

# Cheminova, Inc.

## Material Safety Data Sheet Couraze™ 2F

### SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

**Product Name** COURAZE™ 2F

**Product Use** Insecticides

**Supplier name and address:**

**Cheminova Inc.**

P.O. Box 110566

One Park Drive, Suite 150

Research Triangle Park, NC

27709

Phone #: (919) 474-6600 (8 AM to 5:00 PM EST, Monday to Friday).

**Emergency Telephone #:** 1-866-303-6950 (Medical Emergencies)

1-800-424-9300 (24 Hr. Chemtrec Number)

**MSDS Prepared by:** Cheminova Inc.

**MSDS Preparation date:** May 19, 2008

**Revision date:** December 11, 2009

**Revision reasons:** Update Supplier Address

**Manufacturer's name and address:**

Refer to supplier.

### SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Imidacloprid	138261-41-3	21.40

### SECTION 3. HAZARDS IDENTIFICATION

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

**Emergency Overview**

Caution! Hazard to humans and domestic animals. Keep out of reach of children and animals. Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes and clothing. Avoid breathing spray mist.

**Physical State** viscous liquid suspension

**Odor** mild

**Appearance** off-white

**Routes of Exposure** Inhalation, Skin contact, Skin Absorption, Eye contact

**Immediate Effects**

**Eye** May cause eye irritation. Eye injury may persist for several days.

**Skin** Harmful if absorbed through skin. No skin irritation. Non-sensitizing.

**Ingestion** Harmful if swallowed.

**Inhalation** Harmful if inhaled.

# Cheminova, Inc.

## Material Safety Data Sheet

### Couraze™ 2F

MSDS Number: 102000019647  
MSDS Version 2.0

<b>Chronic or Delayed Long-Term</b>	This product or its components may have target organ effects.
<b>Medical Conditions Aggravated by Exposure</b>	No specific medical conditions are known which may be aggravated by exposure to this product.
<b>Potential Environmental Effect</b>	Highly toxic to bees. Extremely toxic to aquatic and estuarine invertebrates.

#### SECTION 4. FIRST AID MEASURES

<b>General</b>	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
<b>Eye</b>	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.
<b>Skin</b>	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.
<b>Ingestion</b>	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.
<b>Inhalation</b>	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.
<b>Notes to Physician Treatment</b>	There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

#### SECTION 5. FIRE FIGHTING MEASURES

<b>Flash point</b>	> 93 °C / > 199 °F
<b>Lower Flammability Limit</b>	not applicable
<b>Upper Flammability Limit</b>	not applicable
<b>Fire and Explosion Hazards</b>	In the event of fire the following can be released: Hydrogen chloride (HCl) Nitrogen oxides (NOx)

# Cheminova, Inc.

## Material Safety Data Sheet

### Couraze™ 2F

MSDS Number: 102000019647  
MSDS Version 2.0

<b>Suitable Extinguishing Media</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
<b>Fire Fighting Instructions</b>	Keep out of smoke. Fight fire from upwind position. Cool closed containers/tanks exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.  Wear self-contained breathing apparatus and protective suit.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.
<b>Methods for Cleaning Up</b>	Dike area to prevent runoff. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder). Clean contaminated floors and objects thoroughly, observing environmental regulations. Collect and transfer the product into a properly labelled and tightly closed container. Contaminated soil may have to be removed and disposed.
<b>Additional Advice</b>	Contact Cheminova for further assistance if necessary. Information regarding personal protective equipment, see section 8.

## SECTION 7. HANDLING AND STORAGE

<b>Handling Procedures</b>	Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.
<b>Storing Procedures</b>	Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed.
<b>Work/Hygienic Procedures</b>	Remove soiled clothing immediately and clean thoroughly before using again. Remove Personal Protective Equipment (PPE) immediately after handling this product. Wash thoroughly and put on clean clothing.  Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.
<b>Min/Max Storage Temperatures</b>	Recommended maximum transport/storage temperature: 38 °C / 100 °F The 30-day storage temperature average must not exceed the recommended maximum.

## SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>General Protection</b>	Follow all label instructions. Eye wash facility and safety shower should be available. Follow manufacturer's instructions for cleaning/maintaining PPE. If no
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# Cheminova, Inc.

## Material Safety Data Sheet

### Couraze™ 2F

MSDS Number: 102000019647  
MSDS Version 2.0

such instructions for washables, use detergent and warm/tepid water.

