



We create chemistry

# Safety Data Sheet

## Marksman

Revision date : 2022/03/25  
Version: 9.0

Page: 1/13  
(30355605/SDS\_CPA\_CA/EN)

### 1. Identification

#### Product identifier used on the label

**Marksman**

#### Recommended use of the chemical and restriction on use

Recommended use\*: crop protection product, herbicide

\* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

#### Details of the supplier of the safety data sheet

Company:  
BASF Agricultural Solutions Canada Inc.  
510, 28 Quarry Park Boulevard SE,  
Calgary, AB, T2C 5P9  
CANADA

Telephone: +1 (403) 523-3000

#### Emergency telephone number

##### 24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300

BASF HOTLINE: (800) 454-COPE (2673)

#### Other means of identification

PCP# 19349/30726

Synonyms: dicamba potassium salt ; atrazine

### 2. Hazards Identification

#### According to Hazardous Products Regulations (HPR) (SOR/2015-17)

##### Classification of the product

STOT RE	2	Specific target organ toxicity — repeated exposure
Aquatic Acute	2	Hazardous to the aquatic environment - acute
Aquatic Chronic	2	Hazardous to the aquatic environment - chronic
Carc.	1A (by inhalation)	Carcinogenicity

# Safety Data Sheet

## Marksman

Revision date : 2022/03/25  
Version: 9.0

Page: 2/13  
(30355605/SDS\_CPA\_CA/EN)

### Label elements

Pictogram:



Signal Word:  
Danger

Hazard Statement:

H373	May cause damage to organs through prolonged or repeated exposure.
H350	May cause cancer by inhalation.
H401	Toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P280	Wear protective gloves, protective clothing and eye protection or face protection.
P201	Obtain special instructions before use.
P273	Avoid release to the environment.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/gas/mist/vapours.

Precautionary Statements (Response):

P308 + P311	IF exposed or concerned: Call a POISON CENTER or physician.
P314	Get medical advice/attention if you feel unwell.
P391	Collect spillage.

Precautionary Statements (Storage):

P405	Store locked up.
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Precautionary Statements (Disposal):

P501	Dispose of contents and container to hazardous or special waste collection point.
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## 3. Composition / Information on Ingredients

### According to Hazardous Products Regulations (HPR) (SOR/2015-17)

Benzoic acid, 3,6-dichloro-2-methoxy-, potassium salt

CAS Number: 10007-85-9

Content (W/W): 13.4 %

Synonym: No data available.

atrazine

CAS Number: 1912-24-9

Content (W/W): 22.23 %

Synonym: No data available.

ethylene glycol

CAS Number: 107-21-1

Content (W/W): 7.0 - 10.0%

Synonym: 1,2-Ethenediol; Ethylene glycol

# Safety Data Sheet

## Marksman

Revision date : 2022/03/25  
Version: 9.0

Page: 3/13  
(30355605/SDS\_CPA\_CA/EN)

Potassium hydroxide  
CAS Number: 1310-58-3  
Content (W/W): 1.0 - 3.0%  
Synonym: Potassium hydroxide

Quartz (SiO<sub>2</sub>)  
CAS Number: 14808-60-7  
Content (W/W): 0.1 - 1.0%  
Synonym: No data available.

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## 4. First-Aid Measures

### Description of first aid measures

#### General advice:

First aid providers should wear personal protective equipment to prevent exposure. Remove contaminated clothing. Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. In case of intoxication, call a poison control center or physician for treatment advice, taking the packaging or the label of the product.

#### If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

#### If on skin:

Rinse skin immediately with plenty of water for 15 - 20 minutes.

#### If in eyes:

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing. If irritation develops, seek medical attention.

#### If swallowed:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention. Do not induce vomiting unless told to by a poison control center or doctor. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

### Most important symptoms and effects, both acute and delayed

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., (Further) symptoms and / or effects are not known so far

### Indication of any immediate medical attention and special treatment needed

#### Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

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## 5. Fire-Fighting Measures

### Extinguishing media

# Safety Data Sheet

## Marksman

Revision date : 2022/03/25  
Version: 9.0

Page: 4/13  
(30355605/SDS\_CPA\_CA/EN)

Suitable extinguishing media:  
foam, dry powder, carbon dioxide, water spray

### Special hazards arising from the substance or mixture

Hazards during fire-fighting:  
carbon monoxide, carbon dioxide, nitrogen oxides  
The substances/groups of substances mentioned can be released in case of fire.

### Advice for fire-fighters

Protective equipment for fire-fighting:  
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

### Further information:

Evacuate area of all unnecessary personnel. Contain contaminated water/firefighting water. Do not allow to enter drains or waterways.

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## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions. Extinguish sources of ignition nearby and downwind. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

### Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water.

