HARMONY® EXTRA

Version 1.0
Revision Date 03.01.2018 Ref. 130000000384

This Safety Data Sheet adheres to the standards and regulatory requirements of France and may not meet the regulatory requirements in other countries.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name	:	HARMONY® EXTRA
Synonyms	:	B11516278 DPX-R9674 75WG

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture	:	Herbicide

1.3. Details of the supplier of the safety data sheet

Company	:	Cheminova Agro France SAS 11 bis,Quai Perrache 69002 LYON France
Telephone	:	+33 (0) 1 56 60 47 00
Telefax	:	+33 (0) 1 56 60 47 01
E-mail address	:	sds-support@che.dupont.com

1.4. Emergency telephone number

+(44)-870-8200418 (CHEMTREC)

Emergency Phone ORFILA: +33 (0) 145 42 59 59 (Anti-Poison center)

Poison Centres may only possess information required for products in accordance with Regulation (EC) No 1272/2008 and national legislation.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.2. Label elements

Dangerous for the environment

R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Special labelling of certain substances and mixtures	To avoid risks to man and the environment, comply with the instructions for use.
Sensitising components	Contains: Tribenuron methyl / Contains/ May produce an allergic reaction.

S 2	Keep out of the reach of children.
S13	Keep away from food, drink and animal feedingstuffs.
S20/21	When using do not eat, drink or smoke.
S46	If swallowed, seek medical advice immediately and show this container or label.
S35	This material and its container must be disposed of in a safe way.
S57	Use appropriate container to avoid environmental contamination.
SP 1	Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).

2.3. Other hazards

no data available

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

Registration number	Classification according to Regulation (EU) 1272/2008 (CLP)	Concentration (% w/w)
Thifensulfuron methyl (CAS-No.79277-27-3)		
	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	50 %
Tribenuron methyl (CAS-No.101200-48-0) (EC-No.401-190-1) (M-Factor : 100[Acute] 100[Chronic])		
	Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	25 %

The above products are compliant to REACH registration obligations; Registration number(s) may not be provided because substance(s) are exempted, not yet registered under REACH or are registered under another regulatory process (biocide uses, plant protection products), etc.

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice	:	Never give anything by mouth to an unconscious person.
Inhalation	:	Move to fresh air. Consult a physician after significant exposure. Artificial respiration and/or oxygen may be necessary.
Skin contact	:	Take off contaminated clothing and shoes immediately. Wash off immediately

with soap and plenty of water. In the case of skin irritation or allergic reactions see a physician. Wash contaminated clothing before re-use.

Eye contact : Hold eye open and rinse slowly and gently with water for 15-20 minutes. If eye irritation persists, consult a specialist.

Ingestion : Obtain medical attention. DO NOT induce vomiting unless directed to do so by a physician or poison control center. If victim is conscious: Rinse mouth with water.

4.2. Most important symptoms and effects, both acute and delayed

no data available

4.3. Indication of any immediate medical attention and special treatment needed

no data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray, Foam, Dry chemical, Carbon dioxide (CO2)

Extinguishing media which shall not be used for safety reasons : High volume water jet, (contamination risk)

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting : Hazardous decomposition products formed under fire conditions. Carbon dioxide (CO2) Nitrogen oxides (NOx)

5.3. Advice for firefighters

Special protective equipment for firefighters : Wear full protective clothing and self-contained breathing apparatus.

Further information : Prevent fire extinguishing water from contaminating surface water or the ground water system. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

: (on small fires) If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated. Cool containers/tanks with water spray.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions : Control access to area. Keep people away from and upwind of spill/leak. Avoid dust formation. Avoid breathing dust. Use personal protective equipment. Refer to protective measures listed in sections 7 and 8.

6.2. Environmental precautions

Environmental precautions : Prevent further leakage or spillage if safe to do so. Use appropriate container to avoid environmental contamination. Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained. If the spill area is porous, the contaminated material must be collected for subsequent treatment or disposal. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3. Methods and materials for containment and cleaning up

Methods for cleaning up : Clean-up methods - small spillage Sweep up or vacuum up spillage and collect in suitable container for disposal.
Clean-up methods - large spillage Avoid dust formation. Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).
If spill area is on ground near valuable plants or trees, remove 5 cm of top soil after initial clean-up.

Other information : Never return spills in original containers for re-use. Dispose of in accordance with local regulations.