#### Eye/Face Protection

splash goggles

#### Hand Protection

Chemical resistant gloves made of waterproof material such as polyethylene or polyvinyl chloride

#### Body Protection

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

#### Respiratory Protection

No personal respiratory protective equipment normally required.  
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

This product contains material which are Trade Secret and may have Occupational Exposure Limits.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	off-white
Physical State	viscous liquid suspension
Odor	mild
pH	7.5
Density	1.12 g/cm <sup>3</sup> at 20 °C
Melting / Freezing Point	-6.7 °C / 19.9 °F
Water solubility	dispersible
Viscosity	350 - 500 mPa.s at 25 °C

## SECTION 10. STABILITY AND REACTIVITY

Incompatibility	no data available
Hazardous Decomposition Products	Hydrogen chloride (HCl) Hydrogen cyanide (hydrocyanic acid) Carbon dioxide (CO <sub>2</sub> ) Carbon monoxide Nitrogen oxides (NO <sub>x</sub> )
Hazardous Reactions	Stable under normal conditions.

# Cheminova, Inc.

## Material Safety Data Sheet

### Couraze™ 2F

MSDS Number: 102000019647  
MSDS Version 2.0

#### SECTION 11. TOXICOLOGICAL INFORMATION

Only acute toxicity studies have been conducted on this product as formulated. The non-acute information pertains to the active ingredient, imidacloprid.

<b>Acute Oral Toxicity</b>	male rat: LD50: > 4,870 mg/kg
	female rat: LD50: 4,143 mg/kg
<b>Acute Dermal Toxicity</b>	male/female combined rabbit: LD50: > 2,000 mg/kg
<b>Acute Inhalation Toxicity</b>	male/female combined rat: LC50: > 5.33 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. (actual)
	male/female combined rat: LC50: > 20 mg/l Exposure time: 1 h Determined in the form of liquid aerosol. Extrapolated from the 4 hr LC50. (actual)
<b>Skin Irritation</b>	rabbit: No skin irritation.
<b>Eye Irritation</b>	rabbit: Minimally irritating.
<b>Sensitization</b>	guinea pig: Non-sensitizing.
<b>Chronic Toxicity</b>	Imidacloprid caused thyroid and/or liver effects in chronic dietary studies in rats and dogs.

#### Assessment Carcinogenicity

Imidacloprid was not carcinogenic in studies in rats and mice.

#### ACGIH

None.

#### NTP

None.

#### IARC

None.

#### OSHA

None.

#### Reproductive & Developmental Toxicity

REPRODUCTION: Imidacloprid was not a reproductive toxicant in a multi-generation study in rats.

DEVELOPMENTAL TOXICITY: Imidacloprid is not considered a primary developmental toxicant in rats and rabbits. Developmental effects were observed at doses that caused maternal toxicity.

# Cheminova, Inc.

## Material Safety Data Sheet

### Couraze™ 2F

MSDS Number: 102000019647  
MSDS Version 2.0

**Neurotoxicity** Imidacloprid showed slight behavioral and activity changes only at the highest dose tested in neurotoxicity studies in rats. There were no correlating morphological changes observed in the neural tissues.

**Mutagenicity** Imidacloprid was not mutagenic or genotoxic based on the overall weight of evidence 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 contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Notify state/provincial or local authorities and Cheminova immediately if you observe any adverse environmental effects due to the use of this product. Do not allow to get into surface water, drains and ground water. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

## SECTION 13. DISPOSAL CONSIDERATIONS

**General Disposal Guidance** Follow container label instructions for disposal of wastes generated during use in compliance with the product label. In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant.

**Container Disposal** Triple rinse containers. Puncture container to avoid re-use. 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.

## SECTION 14. TRANSPORT INFORMATION

DOT CLASSIFICATION:  
Not regulated for Domestic Surface Transportation

FREIGHT CLASSIFICATION:  
Insecticides or Fungicides, N.O.I., other than poison

## SECTION 15. REGULATORY INFORMATION

### US Federal Regulations

#### TSCA list

None.

#### US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

None.

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#### SARA Title III - Section 302 - Notification and Information

None.

#### SARA Title III - Section 313 - Toxic Chemical Release Reporting

None.

#### US States Regulatory Reporting

##### CA Prop65

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

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

#### US State Right-To-Know Ingredients

None.

#### Canadian Regulations

##### Canadian Domestic Substance List

None.

#### Environmental

##### CERCLA

None.

##### Clean Water Section 307 Priority Pollutants

None.

##### Safe Drinking Water Act Maximum Contaminant Levels

None.

## SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 1      Flammability - 1      Reactivity - 1      Others - none

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

Reason to Revise: Updated for general editorial purposes.

Revision Date: 12/11/2009

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions.

Couraze™ is a trademark of Cheminova.