SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Trade name	HARNESS® MAX HERBICIDE
Product code (UVP)	62293045
SDS Number	102000039732
EPA Registration No.	524-636

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

Use	Herbicide
Restrictions on use	See product label for restrictions.

Information on supplier

Supplier	Bayer CropScience LP 800 North Lindbergh Blvd. St. Louis, MO 63167 USA
Responsible Department	Email: SDSINFO.BCS-NA@bayer.com

Emergency telephone no.

Emergency Telephone Number (24hr/ 7 days)	1-800-334-7577
Product Information Telephone Number	1-866-99BAYER (1-866-992-2937)

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200
Acute toxicity(Oral): Category 4
Skin sensitisation: Category 1
Specific target organ toxicity - single exposure: Category 3
Specific target organ toxicity - repeated exposure, Carcinogenicity: Category 2

Labelling in accordance with regulation HCS 29CFR §1910.1200

Signal word: Warning

Hazard statements

Harmful if swallowed.
May cause an allergic skin reaction.
May cause respiratory irritation.
Suspected of causing cancer.
May cause damage to organs (Liver, Kidney) through prolonged or repeated exposure.

Precautionary statements
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe gas/ mist/vapours/ spray.
Do not eat, drink or smoke when using this product.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Wash thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Use only outdoors or in a well-ventilated area.
IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.
Rinse mouth.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor/physician if you feel unwell.
IF ON SKIN: Wash with plenty of water/ soap.
If skin irritation or rash occurs: Get medical advice/ attention.
Specific treatment (see supplemental first aid instructions on this label).
Take off contaminated clothing and wash before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local regulation.

Hazards Not Otherwise Classified (HNOC)
No physical hazards not otherwise classified.
No health hazards not otherwise classified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Acetochlor	34256-82-1	39.1
mesotrione; 2-[4-(methylsulfonyl)-2-nitrobenzoyl]-1,3-cyclohexanedione	104206-82-8	3.7
Furilazole	121776-33-8	1.2

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice
When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Inhalation
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.

Skin contact	Immediately wash with plenty of soap and water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Call a physician or poison control center immediately.
Eye contact	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.
Ingestion	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.

Most important symptoms and effects, both acute and delayed

Symptoms	May cause allergic skin reaction.

Indication of any immediate medical attention and special treatment needed

Treatment	Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable	High volume water jet
Special hazards arising from the substance or mixture	In the event of fire the following may be released:, Carbon monoxide (CO), Carbon dioxide (CO2), Nitrogen oxides (NOx), Hydrogen chloride (HCl)

Advice for firefighters

Special protective equipment for firefighters	In the event of fire and/or explosion do not breathe fumes. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing. Equipment should be thoroughly decontaminated after use.
	In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.
Further information	Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.
Flash point	does not flash
Auto-ignition temperature	No data available
Lower explosion limit	Not applicable

Upper explosion limit	Not applicable
Explosivity	Not explosive

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions	Use personal protective equipment. Keep unauthorized people away. Avoid contact with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up

Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Keep in suitable, closed containers for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.
Additional advice	Use personal protective equipment. If the product is accidentally spilled, do not allow to enter soil, waterways or waste water canal. Do not allow product to contact non-target plants.
Reference to other sections	Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.
Hygiene measures	Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove Personal Protective Equipment (PPE) immediately after handling this product. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing. Keep working clothes separately. Garments that cannot be cleaned must be destroyed (burnt).

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in a place accessible by authorized persons only. Keep away from direct sunlight. Protect from freezing.
Advice on common storage	Keep away from food, drink and animal feedingstuffs.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

No known occupational limit values.

Exposure controls

Personal protective equipment
In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection	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.
Hand protection	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. Chemical-resistant gloves (barrier laminate, butyl rubber, nitrile rubber or Viton) Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.
Eye protection	Use tightly sealed goggles and face protection.
Skin and body protection	Wear long-sleeved shirt and long pants and shoes plus socks.
General protective measures	Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Form	suspension
Colour	off-white
Odour	odourless
Odour Threshold	No data available
pH	2 (100 %) (23 °C)
Melting point/range	No data available
Boiling Point	No data available

Flash point	does not flash
Flammability	No data available
Auto-ignition temperature	No data available
Minimum ignition energy	Not applicable
Self-accelarating decomposition temperature (SADT)	No data available
Upper explosion limit	Not applicable
Lower explosion limit	Not applicable
Vapour pressure	No data available
Evaporation rate	No data available
Relative vapour density	No data available
Relative density	1.07
Density	ca. 1.08 g/cm³ (20 °C)
Water solubility	completely miscible
Partition coefficient: n-octanol/water	Acetochlor: log Pow: 4.14 (20 °C) Mesotrione: log Pow: 1.49 Furilazole: log Pow: 2.12 (23 °C)
Viscosity, dynamic	250 - 2,000 cps
Viscosity, kinematic	No data available
Oxidizing properties	No data available
Explosivity	Not explosive
Other information	Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

Reactivity	
Thermal decomposition	Stable under normal conditions.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions.

Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatible materials	No incompatible materials known.
Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Skin contact, Eye contact, Inhalation
Immediate Effects	
Eye	Not expected to produce significant adverse effects when recommended use instructions are followed.
Skin	Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.
Ingestion	Harmful if swallowed.
Inhalation	May cause respiratory tract irritation.
Information on toxicological effects	
Acute oral toxicity	LD50 (Rat) 1,750 mg/kg
Acute inhalation toxicity	LC50 (Rat) > 5.41 mg/l Exposure time: 4 h Determined in the form of a respirable aerosol. No deaths
Acute dermal toxicity	LD50 (Rat) > 5,000 mg/kg
Skin corrosion/irritation	Slight irritant effect - does not require labelling. (Rabbit)
Serious eye damage/eye irritation	No eye irritation (Rabbit)
Respiratory or skin sensitisation	Skin: Sensitising (Guinea pig) OECD Test Guideline 406, Buehler test The value mentioned relates to the active ingredient acetochlor. Skin: Sensitising (Guinea pig) OECD Test Guideline 406, Buehler test The value mentioned relates to the safener furilazole.

Assessment STOT Specific target organ toxicity – single exposure

Acetochlor: May cause respiratory irritation.
Mesotrione: Based on available data, the classification criteria are not met.
Furilazole: Based on available data, the classification criteria are not met.

Assessment STOT Specific target organ toxicity – repeated exposure

Acetochlor caused specific target organ toxicity in experimental animal studies in the following organ(s): Kidney.
Mesotrione: May cause damage to organs (Eyes, Central nervous system) through prolonged or repeated exposure.

Furilazole caused specific target organ toxicity in experimental animal studies in the following organ(s): Liver.

Assessment mutagenicity

Acetochlor was not genotoxic based on weight of evidence analysis.
Mesotrione is not considered mutagenic.
Furilazole was not genotoxic based on weight of evidence analysis.

Assessment carcinogenicity

Acetochlor caused an increased incidence of tumours in rats in the following organ(s): Nasal, Thyroid. Mode(s) of action not relevant to humans.
Acetochlor caused an increased incidence of tumours in rats, mice in the following organ(s): Liver. Only above the MTD (maximum tolerated dose). The observed effects do not appear to be relevant for humans.
Acetochlor caused lung tumours and histocytic sarcomas in mice, probably not treatment related. Based on available data, the classification criteria are not met.
Furilazole caused an increased incidence of tumours in rats, mice in the following organ(s): Liver. Only at doses that caused significant hepatotoxicity. Questionable relevance to humans.
Furilazole caused an increased incidence of tumours in mice in the following organ(s): Lungs. Only at doses that caused chronic inflammation. Questionable relevance to humans.
Furilazole caused an increased incidence of tumours in rats in the following organ(s): forestomach. Only at doses that caused substantial irritation. The observed effects do not appear to be relevant for humans.

ACGIH

None.

NTP

None.

IARC

None.

OSHA

None.

Assessment toxicity to reproduction

Reproductive effects in rats seen with Acetochlor are only in the presence of significant maternal toxicity.
Mesotrione: Based on available data, the classification criteria are not met.
Furilazole did not cause reproductive toxicity in laboratory animals.

Assessment developmental toxicity

Developmental effects in rats seen with Acetochlor are only in the presence of significant maternal toxicity.
Acetochlor did not cause developmental toxicity in rabbits. Testicular damage in dogs only in the presence of substantial systemic toxicity.
Mesotrione: Based on available data, the classification criteria are not met.
Furilazole did not cause developmental toxicity in rabbits. The developmental effects seen with Furilazole are related to maternal toxicity.

