

SECTION 1 Identification**1.1. Product identifier**

Product form : Mixture
Product name : RESONATE 480 ST
Product code : 1000216,1000217,1000218,1000219,1000220

1.2. Other means of identification

Registration Number : EPA Reg. No. 42750-134

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Seed Treatment, Insecticide
Restrictions on use : It is a violation of Federal law to use this product in a manner inconsistent with its label, Use in accordance with label directions for use.

1.4. Supplier's details

Albaugh, LLC
1525 NE 36th Street
Ankeny, Iowa 50021
United States
T 800-247-8013
ContactUS@albaughllc.com - albaughllc.com

1.5. Emergency phone number

Emergency number : For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident:
• Call CHEMTREC Day or Night within USA and Canada: 1-800-424-9300, Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

For Medical Emergencies Only:
• Call Albaugh LLC Day or Night within USA and Canada: 1-888-347-6732
24 hours a day, 7 days a week

SECTION 2 Hazard Identification**2.1. Classification of the substance or mixture****GHS US classification**

Acute toxicity (oral), Category 4	H302	Harmful if swallowed.
Acute toxicity (inhalation: dust, mist), Category 4	H332	Harmful if inhaled.
Hazardous to the aquatic environment — Acute Hazard, Category 1	H400	Very toxic to aquatic life.
Hazardous to the aquatic environment — Chronic Hazard, Category 1	H410	Very toxic to aquatic life with long lasting effects.

Full text of H statements : see section 16

2.2. Label elements**GHS US labeling**

Hazard pictograms (GHS US)



Signal word (GHS US) : Warning

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Hazard statements (GHS US)	: H302+H332 - Harmful if swallowed or if inhaled H400 - Very toxic to aquatic life H410 - Very toxic to aquatic life with long lasting effects
Precautionary statements (GHS US)	: P261 - Avoid breathing dust, fume, gas, mist, vapors, spray. P264 - Wash hands, forearms and face thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P271 - Use only outdoors or in a well-ventilated area. P273 - Avoid release to the environment. P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell. P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing. P312 - Call a poison center or doctor if you feel unwell. P330 - Rinse mouth. P391 - Collect spillage. P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Other Ingredients (non-hazardous, proprietary) (Additive)	-	51 – 56	Not classified
imidacloprid (ISO), 1-(6-chloropyridin-3-ylmethyl)-N-nitroimidazolidin-2-ylidenamine (Active substance (Biocide), Main constituent)	CAS-No.: 138261-41-3	38 – 43	Acute Tox. 3 (Oral), H301 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general	: Call a poison center/doctor/physician if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Rinse mouth. Call a poison center/doctor/physician if you feel unwell.
Personal protection for first-aid responders.	: First aid workers will be equipped with suitable personal protective equipment.

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4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation	: Harmful if inhaled.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: None under normal conditions.
Symptoms/effects after ingestion	: Harmful if swallowed.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment	: Treat symptomatically.
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SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard	: No fire hazard.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.
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For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area. Avoid breathing dust/fume/gas/mist/vapors/spray.

For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: Evacuate unnecessary personnel. Stop leak if safe to do so.

Environmental precautions	: Avoid release to the environment.
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6.2. Methods and materials for containment and cleaning up

For containment	: Collect spillage. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
Methods for cleaning up	: Take up liquid spill into absorbent material.
Other information	: Dispose of materials or solid residues at an authorized site.

For further information refer to section 13.

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SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapors/spray.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
Additional hazards when processed	: Not expected to present a significant hazard under anticipated conditions of normal use.

7.2. Conditions for safe storage, including incompatibilities

Technical measures	: Keep in a cool, well-ventilated place away from heat.
Storage conditions	: Keep cool. Protect from sunlight.
Packaging materials	: Always store product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

RESONATE 480 ST	
USA - ACGIH - Occupational Exposure Limits	
Local name	Imidacloprid
ACGIH® TLV® TWA	0.005 mg/m³ (I - Inhalable particulate matter)
Remark (ACGIH®)	TLV® Basis: Male repro system dam; Body weight; Repro eff; Neurodevelopmental impair. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2025
imidacloprid (ISO), 1-(6-chloropyridin-3-ylmethyl)-N-nitroimidazolidin-2-ylidenamine (138261-41-3)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Imidacloprid
ACGIH® TLV® TWA	0.005 mg/m³ (I - Inhalable particulate matter)
Remark (ACGIH®)	TLV® Basis: Male repro system dam; Body weight; Repro eff; Neurodevelopmental impair. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2025

Exposure limit values of other components

IMIDACLOPRID TECHNICAL (138261-41-3)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Imidacloprid
ACGIH® TLV® TWA	0.005 mg/m³ (I - Inhalable particulate matter)
Remark (ACGIH®)	TLV® Basis: Male repro system dam; Body weight; Repro eff; Neurodevelopmental impair. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2025

8.2. Appropriate engineering controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Environmental exposure controls	: Avoid release to the environment.

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8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Hand protection:
Protective gloves
Eye protection:
Safety glasses
Skin and body protection:
Wear suitable protective clothing
Respiratory protection:
[In case of inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s):



SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	: Liquid
Appearance	: Opaque. Off-white. Liquid.
Color	: Off-white
Odor	: Latex Paint Like
Odor threshold	: No data available
pH	: 5.93
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 100 °C
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Density	: 1.16 g/ml
Solubility	: Forms suspension in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: 140.517 mm²/s
Viscosity, dynamic	: 163 mPa·s
Explosion limits	: No data available
Explosive properties	: Not Explosive.
Oxidizing properties	: Not oxidising.
Particle characteristics	: No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

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SECTION 10 Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11 Toxicological information

Likely routes of exposure : Inhalation. Skin and eye contact.

