER

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label.

SECTION 2: THE PRODUCT

Stress Shield for cereals and soybeans is a systemic seed treatment insecticide that provides protection of certain crops from damage caused by listed chewing and sucking insects through contact and systemic activity. Thorough seed coverage is required for maximum protection of seed. When rate ranges are given, use the higher rate when insect pressure is expected to be high. Under high insect pressures, a foliar insecticide may be required, therefore monitor crops regularly for insect infestation levels. Do not apply any subsequent application of a Group 4 Insecticide (i.e. in-furrow or foliar application) following treatment with Stress Shield for cereals and soybeans.

SAFETY AND HANDLING

SECTION 3: PRECAUTIONS, PROTECTIVE CLOTHING AND EQUIPMENT

PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN.
Harmful if swallowed, absorbed through skin or inhaled. Avoid breathing vapour or spray mist. When handling Stress Shield for cereals and soybeans or seed treated with Stress Shield for cereals and soybeans, work in a well-ventilated area and wear a long-sleeved shirt, long pants, chemical-resistant gloves, and shoes plus socks. DO NOT use leather or cloth gloves. Wear goggles and a suitable dust mask approved by NIOSH/MSHA when handling this product. In commercial facilities, soybean treaters and baggers must wear a NIOSH/MSHA/BHSE-approved respirator.
Use good personal hygiene, washing hands and exposed skin before eating, drinking or smoking. No food, drink or tobacco should be allowed in areas of chemical storage or use.

If this pest control product is to be used on a commodity that may be exported and you require information regarding Maximum Residue Limits for an importing country, please contact Bayer CropScience Canada Inc. at 1-888-283-6847 or www.cropscience.bayer.ca.

SECTION 4: FIRST AID AND TOXICOLOGICAL INFORMATION

FIRST AID:
Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

If swallowed	Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.
If on skin or clothing	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.
If inhaled	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.
If in eyes	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 poison control centre or doctor for treatment advice.

TOXICOLOGICAL INFORMATION:

Treat symptomatically.

SECTION 5: ENVIRONMENTAL PRECAUTIONS

This product is highly toxic to birds and aquatic invertebrates. Do not apply directly to water or to areas where surface water is present. Do not contaminate water when disposing of equipment wash waters. Left over treated seed should be double-sown around the headland, or buried away from water sources.
Imidacloprid is toxic to bees. Bees can be exposed to product residues in flowers, leaves, pollen and/or nectar resulting from seed treatment applications. When used according to label directions minimal exposure or risk is expected. Dust generated during planting of treated seed may be harmful to bees and other pollinators To help minimize the dust generated during planting, refer to the complete guidance “Pollinator Protection and Responsible Use of Treated Seed- Best Management Practices” on the Health Canada webpage on pollinator protection at www.canada.ca/pollinators .When using a seed flow lubricant with soybean seed treated with Stress Shield, only a dust-reducing fluency agent is permitted. Talc and graphite are not permitted to be used as a seed flow lubricant for soybean seed treated with this insecticide. Carefully follow use directions for the seed flow lubricant. Do not load or clean planting equipment near bee colonies, and avoid places where bees may be foraging, such as flowering crops or weeds. When turning on the planter, avoid engaging the system where emitted dust may contact honey bee colonies.
Spilled or exposed seeds and dust must be incorporated into the soil or cleaned up from the soil surface.

SECTION 6: STORAGE

Store product in original container only, away from other pesticides, fertilizer, food or feed.
Keep container closed.
Do not store Stress Shield for cereals and soybeans in direct sunlight.
Do not store Stress Shield for cereals and soybeans above 35ºC.

SECTION 7: DISPOSAL

DISPOSAL OF CONTAINER

FOR NON-RETURNABLE CONTAINERS:
1. Triple- or pressure-rinse the empty container. Add the rinsings to the mixture in the tank. (See below for specific instructions.)
2. Follow provincial instructions for any required additional cleaning of the container prior to its disposal.
3. Make the empty container unsuitable for further use.
4. Dispose of the container in accordance with provincial requirements.

FOR RECYCLABLE CONTAINERS:
Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

2. Triple- or pressure-rinse the empty container. Add the rinsings to the mixture in the tank. (See below for specific instructions.)
2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

FOR RETURNABLE CONTAINERS:
Do not reuse this container for any purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer).