6.4. Reference to other sections

Not applicable

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling : Use only according to our recommendations. Use only clean equipment. Avoid contact with skin, eyes and clothing. Do not breathe dust or spray mist. Wear personal protective equipment. For personal protection see section 8. Prepare the working solution as given on the label(s) and/or the user instructions. Use prepared working solution as soon as possible - Do not store. Provide appropriate exhaust ventilation at places where dust is formed. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use. Avoid exceeding the given occupational exposure limits (see section 8).

Advice on protection against fire and explosion : Keep away from heat and sources of ignition. Avoid dust formation in confined areas. During processing, dust may form explosive mixture in air.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage : Store in original container. Keep in properly labelled containers. Keep

areas and containers : containers tightly closed in a dry, cool and well-ventilated place. Store in a place accessible by authorized persons only. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.

Advice on common storage : No special restrictions on storage with other products.

Other data : Stable under recommended storage conditions.

7.3. Specific end use(s)

no data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

If sub-section is empty then no values are applicable.

Components with workplace control parameters

Type Form of exposure	Control parameters (Expressed as)	Update	Regulatory basis	Remarks

Sucrose (CAS-No. 57-50-1)

French Time Weighted Average (VME):	10 mg/m3	01 2008	France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984	Indicative limit (VL)

8.2. Exposure controls

Engineering measures : Ensure adequate ventilation, especially in confined areas. Provide for appropriate exhaust ventilation and dust collection at machinery.
Contains no substances with occupational exposure limit values.

Eye protection : Safety glasses with side-shields conforming to EN166

Hand protection : Material: Nitrile rubber
Glove thickness: 0,4 - 0,7 mm
Glove length: Gauntlets
Protection index: Class 6
Wearing time: 8 h
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Before removing gloves clean them with soap and water.

Skin and body protection : Manufacturing and processing work: Full protective clothing Type 5 (EN 13982-2)
Mixer and loaders must wear: Full protective clothing Type 5 + 6 (EN ISO 13982-2 / EN 13034) Rubber apron Rubber or plastic boots

		Field and greenhouse application: Full protective clothing Type 4 (EN 14605) Rubber or plastic boots
Protective measures	:	The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. All chemical protective clothing should be visually inspected prior to use. Clothing and gloves should be replaced in case of chemical or physical damage or if contaminated. Only protected handlers may be in the area during application.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of equipment, work area and clothing. Keep working clothes separately. Contaminated work clothing should not be allowed out of the workplace. Wash hands and face before breaks and immediately after handling the product. When using do not eat, drink or smoke. Keep away from food, drink and animal feedingstuffs. For environmental protection remove and wash all contaminated protective equipment before re-use. Remove clothing/PPE immediately if material gets inside. Wash thoroughly and put on clean clothing. Dispose of rinse water in accordance with local and national regulations.
Respiratory protection	:	Manufacturing and processing work: Half mask with a particle filter FFP1 (EN149) Mixer and loaders must wear: Half mask with a particle filter FFP1 (EN149) Spray application - outdoor: No personal respiratory protective equipment normally required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	: solid, dry, free flowing granules
Colour	: beige
Odour	: slight, pungent
pH	: 5,4 at 10 g/l (20 °C)
Melting point/range	: Not available for this mixture.
Flammability (solid, gas)	: Does not sustain combustion.
Oxidizing properties	: The product is not oxidizing.
Explosive properties	: Not explosive
Bulk density	: 660 - 700 kg/m3
Water solubility	: dispersible

9.2. Other information

no data available

SECTION 10: Stability and reactivity

10.1. Reactivity : no data available

10.2. Chemical stability : no data available

10.3. Possibility of hazardous reactions : No dangerous reaction known under conditions of normal use. Polymerization will not occur. No decomposition if stored and applied as directed.

10.4. Conditions to avoid : Processing temperature : < 305 °C To avoid thermal decomposition, do not overheat. Under severe dusting conditions, this material may form explosive mixtures in air.

10.5. Incompatible materials : No materials to be especially mentioned.

10.6. Hazardous decomposition products : Sulphur oxides

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity

LD50 / Rat : > 5 000 mg/kg
Method: US EPA Test Guideline OPP 81-1
(Data on the product itself) Information source: Internal study report

- Thifensulfuron methyl
  LD50 / Rat : > 5 000 mg/kg

Acute inhalation toxicity

- Thifensulfuron methyl
  LC50 / 4 h Rat : > 7,9 mg/l

- Tribenuron methyl
  LC50 / 4 h Rat : > 6,0 mg/l

Acute dermal toxicity

LD50 / Rabbit : > 2 000 mg/kg
Method: US EPA Test Guideline OPP 81-2
(Data on the product itself) Information source: Internal study report