11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Inhalation:dust,mist: Harmful if inhaled.

RESONATE 480 ST	
LD50 oral rat	550 mg/kg
LD50 dermal rat	> 5000 mg/kg
ATE US (oral)	550 mg/kg body weight
ATE US (dust, mist)	1.5 mg/l/4h

imidacloprid (ISO), 1-(6-chloropyridin-3-ylmethyl)-N-nitroimidazolidin-2-ylidenamine (138261-41-3)	
ATE US (oral)	100 mg/kg body weight

Skin corrosion/irritation : Not classified
pH: 5.93
Serious eye damage/irritation : Not classified
pH: 5.93
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

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Viscosity, kinematic	140.517 mm ² /s
Symptoms/effects after inhalation	: Harmful if inhaled.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: None under normal conditions.
Symptoms/effects after ingestion	: Harmful if swallowed.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general	: Very toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	: Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term (chronic)	: Very toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

RESONATE 480 ST	
Persistence and degradability	Not rapidly degradable
imidacloprid (ISO), 1-(6-chloropyridin-3-ylmethyl)-N-nitroimidazolidin-2-ylidenamine (138261-41-3)	
Persistence and degradability	Not rapidly degradable
Other Ingredients (non-hazardous, proprietary)	
Persistence and degradability	Not rapidly degradable

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Ozone	: Not classified
Fluorinated greenhouse gases	: No

SECTION 13 Disposal considerations

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.

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SECTION 14 Transport information

DOT	IMDG	IATA
Shipment by ground under DOT/TDG is non-regulated; however it may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO.		
14.1. UN number		
Not regulated	UN3082	UN3082
14.2. Proper Shipping Name		
Not regulated	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Imidacloprid)	Environmentally hazardous substance, liquid, n.o.s. (Imidacloprid)
14.3. Transport hazard class(es)		
Not regulated	9	9
		
14.4. Packing group		
Not regulated	III	III
14.5. Environmental hazards		
Not regulated	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT

Not regulated

IMDG

Special provision (IMDG) : 274, 335, 375, 969
Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E1
Packing instructions (IMDG) : LP01, P001
Packing provisions (IMDG) : PP1
IBC packing instructions (IMDG) : IBC03
Tank instructions (IMDG) : T4
Tank special provisions (IMDG) : TP1, TP29
EmS-No. (Fire) : F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage) : S-F - SPILLAGE SCHEDULE Foxtrot - WATER-SOLUBLE MARINE POLLUTANTS
Stowage category (IMDG) : A

IATA

Special provision (IATA) : A97, A158, A197, A215
PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y964
PCA limited quantity max net quantity (IATA) : 30kgG
PCA packing instructions (IATA) : 964
PCA max net quantity (IATA) : 450L

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CAO packing instructions (IATA) : 964
CAO max net quantity (IATA) : 450L
ERG code (IATA) : 9L

SECTION 15 Regulatory information

15.1. Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
imidacloprid (ISO), 1-(6-chloropyridin-3-ylmethyl)-N-nitroimidazolidin-2-ylidenamine	138261-41-3	Not present	-	
Other Ingredients (non-hazardous, proprietary)		Not present	-	

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

FIFRA Labelling

EPA Registration Number 42750-134

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.

FIFRA Signal Word	Caution
FIFRA Precautionary Statement	KEEP OUT OF REACH OF CHILDREN. Hazards To Humans and Domestic Animals.
FIFRA Human Health Hazards	CAUTION. Harmful if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Avoid contact with skin, eyes, or clothing. Avoid breathing vapor or spray mist.
FIFRA First Aid	IF SWALLOWED: •Call a poison control center 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 center 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 center 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 mouth-to-mouth if possible. •Call a poison control center or doctor for further treatment advice.

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FIFRA Labelling	
FIFRA Environmental Hazards	This product is highly toxic to birds and aquatic invertebrates. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters. Cover or incorporate spilled treated seeds. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area. Ensure that planting equipment is functioning properly in accordance with manufacturing specifications to minimize seed coat abrasion during planting to reduce dust which can drift to blooming crops or weeds.
FIFRA Other	STORAGE AND DISPOSAL Do not contaminate water, food or feed by storage, disposal, or by cleaning of equipment. Do not reuse empty container. Open dumping is prohibited. PESTICIDE STORAGE: Store in a cool place. Do not store in direct sunlight. Protect from freezing temperatures. PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. CONTAINER DISPOSAL: Non-refillable containers (1, 2.5, 30 & 55 gallon): Do not reuse or refill this container. Offer for recycling, if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. (non-refillable <5 gallons): Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. (non-refillable >5 gallons): Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Pressure rinse as follows (all sizes): Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use for disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

15.2. International regulations

CANADA

imidacloprid (ISO), 1-(6-chloropyridin-3-ylmethyl)-N-nitroimidazolidin-2-ylidenamine (138261-41-3)

Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

EU-Regulations

No additional information available

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National regulations

imidacloprid (ISO), 1-(6-chloropyridin-3-ylmethyl)-N-nitroimidazolidin-2-ylidenamine (138261-41-3)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16 Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Issue date : 2/8/2026

Full text of hazard classes and H-statements

H301	Toxic if swallowed
H302	Harmful if swallowed
H332	Harmful if inhaled
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

NFPA health hazard

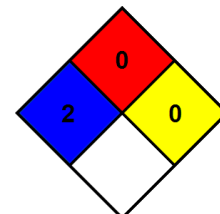
: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard

: 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity

: 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health

: 2 Moderate Hazard - Temporary or minor injury may occur

Flammability

: 0 Minimal Hazard - Materials that will not burn

Physical

: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

SDS USA-ALBAUGH

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