



Safety Data Sheet (SDS)

Issue Date: 03-Dec-2019

Revision Date: 21-Feb-2020

Version 2

1. IDENTIFICATION

Product identifier

Product Name **Brazen II**

Other means of identification

SDS # ADAMA-297

Registration Number(s) Pest Control Product Reg. No. 33551
UN/ID No UN3082

Recommended use of the chemical and restrictions on use

Recommended Use Herbicide.

Details of the supplier of the safety data sheet

Registrant

ADAMA Agricultural Solutions Canada Ltd.
300-191 Lombard Avenue
Winnipeg, Manitoba R3B 0X1
1-855-264-6262

Emergency telephone number

Emergency Telephone For fire, spill and/or leak contact INFOTRAC:
1-800-535-5053 (North America) 1-352-323-3500 (International)
For medical emergencies and health/safety inquiries, contact ProPharma Group:
1-877-250-9291

2. HAZARDS IDENTIFICATION

This chemical is a product registered by the Canadian Pest Control Products Act and is subject to certain labeling requirements under federal law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-PCPA registered chemicals. Please see Section 15 for additional information. This product has been classified according to Canada's Hazardous Product Regulations (WHMIS 2015).

Appearance Yellow to orange liquid

Physical state Liquid

Odor Aromatic

Classification

Serious eye damage/eye irritation	Category 2A
Carcinogenicity	Category 2
Reproductive toxicity	Category 1B
Specific target organ toxicity (repeated exposure)	Category 2
Aspiration toxicity	Category 1
Flammable liquids	Category 4

Signal Word

Danger

Hazard statements

Causes serious eye irritation
 Suspected of causing cancer
 May damage fertility or the unborn child
 May cause damage to organs through prolonged or repeated exposure
 May be fatal if swallowed and enters airways
 Combustible liquid

**Precautionary Statements - Prevention**

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Do not breathe dust/fume/gas/mist/vapors/spray
 Wear protective gloves/protective clothing/eye protection/face protection
 Wash face, hands and any exposed skin thoroughly after handling
 Keep away from heat/sparks/open flames/hot surfaces. — No smoking

Precautionary Statements - Response

If exposed or concerned: Get medical advice/attention
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If eye irritation persists: Get medical advice/attention
 IF INHALED: Remove person to fresh air and keep comfortable for breathing
 IF SWALLOWED: Immediately call a POISON CENTER or doctor
 Do NOT induce vomiting
 IN CASE OF FIRE: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other hazards

Very toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
Naphtha (petroleum), heavy aromatic	64742-94-5	30-60
Tetrahydrofurfuryl alcohol	97-99-4	10-30
Pinoxaden	243973-20-8	9.7087
Cloquintocet-mexyl	99607-70-2	1-5
Naphthalene	91-20-3	0.1-1

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures**General Advice**

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). First aider: Pay attention to self-protection.

Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediate medical attention is required.
Skin Contact	Remove/take off immediately all contaminated clothing. Wash off immediately with soap and plenty of water. If symptoms persist, call a physician. Wash contaminated clothing before reuse.
Inhalation	Remove to 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.
Ingestion	Do NOT induce vomiting. Rinse mouth. Immediate medical attention is required.

Most important symptoms and effects, both acute and delayed

Symptoms	Causes serious eye irritation. Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting, may cause bronchopneumonia or pulmonary edema.
-----------------	--

Indication of any immediate medical attention and special treatment needed

Notes to Physician	No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Treat the patient symptomatically. This product contains petroleum distillates. Vomiting may cause aspiration pneumonia.
---------------------------	---

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Small Fire	Water spray. Alcohol-resistant foam. Dry chemical. Carbon dioxide (CO ₂).
Large Fire	Alcohol resistant foam.

Unsuitable Extinguishing Media Do not use a solid water stream as it may scatter and spread fire.

Specific Hazards Arising from the Chemical

Combustible liquid. Flash back possible over considerable distance.

Hazardous combustion products Smoke, fumes or vapors, and oxides of carbon.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions	Use personal protective equipment as required. Isolate spill or leak area immediately. Stay upwind and out of low areas. Ventilate closed spaces before entering. Do not touch or walk through spilled material. Pay attention to flashback.
For Emergency Responders	Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions	Do not flush into surface water or sanitary sewer system. If the product contaminates lakes, rivers, or sewers, inform appropriate authorities in accordance with local regulations. See Section 12 for additional Ecological Information.
----------------------------------	--

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

Methods for Clean-Up Clean contaminated surface thoroughly. Clean with detergents. Avoid solvents. Retain and dispose of contaminated wash water if necessary.