- Thifensulfuron methyl
  LD50 / Rabbit : > 2 000 mg/kg

Skin irritation

Rabbit

Result: No skin irritation
Method: US EPA Test Guideline OPP 81-5
(Data on the product itself) Information source: Internal study report

- Thifensulfuron methyl
  Rabbit
  Classification: No skin irritation
  Result: No skin irritation

Eye irritation

Rabbit
Result: No eye irritation
Method: US EPA Test Guideline OPP 81-4
(Data on the product itself)

- Thifensulfuron methyl
  Rabbit
  Classification: No eye irritation
  Result: No eye irritation

Sensitisation

Guinea pig
Result: Animal test did not cause sensitization by skin contact.
Method: Modified Draize Test
(Data on the product itself) Information source: Internal study report

- Thifensulfuron methyl
  Guinea pig Maximisation Test
  Classification: Not a skin sensitizer.
  Result: Does not cause skin sensitisation.

Repeated dose toxicity

- Thifensulfuron methyl
  The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.

  Oral - feed multiple species
  Reduced body weight gain

  Oral - feed Rat
  Increase in blood urea nitrogen, altered hematology

  Oral Rat
  Exposure time: 28 d
  NOAEL: 529 mg/kg
  No adverse effect has been observed in chronic toxicity tests.

- Tribenuron methyl

The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.

Oral - feed Mouse
Exposure time: 90 d
NOAEL: 500 mg/kg
Reduced body weight gain

Oral Rat
Exposure time: 28 d
Reduced body weight gain

Mutagenicity assessment

- Thifensulfuron methyl
  Tests on bacterial or mammalian cell cultures did not show mutagenic effects. Animal testing did not show any mutagenic effects.

- Tribenuron methyl
  Animal testing did not show any mutagenic effects. Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity assessment

- Thifensulfuron methyl
  Animal testing did not show any carcinogenic effects.

- Tribenuron methyl
  Not classifiable as a human carcinogen. An increased incidence of tumours was observed in laboratory animals. Target(s): Mammary glands

Toxicity to reproduction assessment

- Thifensulfuron methyl
  No toxicity to reproduction Animal testing showed no reproductive toxicity.

- Tribenuron methyl
  No toxicity to reproduction

Assessment teratogenicity

- Thifensulfuron methyl
  Did not show teratogenic effects in animal experiments. Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish

static test / LC50 / 96 h / Oncorhynchus mykiss (rainbow trout): 750 mg/l
Method: OECD Test Guideline 203
(Data on the product itself) Information source: Internal study report

- Thifensulfuron methyl
  LC50 / 96 h / Oncorhynchus mykiss (rainbow trout): > 100 mg/l

Toxicity to aquatic plants

EbC50 / 72 h / Pseudokirchneriella subcapitata (green algae): 4,8 mg/l
Method: OECD Test Guideline 201
(Data on the product itself) Information source: Internal study report

- Thifensulfuron methyl
  EC50 / 14 d / Lemna minor (duckweed): 0,0013 mg/l

- Tribenuron methyl
  EC50 / 120 h / Pseudokirchneriella subcapitata (microalgae): 0,11 mg/l

  EC50 / 14 d / Lemna gibba (duckweed): 0,00425 mg/l

Toxicity to aquatic invertebrates

static test / EC50 / 48 h / Daphnia (water flea): 650 mg/l
Method: OECD Test Guideline 202
(Data on the product itself) Information source: Internal study report

- Thifensulfuron methyl
  EC50 / 48 h / Daphnia magna (Water flea): 470 mg/l

Toxicity to soil dwelling organisms

- Thifensulfuron methyl
  NOEC / 14 d / Eisenia fetida (earthworms): 1 000 mg/kg

  LC50 / 14 d / Eisenia fetida (earthworms): > 1 000 mg/kg

Toxicity to other organisms

- Thifensulfuron methyl
  LD50 / Anas platyrhynchos (Mallard duck): > 2 510 mg/kg

  LC50 / 8 d / Anas platyrhynchos (Mallard duck): > 5 620 mg/kg

  LC50 / 8 d / Colinus virginianus (Bobwhite quail): > 5 620 mg/kg

  LD50 / Apis mellifera (bees): 7.1 µg/b
  Oral

  LD50 / Apis mellifera (bees): > 100 µg/b
  Contact

Chronic toxicity to fish

- Thifensulfuron methyl
  NOEC / 21 d / Oncorhynchus mykiss (rainbow trout): > 250 mg/l

  NOEC / 62 d / Oncorhynchus mykiss (rainbow trout): 10,6 mg/l

- Tribenuron methyl
  NOEC / 21 d / Oncorhynchus mykiss (rainbow trout): > 560 mg/l

Chronic toxicity to aquatic Invertebrates

- Thifensulfuron methyl
  NOEC / 28 d / Americamysis bahia (mysid shrimp): 7,93 mg/l

  EC50 / 21 d / Daphnia magna (Water flea): > 340 mg/l
  Information source: Internal study report

  NOEC / 21 d / Daphnia magna (Water flea): > 340 mg/l

- Tribenuron methyl
  NOEC / 21 d / Daphnia magna (Water flea): 120 mg/l

12.2. Persistence and degradability

Biodegradability

Not readily biodegradable. Estimation based on data obtained on active ingredient.