### Methods and material for containment and cleaning up

Dike spillage. Pick up with suitable absorbent material. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

For small amounts: Pick up with absorbent material (e.g. sand, sawdust, general-purpose binder).

For large amounts: Dike spillage. Pump off product.

Dispose of absorbed material in accordance with regulations.

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## 7. Handling and Storage

### Precautions for safe handling

No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

Protection against fire and explosion:

The relevant fire protection measures should be noted. Fire extinguishers should be kept handy.

Avoid all sources of ignition: heat, sparks, open flame. Sources of ignition should be kept well clear.

Avoid extreme heat. Keep away from oxidizable substances. Electrical equipment should conform to national electric code. Ground all transfer equipment properly to prevent electrostatic discharge.

Electrostatic discharge may cause ignition.

### Conditions for safe storage, including any incompatibilities

# Safety Data Sheet

## Marksman

Revision date : 2022/03/25  
Version: 9.0

Page: 5/13  
(30355605/SDS\_CPA\_CA/EN)

Segregate from foods and animal feeds.

Further information on storage conditions: Keep away from heat. Protect from direct sunlight.  
Protect from temperatures above: 40 °C  
Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

## 8. Exposure Controls/Personal Protection

**Users of a pesticidal product should refer to the product label for personal protective equipment requirements.**

### Components with occupational exposure limits

ethylene glycol	ACGIH, US:	TWA value 25 ppm Vapor fraction ;
	ACGIH, US:	STEL value 50 ppm Vapor fraction ;
	ACGIH, US:	STEL value 10 mg/m3 Aerosol, inhalable. ;
atrazine	ACGIH, US:	TWA value 2 mg/m3 Inhalable fraction ;
Distillates (petroleum), solvent-refined heavy paraffinic	ACGIH, US:	TWA value 5 mg/m3 Inhalable fraction ;
	OSHA Z1:	PEL 5 mg/m3 Mist ;
	OSHA Z1:	PEL 500 ppm 2,000 mg/m3 ;
	ACGIH, US:	; Included in the regulation, but with no data values - See the regulation for further details
	ACGIH, US:	; Exposure by all routes should be carefully controlled to levels as low as possible.
Distillates (petroleum), solvent-dewaxed heavy paraffinic	ACGIH, US:	TWA value 5 mg/m3 Inhalable fraction ;
	OSHA Z1:	PEL 500 ppm 2,000 mg/m3 ;
	OSHA Z1:	PEL 5 mg/m3 Mist ;
	ACGIH, US:	; Exposure by all routes should be carefully controlled to levels as low as possible.
	ACGIH, US:	; Included in the regulation, but with no data values - See the regulation for further details

**Advice on system design:**  
Ensure adequate ventilation.

### Personal protective equipment

#### **Respiratory protection:**

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) TC23C Chemical/Mechanical type filter system to remove a combination of particles, gas and vapours.

#### **Hand protection:**

Chemical resistant protective gloves

#### **Eye protection:**

Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

# Safety Data Sheet

## Marksman

Revision date : 2022/03/25  
Version: 9.0

Page: 6/13  
(30355605/SDS\_CPA\_CA/EN)

### Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

### General safety and hygiene measures:

The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing. Wearing of closed work clothing is recommended. Take off immediately all contaminated clothing. Keep away from food, drink and animal feeding stuffs.

## 9. Physical and Chemical Properties

Form:	suspension
Odour:	mild
Odour threshold:	Not determined due to potential health hazard by inhalation.
Colour:	brown
pH value:	8.5 - 10
Melting point:	approx. 0 °C Information based on the main component/s.
Boiling point:	approx. 100 °C Information based on the main component/s.
Flash point:	A flash point determination is unnecessary due to the high water content.
Flammability:	not applicable
Lower explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Upper explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Vapour pressure:	approx. 23 hPa ( 20 °C) Information applies to the solvent.
Density:	approx. 1.17 g/cm <sup>3</sup> ( 20 °C) approx. 9.686 lb/USg ( 68 °F)
Partitioning coefficient n-octanol/water (log Pow):	The statements are based on the properties of the individual components.
<i>Information on: dicamba</i>	
Partitioning coefficient n-octanol/water (log Pow):	-0.55 ( 25 °C) -1.8 ( 25 °C) -1.9 ( 25 °C)
	(OECD Guideline 107) (OECD Guideline 107) (OECD Guideline 107)

# Safety Data Sheet

## Marksman

Revision date : 2022/03/25  
Version: 9.0

Page: 7/13  
(30355605/SDS\_CPA\_CA/EN)

Self-ignition temperature:	Based on its structural properties the product is not classified as self-igniting.
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.
Viscosity, dynamic:	approx. 380 mPa.s ( 20 °C)
Solubility in water:	miscible
Evaporation rate:	not applicable
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.

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## 10. Stability and Reactivity

### Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Oxidizing properties:

Based on its structural properties the product is not classified as oxidizing.