7. HANDLING AND STORAGE**Precautions for safe handling**

Advice on Safe Handling Avoid breathing dust/fume/gas/mist/vapors/spray. Use personal protection recommended in Section 8. Do not eat, drink or smoke when using this product. Wash face, hands and any exposed skin thoroughly after handling. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Do not store near combustible materials. Keep in an area equipped with sprinklers. Keep away from food, drink and animal feeding stuffs. No smoking near storage. Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

Incompatible Materials None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Exposure Guidelines**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Naphthalene 91-20-3	TWA: 10 ppm S*	TWA: 10 ppm TWA: 50 mg/m ³ (vacated) TWA: 10 ppm (vacated) TWA: 50 mg/m ³ (vacated) STEL: 15 ppm (vacated) STEL: 75 mg/m ³	IDLH: 250 ppm TWA: 10 ppm TWA: 50 mg/m ³ STEL: 15 ppm STEL: 75 mg/m ³

Appropriate engineering controls

Engineering Controls THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT. FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL. FOR ENGINEERING CONTROLS, REFER TO 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.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Tight sealing safety goggles.

Skin and Body Protection Wear protective gloves and protective clothing. Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific workplace. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection Ensure adequate ventilation, especially in confined areas. Normally not required if good ventilation is maintained. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Remove contaminated clothing promptly and wash thoroughly before reused.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid	Odor	Aromatic
Appearance	Yellow to orange liquid	Odor Threshold	Not determined
Color	Yellow to orange		
<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>	
pH	3-7		
Melting point / freezing point	Not determined		
Boiling point / boiling range	Not determined		
Flash point	79°C		
Evaporation Rate	Not determined		
Flammability (Solid, Gas)	NA		
Flammability Limit in Air			
Upper flammability or explosive limits	Not determined		
Lower flammability or explosive limits	Not determined		
Vapor Pressure	Not determined		
Vapor Density	Not determined		
Relative Density	1.03		
Water Solubility	Not determined		
Solubility in other solvents	Not determined		
Partition Coefficient	Not determined		
Autoignition temperature	305°C		
Decomposition temperature	Not determined		
Kinematic viscosity	Not determined		
Dynamic Viscosity	Not determined		
Explosive Properties	Not an explosive		
Oxidizing Properties	Not an oxidizer		

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to Avoid

Heat, sparks, flames.

Incompatible materials

None known based on information supplied.

Hazardous decomposition products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact	Causes serious eye irritation.
Skin Contact	Avoid contact with skin.
Inhalation	Do not inhale.
Ingestion	May be fatal if swallowed and enters airways.

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Naphtha (petroleum), heavy aromatic 64742-94-5	> 5000 mg/kg (Rat)	> 2 mL/kg (Rabbit)	> 590 mg/m ³ (Rat) 4 h
Tetrahydrofurfuryl alcohol 97-99-4	= 1600 mg/kg (Rat)	-	-
Pinoxaden 243973-20-8	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rat)	= 5.22 mg/L (Rat) 4 h
Naphthalene 91-20-3	= 1110 mg/kg (Rat) = 490 mg/kg (Rat)	(> 20 g/kg (Rabbit) = 1120 mg/kg (Rabbit)	> 340 mg/m ³ (Rat) 1 h

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Please see section 4 of this SDS for symptoms.
-----------------	--

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity	Suspected of causing cancer.
------------------------	------------------------------

Chemical name	ACGIH	IARC	NTP	OSHA
Naphthalene 91-20-3	A3	Group 2B	Reasonably Anticipated	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

NTP (National Toxicology Program)

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity	May damage fertility or the unborn child.
------------------------------	---

STOT - repeated exposure	Causes damage to organs through prolonged or repeated exposure. May cause disorder and damage to the. Urinary Tract. Liver.
---------------------------------	---

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

Oral LD50	3,129 mg/kg
Dermal LD50	>2,000 mg/kg
ATEmix (inhalation-dust/mist)	>5.0 mg/L