- Thifensulfuron methyl
  According to the results of tests of biodegradability this product is not readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulation

This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT). This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

- Thifensulfuron methyl
  Does not bioaccumulate.

12.4. Mobility in soil

no data available

12.5. Results of PBT and vPvB assessment

no data available

12.6. Other adverse effects

no data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product : In accordance with local and national regulations. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Do not contaminate ponds, waterways or ditches with chemical or used container.

Contaminated packaging : Do not re-use empty containers.

SECTION 14: Transport information

ADR

14.1. UN number: 3077
14.2. UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Thifensulfuron-methyl, Tribenuron methyl)
14.3. Transport hazard class(es): 9
14.4. Packing group: III
14.5. Environmental hazards: For further information see Section 12.

14.6. Special precautions for user:
Tunnel restriction code: (-)
Not classified as dangerous in the meaning of air transport regulations. Optional classification as per IATA Special Provision A97.

IATA_C

14.1. UN number: 3077
14.2. UN proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Thifensulfuron-methyl, Tribenuron methyl)
14.3. Transport hazard class(es): 9
14.4. Packing group: III
14.5. Environmental hazards : For further information see Section 12.

14.6. Special precautions for user:
Not classified as dangerous in the meaning of air transport regulations. Optional classification as per IATA Special Provision A97.

IMDG

14.1. UN number: 3077
14.2. UN proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Thifensulfuron-methyl, Tribenuron methyl)
14.3. Transport hazard class(es): 9
14.4. Packing group: III
14.5. Environmental hazards : Marine pollutant

14.6. Special precautions for user:

Not classified as dangerous in the meaning of air transport regulations. Optional classification as per IATA Special Provision A97.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

No specific information about other regulations/legislation to be mentioned.

15.2. Chemical safety assessment

no data available

SECTION 16: Other information

Full text of H-Statements referred to under section 3.

H317	May cause an allergic skin reaction.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Other information professional use

Abbreviations and acronyms

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute toxicity estimate
CAS-No.	Chemical Abstracts Service number
CLP	Classification, Labelling and Packaging
EbC50	Concentration at which 50% reduction of biomass is observed
EC50	Median effective concentration
EN	European Norm
EPA	Environmental Protection Agency
ErC50	Concentration at which a 50% inhibition of growth rate is observed
EyC50	Concentration at which 50 % inhibition of yield is observed
IATA_C	International Air Transport Association (Cargo)
IBC	International Bulk Chemical Code
ICAO	International Civil Aviation Organization
ISO	International Standard Organization
IMDG	International Maritime Dangerous Goods
LC50	Median Lethal Concentration
LD50	Median Lethal Dose
LOEC	Lowest Observed Effect Concentration
LOEL	Lowest observed effect level
MARPOL	International Convention for the Prevention of Marine Pollution from Ships
n.o.s.	Not Otherwise Specified
NOAEC	No Observed Adverse Effect Concentration

NOAEL	No observed adverse effect level
NOEC	No Observed Effect Concentration
NOEL	No Observed Effect Level
OECD	Organisation for Economic Co-operation and Development
OPPTS	Office of Prevention, Pesticides and Toxic Substances
PBT	Persistent, Bioaccumulative and Toxic
STEL	Short term exposure limit
TWA	Time Weighted Average (TWA):
vPvB	very Persistent and very Bioaccumulative

Further information
Before use read DuPont's safety information., Take notice of the directions of use on the label.

Note: The classification of substances listed in Annex VI to the CLP regulation are derived from assessment of the best knowledge and information available at the time of its publication or subsequent amendments.The information on components provided in sections 11 and 12 of this safety data sheet may in some cases not align with a legally binding classification on the basis of technical progress and availability of new information.

Significant change from previous version is denoted with a double bar.

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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The above information relates only to the specific material(s) designated herein and may not be valid for such material(s) used in combination with any other materials or in any process or if the material is altered or processed, unless specified in the text.