### Chemical stability

The product is stable if stored and handled as prescribed/indicated.

### Possibility of hazardous reactions

No hazardous reactions when stored and handled according to instructions.

### Conditions to avoid

Avoid all sources of ignition: heat, sparks, open flame. Avoid prolonged storage. Avoid electro-static discharge. Avoid contamination. Avoid prolonged exposure to extreme heat. Avoid extreme temperatures.

### Incompatible materials

strong bases, strong acids, strong oxidizing agents

### Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated., Prolonged thermal loading can result in products of degradation being given off.

Thermal decomposition:

No decomposition if stored and handled as prescribed/indicated.

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## 11. Toxicological information

### Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

### Acute Toxicity/Effects

Acute toxicity

# Safety Data Sheet

## Marksman

Revision date : 2022/03/25

Version: 9.0

Page: 8/13

(30355605/SDS\_CPA\_CA/EN)

Assessment of acute toxicity: Relatively nontoxic after single ingestion. Slightly toxic after short-term skin contact. Relatively nontoxic after short-term inhalation.

### Oral

Type of value: LD50

Species: rat (male/female)

Value: 5,897 mg/kg

### Inhalation

Type of value: LC50

Species: rat (male/female)

Value: > 3.38 mg/l

Exposure time: 4 h

### Dermal

Type of value: LD50

Species: rabbit (male/female)

Value: > 2,000 mg/kg

### Assessment other acute effects

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

The product has not been tested. The statement has been derived from the properties of the individual components.

### Irritation / corrosion

Assessment of irritating effects: May cause slight irritation to the skin. May cause moderate but temporary irritation to the eyes.

### Skin

Species: rabbit

Result: non-irritant

### Eye

Species: rabbit

Result: non-irritant

### Sensitization

Assessment of sensitization: There is no evidence of a skin-sensitizing potential.

Skin sensitization test

Species: guinea pig

Skin sensitizing effects were not observed in animal studies.

## Chronic Toxicity/Effects

### Repeated dose toxicity

Assessment of repeated dose toxicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Danger of serious damage to health by prolonged exposure.

*Information on: Atrazine*

*Assessment of repeated dose toxicity: Repeated oral exposure may affect certain organs.*

*Information on: ethylene glycol*



# Safety Data Sheet

## Marksman

Revision date : 2022/03/25  
Version: 9.0

Page: 9/13  
(30355605/SDS\_CPA\_CA/EN)

*Assessment of repeated dose toxicity: The substance may cause damage to the kidney after repeated ingestion. The substance may cause damage to the kidney after repeated skin contact with high doses.*

*Information on: crystalline silica*

*Assessment of repeated dose toxicity: Prolonged or repeated inhalation of respirable crystalline silica may result in silicosis. Repeated inhalation exposure may cause inflammatory effects in the lung. The substance may cause increase in lung mass and lung tissue changes after repeated inhalation. This product may contain greater than 0.1% crystalline silica. Repeated exposure to high concentrations results in silicosis, a lung disease characterized by coughing, difficult breathing, wheezing, scarring of the lungs, and repeated, non-specific chest illnesses.*

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### Genetic toxicity

Assessment of mutagenicity: The product has not been tested. The statement has been derived from the properties of the individual components. Mutagenicity tests revealed no genotoxic potential.

### Carcinogenicity

Assessment of carcinogenicity: The product has not been tested. The statement has been derived from the properties of the individual components.

*Information on: Dicamba*

*Assessment of carcinogenicity: In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.*

*Information on: atrazine*

*Assessment of carcinogenicity: The substance is not considered to pose a carcinogenic risk at low human exposure levels. In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.*

*In long-term animal studies in which the substance was given in high concentrations by feed, a carcinogenic effect was observed.*

*IARC Group 3 (not classifiable as to human carcinogenicity).*

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### Reproductive toxicity

Assessment of reproduction toxicity: The product has not been tested. The statement has been derived from the properties of the individual components. The results of animal studies gave no indication of a fertility impairing effect.

### Teratogenicity

Assessment of teratogenicity: The product has not been tested. The statement has been derived from the properties of the individual components.

*Information on: ethylene glycol*

*Assessment of teratogenicity: Developmental toxicity was observed after oral ingestion of high doses in studies with rats and mice, but this effect was not seen in a study with rabbits. Mechanistic studies show that the rabbit is the relevant species for the classification for human health. As such, and since ethylene glycol is not a developmental toxicant in the rabbit, no classification is warranted. Embryotoxicity and teratogenicity was observed in animal studies, in the absence of maternal toxicity. However, the relevance of this result for humans is unclear.*

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### Other Information

Misuse can be harmful to health.

# Safety Data Sheet

## Marksman

Revision date : 2022/03/25  
Version: 9.0

Page: 10/13  
(30355605/SDS\_CPA\_CA/EN)

## 12. Ecological Information

### Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

Acutely toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment.