FOR REFILLABLE CONTAINERS:
For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose.

TRIPLE RINSE INSTRUCTIONS FOR CONTAINER DISPOSAL (FOR RECYCLABLE AND DISPOSABLE CONTAINERS ONLY): This container should be triple-rinsed prior to its disposal. The rinsate can be added to the seed treatment provided the total volume of water does not exceed 6 % of the container size. Add 1/3 of the rinse water to the container and swish the contents thoroughly. Empty the rinsate into the seed treater holding tank and repeat this process two more times making sure the total volume of rinsate does not exceed 6%. Make sure rinsate is thoroughly mixed with seed treatment before treating. Close the container.

CAUTION: Do not dilute beyond 6% or excess seed wetness may result in seed handling difficulties. Using excess water can also cause Stress Shield for cereals and soybeans to thin resulting in settling of solids in the product. Be sure to adjust the undiluted application rate up by 6% to compensate for the dilution of the product caused by the addition of rinsate.

DISPOSAL OF UNUSED, UNWANTED PRODUCT:
For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

DIRECTIONS FOR USE

SECTION 8: CROPS AND PESTS

8.1 DURUM WHEAT, WINTER WHEAT, SPRING WHEAT, BARLEY & OATS

To provide early season protection against crop stand injury caused by wireworm apply Stress Shield for cereals and soybeans at 21-63 ml/100 kg of seed. For fields with a history of moderate to high wireworm pressure, treat crops at 42 – 63 ml / 100 kg seed. Use the higher rate when infestation pressures are expected to be heavy. Do not apply any subsequent application of a Group 4 Insecticide (i.e. in-furrow or foliar application) following treatment with Stress Shield for cereals and soybeans.

For use in commercial and on-farm seed treatment equipment. Mix thoroughly before use or use entire container at one time. All seed must be conspicuously coloured at the time of treatment in accordance with *Seed Act and Regulations*. Seed treated with Stress Shield for cereals and soybeans may reduce seed flow in the seed drill. Recalibration of the seed drill may be required to obtain correct seeding rate before planting.

Crop	Insect Pest	Use Rate / 100 kg seed		Remarks
		ml product	grams a.i.	
Wheat (durum, spring, winter), Barley, Oats	Wireworm	21 – 63	10 – 30	Dilute in sufficient liquid to achieve uniform distribution on the seed.

Pre-test the germination of a small sample of each seed lot with Stress Shield for cereals and soybeans prior to commercial application to the whole lot. Stress Shield for cereals and soybeans can be used as an over-treatment.

8.2 TANK MIXTURES WITH FUNGICIDES

For control of certain seed and soil-borne pathogens in wheat, barley and oat seeds and seedlings, Stress Shield for cereals and soybeans may be mixed with Raxil T or Raxil MD Seed Treatment Fungicides. Follow all appropriate directions and precautions as specified on the

fungicide labels. Do not tank mix Stress Shield for cereals and soybeans with pesticides, fertilizers or any other chemical additives unless recommended on this label.

Crop	Seed Treatment Fungicide	Application Rate ml product / 100 kg
Wheat (spring, winter & durum), barley, oat	Raxil T	225
Wheat (spring, winter & durum), barley, oat	Raxil MD	300

8.3 SOYBEANS

For early season protection against soybean aphid and to reduce early season defoliation caused by the over-wintering generation of bean leaf beetle, apply Stress Shield for cereals and soybeans at 130-260 ml/100 kg of seed. To provide early season protection against crop stand injury caused by wireworm and seedcorn maggot, apply Stress Shield for cereals and soybeans at 130-260 ml/100 kg of seed. Use the higher rate when insect populations are expected to be high. Do not apply any subsequent application of a Group 4 Insecticide (i.e. in-furrow or foliar application) following treatment with Stress Shield for cereals and soybeans.