Aspiration hazard

Based on available data, the classification criteria are not met.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish

LC50 (Lepomis macrochirus (Bluegill sunfish)) 1.3 mg/l
static test; Exposure time: 96 h
The value mentioned relates to the active ingredient acetochlor.

LC50 (Oncorhynchus mykiss (rainbow trout)) 0.36 - 1.2 mg/l
static test; Exposure time: 96 h
The value mentioned relates to the active ingredient acetochlor.

LC50 (Oncorhynchus mykiss (rainbow trout)) > 114 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient Mesotrione.

Toxicity to aquatic invertebrates

EC50 (Daphnia magna (Water flea)) 8.6 - 16 mg/l static test; Exposure time: 48 h
The value mentioned relates to the active ingredient acetochlor.

EC50 (Daphnia magna (Water flea)) 840 mg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient Mesotrione.

Toxicity to aquatic plants

EC50 (Raphidocelis subcapitata (freshwater green alga)) 0.00027 - 0.00149 mg/l
static test; Exposure time: 96 h
The value mentioned relates to the active ingredient acetochlor.

EC50 (Raphidocelis subcapitata (freshwater green alga)) 1.9 mg/l
Exposure time: 5 d
The value mentioned relates to the active ingredient Mesotrione.

Biodegradability

Acetochlor:
Not rapidly biodegradable
Mesotrione:
No data available
Furilazole: 1 %, Exposure time: 28 d
Not readily biodegradable.

Koc

Acetochlor: Koc: 204
Furilazole: Koc: 56 - 341

Bioaccumulation

Acetochlor: Bioconcentration factor (BCF) 20
Mesotrione:
Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.
Furilazole:
No significant accumulation in organisms.

Mobility in soil

Acetochlor: Moderately persistent
Mesotrione: Not persistent in soil.

Furilazole: Moderately persistent

Results of PBT and vPvB assessment

PBT and vPvB assessment	Acetochlor: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB). Mesotrione: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB). Furilazole: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).
Additional ecological information	No further ecological information is available.
Environmental precautions	Apply this product as specified on the label. 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. Do not allow to get into surface water, drains and ground water.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines. Do not contaminate water, food, or feed by disposal. Incineration in a special incineration plant in accordance with the local waste regulation authority. Follow all local/regional/national/international regulations.
Contaminated packaging	Follow advice on product label and/or leaflet. Do not re-use empty containers. Triple rinse containers. Puncture container to avoid re-use. Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities. If burned, stay out of smoke.
RCRA Information	Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

SECTION 14: TRANSPORT INFORMATION

49CFR	Not dangerous goods / not hazardous material

IMDG

UN number	**3082**
Class	9
Packaging group	III
Marine pollutant	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ACETOCHLOR, MESOTRIONE SOLUTION)

IATA

UN number	**3082**
Class	9
Packaging group	III
Environm. Hazardous Mark	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ACETOCHLOR, MESOTRIONE SOLUTION)

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 524-636
US Federal Regulations
TSCA list

Water	7732-18-5
1,2-Propanediol	57-55-6

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
No export notification needs to be made.
SARA Title III - Section 302 - Notification and Information
Not applicable.
SARA Title III - Section 313 - Toxic Chemical Release Reporting
None.

US States Regulatory Reporting
CA Prop65
WARNING: This product contains a chemical known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Acetochlor	34256-82-1

WARNING: This product contains a chemical known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Furilazole	121776-33-8

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

reproductive harm.

US State Right-To-Know Ingredients

1,2-Propanediol	57-55-6	MN, RI

Environmental
CERCLA
None.
Clean Water Section 307(a)(1)
None.
Safe Drinking Water Act Maximum Contaminant Levels
Yes

Acetochlor	34256-82-1

EPA/FIFRA Information:
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 required on the pesticide label:

Signal word: Caution!

Hazard statements: Harmful if swallowed.
May cause allergic skin reaction.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

49CFR	Code of Federal Regulations, Title 49
ACGIH	US. ACGIH Threshold Limit Values
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
N.O.S.	Not otherwise specified
NTP	US. National Toxicology Program (NTP) Report on Carcinogens
OECD	Organization for Economic Co-operation and Development
TDG	Transportation of Dangerous Goods
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

NFPA 704 (National Fire Protection Association):

Health - 2	Flammability - 1	Instability - 1	Others - none

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 2	Flammability - 1	Physical Hazard - 1	PPE -

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

Reason for Revision: New Safety Data Sheet.

Revision Date: 09/01/2020

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