#### Toxicity to fish

Information on: dicamba

LC50 (96 h) > 100 mg/l, *Cyprinus carpio*

LC50 (96 h) > 41 mg/l, *Oncorhynchus mykiss*

Information on: Atrazine

LC50 (96 h) 4.5 mg/l, *Oncorhynchus mykiss* (OECD 203; ISO 7346; 84/449/EEC, C.1)

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#### Aquatic invertebrates

Information on: dicamba

EC50 (48 h) > 41 mg/l, *Daphnia magna*

Information on: Atrazine

EC50 (48 h) 6.9 mg/l, *Daphnia magna*

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#### Aquatic plants

Information on: dicamba

EC10 (72 h) 0.072 mg/l, *Skeletonema costatum*

EC50 (72 h) 4.1 mg/l (growth rate), *Skeletonema costatum*

EC50 (96 h) 1.5 mg/l, *Skeletonema costatum*

EC10 (96 h) 0.038 mg/l, *Skeletonema costatum*

EC50 (72 h) 2.4 mg/l, *Skeletonema costatum*

Information on: Atrazine

EC50 (72 h) 0.049 mg/l, *Pseudokirchneriella subcapitata*

No observed effect concentration (10 d) 0.037 mg/l, *Lemna gibba*

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### Persistence and degradability

#### Assessment biodegradation and elimination (H2O)

The product has not been tested. The statement has been derived from the properties of the individual components.

#### Elimination information

Information on: dicamba

5 % BOD of COD (28 d) (OECD 301F; ISO 9408; 92/69/EEC, C.4-D) (aerobic, activated sludge, industrial) Not readily biodegradable (by OECD criteria).

Information on: Atrazine

# Safety Data Sheet

## Marksman

Revision date : 2022/03/25  
Version: 9.0

Page: 11/13  
(30355605/SDS\_CPA\_CA/EN)

7 - 14 % CO<sub>2</sub> formation relative to the theoretical value (28 d) (OECD 301B; ISO 9439; 92/69/EEC, C.4-C) (aerobic, domestic sewage) Non-biodegradable.

### Bioaccumulative potential

#### Assessment bioaccumulation potential

The product has not been tested. The statement has been derived from the properties of the individual components.

#### Assessment bioaccumulation potential

Information on: dicamba

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Information on: Atrazine

### Mobility in soil

#### Assessment transport between environmental compartments

The product has not been tested. The statement has been derived from the properties of the individual components.

### Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control.

## 13. Disposal considerations

### **Waste disposal of substance:**

See product label for disposal and recycling instructions.

### **Container disposal:**

Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

## 14. Transport Information

### **Land transport**

TDG

Not classified as a dangerous good under transport regulations

### **Sea transport**

IMDG

Hazard class:	9
Packing group:	III
ID number:	UN 3082
Hazard label:	9, EHSM
Marine pollutant:	YES

# Safety Data Sheet

## Marksman

Revision date : 2022/03/25  
Version: 9.0

Page: 12/13  
(30355605/SDS\_CPA\_CA/EN)

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S. (contains DICAMBA)

### Air transport

IATA/ICAO

Hazard class: 9  
Packing group: III  
ID number: UN 3082  
Hazard label: 9, EHSM  
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S. (contains DICAMBA)

### Further information

Exempt from regulation when transported by road or rail, in accordance with TDG Regulations 1.45.1. This exemption provides that this product does not require dangerous goods shipping documentation or safety marks when transported on land by road or rail.

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## 15. Regulatory Information

### Federal Regulations

#### Registration status:

Crop Protection DSL, CA released / exempt

Chemical DSL, CA released; restriction on use and qty. / listed

### Labeling requirements under Pest Control Products Act

Read the label, authorized under the Pest Control Products Act, prior to using or handling the pest control product.

This chemical is a pest control product registered by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the Pest Control Products Act. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. The following is the hazard information required on the pest control product label:

# Safety Data Sheet

## Marksman

Revision date : 2022/03/25  
Version: 9.0

Page: 13/13  
(30355605/SDS\_CPA\_CA/EN)



Caution: Poison

**WARNING:**

Contains the allergen sulfite(s).  
KEEP OUT OF REACH OF CHILDREN.  
HARMFUL IF SWALLOWED.  
HARMFUL IF ABSORBED THROUGH SKIN.  
CAUSES SKIN IRRITATION.  
Avoid contact with the skin, eyes and clothing.

There are Canada-specific environmental requirements for handling, use, and disposal of this pest control product that are indicated on the label.

## 16. Other Information

**SDS Prepared by:**

BASF Agricultural Solutions Canada NA Product Regulations  
SDS Prepared on: 2022/03/25

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

END OF DATA SHEET