Ensure product is thoroughly mixed prior to application or use entire container at one time. Apply Stress Shield for cereals and soybeans through slurry applicator seed treaters which provide uniform seed coverage. Uneven or incomplete seed coverage may not give the desired level of insect control. Maintain constant agitation of the slurry during application. Allow the seed to dry before bagging or storing into bulk containers. This product contains no colourant. All seed must be conspicuously coloured at the time of treatment in accordance with *Seed Act and Regulations.*

Crop	Insect Pests	Use Rate / 100 kg seed		Remarks
		mL product	grams a.i.	
Soybeans	Soybean aphid, Bean leaf beetle, Seedcorn maggot, Wireworm	130 - 260	62.5 - 125	Use the higher rate for: 1. early seeding; 2. when insect populations are expected to be high; 3. extended control period for aphids. Dilute in sufficient liquid to achieve uniform distribution on the seed.

8.4 TANK MIXTURES WITH FUNGICIDES

For control of certain seed and soil-borne pathogens in soybean seeds and seedlings, Stress Shield may be mixed with listed seed treatment fungicides. Follow all appropriate directions and

precautions as specified on the fungicide labels. Do not tank mix Stress Shield with pesticides, fertilizers or any other chemical additives unless recommended on this label.

Crop	Seed Treatment Fungicide	Application rate mL product / 100 Kg
Soybean	Apron Maxx RTA	325
	Apron Maxx RFC	100

SECTION 9: USE RESTRICTIONS AND LIMITATIONS

9.1 USE RESTRICTIONS:

Do not use treated seed for food, feed or oil processing.
Do not graze or feed livestock on treated areas for four weeks after planting.

9.2 SEED QUALITY:

Treatment of highly mechanically damaged seed, or seed of known low vigour and poor quality may result in reduced germination and/or reduction of seed and seedling vigour. If seed lot quality is unknown, conduct a germination test on a small portion of seed before committing the total seed lot to a selected chemical treatment.

9.3 LABELLING TREATED SEED:

All treated wheat, oat, barley and soybean seed for sale or use in Canada must be labeled with the following information:

- This seed has been treated with Stress Shield for cereals and soybeans seed protectant which contains imidacloprid.
- Do not use for feed, food or oil processing. Store away from feeds and other foodstuffs.
- Imidacloprid is toxic to bees. Dust generated during planting of treated seed may be harmful to bees and other pollinators.
- To help minimize the dust generated during planting, refer to the “Pollinator Protection and Responsible Use of Treated Seed- Best Management Practices” on the Health Canada webpage on pollinator protection at www.canada.ca/pollinators.
- Do not load or clean planting equipment near bee colonies, and avoid places where bees may be foraging, such as flowering crops or weeds.
- When turning on the planter, avoid engaging the system where emitted dust may contact honey bee colonies.
- Spilled or exposed seeds and dust must be incorporated into the soil or cleaned up from the soil surface.

Additionally, all treated soybean seed for sale or use in Canada must be labeled with the following information:

- When using a seed flow lubricant with this treated seed, only a dust-reducing fluency agent is permitted. Talc and graphite are not permitted to be used as a seed flow lubricant

for soybean seed treated with this insecticide. Carefully follow use directions for the seed flow lubricant.

9.4 SPECIAL USE RESTRICTIONS:

This product contains no colourant. Seed treated with this product must be conspicuously coloured. Regulations pertaining to the *Seeds Act* must be strictly adhered to when using this product.

SECTION 10: MIXING INSTRUCTIONS

Storage of Stress Shield for cereals and soybeans at low temperatures is not recommended. Prior to and during application, Stress Shield for cereals and soybeans must be thoroughly agitated to ensure uniform mixing of the product. Due to the viscosity of the material, it should be kept above 10 °C prior to and during application. Do not apply direct heat to container.

SECTION 11: RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, please note that Stress Shield for cereals and soybeans contains a Group 4 insecticide. Any insect population may contain individuals naturally resistant to Stress Shield for cereals and soybeans and other Group 4 insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.
To delay insecticide resistance:

- Where possible, rotate the use of Stress Shield for cereals and soybeans or other Group 4 insecticides with different groups that control the same pests in a field.
- Use tank mixtures with insecticides from a different group when such use is permitted.
- Insecticide use should be based on an IPM program that includes scouting, record keeping, and considers cultural, biological and other chemical control practices.
- Monitor treated pest populations for resistance development.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.
- For further information or to report suspected resistance contact Bayer CropScience Inc. via internet at www.cropscience.bayer.ca or phone 1-888-283-6847.