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

Component Information

Chemical name	Algae/aquatic plants	Fish	Crustacea
Naphtha (petroleum), heavy aromatic 64742-94-5	2.5: 72 h Skeletonema costatum mg/L EC50	41: 96 h Pimephales promelas mg/L LC50 1740: 96 h Lepomis macrochirus mg/L LC50 static 45: 96 h Pimephales promelas mg/L LC50 flow-through 2.34: 96 h Oncorhynchus mykiss mg/L LC50 19: 96 h Pimephales promelas mg/L LC50 static	0.95: 48 h Daphnia magna mg/L EC50
Tetrahydrofurfuryl alcohol 97-99-4		3400: 48 h Chaetodonoides mg/L LC50 101: 96 h Oryzias latipes mg/L LC50 semi-static	
Naphthalene 91-20-3	0.4: 72 h Skeletonema costatum mg/L EC50	31.0265: 96 h Lepomis macrochirus mg/L LC50 static 1.99: 96 h Pimephales promelas mg/L LC50 static 0.91 - 2.82: 96 h Oncorhynchus mykiss mg/L LC50 static 1.6: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 5.74 - 6.44: 96 h Pimephales promelas mg/L LC50 flow-through	1.96: 48 h Daphnia magna mg/L EC50 Flow through 1.09 - 3.4: 48 h Daphnia magna mg/L EC50 Static 2.16: 48 h Daphnia magna mg/L LC50

Persistence/Degradability

Rapidly degradable. low persistence.

Bioaccumulation

Low potential for bioaccumulation.

Mobility

Chemical name	Partition coefficient
Naphtha (petroleum), heavy aromatic 64742-94-5	6.1
Naphthalene 91-20-3	3.6

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes

Disposal should be in accordance with applicable regional, national and local laws and regulations. Do not contaminate water, food, or feed by storage or disposal.

Contaminated Packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

Note	Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.
DOT	
UN/ID No	UN3082
Proper Shipping Name	Environmentally hazardous substances, liquid, n.o.s. (Solvent Naptha)
Hazard class	9
Packing Group	III
Marine Pollutant	Yes
	49 CFR §171.4 Not regulated when transported on land by motor vehicle or rail car in non-bulk containers (119 Gal, 450 Liters)
IATA	
UN number	UN3082
Proper Shipping Name	Environmentally hazardous substances, liquid, n.o.s. (Solvent Naptha)
Transport hazard class(es)	9
Packing Group	III
Marine Pollutant	Yes
IMDG	
UN number	UN3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s. (Solvent Naptha)
Transport hazard class(es)	9
Packing Group	III
Marine Pollutant	Yes
TDG	
UN/ID No	UN3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s. (Solvent Naptha)
Hazard class	9
Packing Group	III
Marine Pollutant	Yes
	Section 1.45.1 of the TDG Regulations provides an exemption from documentation and safety marks only for this product and only when transported by road or railway vehicle.

15. REGULATORY INFORMATION

International Inventories

Chemical name	TSCA	TSCA Inventory Status	DSL/NDSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Naphtha (petroleum), heavy aromatic	X	ACTIVE	X	X		X	X	X	X
Tetrahydrofurfuryl alcohol	X	ACTIVE	X	X	X	X	X	X	X
Pinoxaden	X	ACTIVE							
Cloquintocet-mexyl	X	ACTIVE							
Naphthalene	X	ACTIVE	X	X	X	X	X	X	X

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

Does not apply

US State Regulations

Does not apply

Pesticide Control Products Act Registration Number: 33551**Product Statement**

This chemical is a product registered by the Canadian Pest Control Products Act and is subject to certain labeling requirements under federal law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-PCPA registered chemicals. Read the approved label, authorized under the Pest Control Products Act, prior to using or handling the pest control product. Following is the hazard information as required on the pesticide label:

Pesticide Label

Poison

Warning: Skin and eye irritant

Difference between SDS and pesticide label

	PCPA	OSHA
Signal Word	Warning	Danger
Serious eye damage/eye irritation	Eye irritant	Causes serious eye irritation
Skin corrosion/ irritation	Skin irritant	n/a
Carcinogenicity	n/a	Suspected of causing cancer
Reproductive toxicity	n/a	May damage fertility or the unborn child
Specific target organ toxicity (repeated exposure)	n/a	May cause damage to organs through prolonged or repeated exposure
Aspiration toxicity	n/a	May be fatal if swallowed and enters airway

16. OTHER INFORMATION**NFPA****Health Hazards**

2

Flammability

1

Instability

0

Special Hazards

Not determined

HMIS**Health Hazards**

Not determined

Flammability

Not determined

Physical hazards

Not determined

Personal Protection

Not determined

Issue Date:

03-Dec-2019

Revision Date:

21-Feb-2020

Revision Note:

Changes to Section 14

Disclaimer

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.

End of Safety Data Sheet