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## PROGRASS® HERBICIDE

Version 4.0 / USA Revision Date: 10/06/2020 102000053434 Print Date: 10/07/2020

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

**Product identifier** 

Trade name PROGRASS® HERBICIDE

Product code (UVP) 86808307

**SDS Number** 102000053434

**EPA Registration No.** 432-941

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 Environmental Science

A division of Bayer CropScience LP 5000 Centregreen Way, Suite 400

Cary, NC 27513

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

1-800-331-2867

### **SECTION 2: HAZARDS IDENTIFICATION**

Classification in accordance with regulation HCS 29CFR §1910.1200

Flammable liquids: Category 3

Serious eye damage, Aspiration hazard: Category 1

Carcinogenicity: Category 2

Specific target organ toxicity - single exposure: Category 3

Labelling in accordance with regulation HCS 29CFR §1910.1200









Signal word: Danger



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#### **Hazard statements**

Flammable liquid and vapour.

Suspected of causing cancer.

May cause respiratory irritation.

May be fatal if swallowed and enters airways.

Causes serious eye damage.

### **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ ventilating/ lighting/ equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Wear protective gloves/protective clothing/eye protection/face protect

Avoid breathing mist/ vapours/ spray.

Use only outdoors or in a well-ventilated area.

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER/doctor/physician if you feel unwell.

IF SWALLOWED: Immediately call a POISON CENTER/doctor/ physician.

Do NOT induce vomiting.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER/doctor/ physician.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

Store locked up.

Store in a well-ventilated place. Keep container tightly closed.

Keep cool.

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
Ethofumesate	26225-79-6	19.0
Hydrocarbons, C9, aromatics	64742-95-6	59.91
Cyclohexanone	108-94-1	15.0
Branched calcium dodecyl benzene sulfonate	68953-96-8	1.17
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	1.13
Naphthalene	91-20-3	0.15



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### **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 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.

Hold eye open and rinse slowly and gently with water for 15-20 Eye contact

> 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. Do not give

> liquids 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** To date no symptoms are known.

Indication of any immediate medical attention and special treatment needed

**Risks** Contains hydrocarbon solvents. May pose an aspiration pneumonia

hazard.

**Treatment** Appropriate supportive and symptomatic treatment as indicated by the

patient's condition is recommended.

#### SECTION 5: FIREFIGHTING MEASURES

**Extinguishing media** 

Suitable Water spray, Carbon dioxide (CO2), Foam, Sand, Dry chemical

Unsuitable High volume water jet

Special hazards arising

from the substance or

mixture

Dangerous gases are evolved in the event of a fire.

Advice for firefighters

Special protective

equipment for firefighters

Firefighters should wear NIOSH approved self-contained breathing

apparatus and full protective clothing.



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**Further information** Fight fire from upwind position. Keep out of smoke. Cool closed

> containers exposed to fire with water spray. Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains

or water courses.

44.5 °C Flash point

**Auto-ignition temperature** No data available Lower explosion limit No data available Upper explosion limit No data available **Explosivity** Not applicable

#### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

#### Personal precautions, protective equipment and emergency procedures

**Precautions** Remove all sources of ignition. Keep unauthorized people away.

Isolate hazard area. 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. No sparking tools should be used. 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.

Information regarding safe handling, see section 7. Reference to other sections

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 Use only in area provided with appropriate exhaust ventilation. Handle

and open container in a manner as to prevent spillage.

Advice on protection

Keep away from heat and sources of ignition. Take measures to prevent against fire and explosion the build up of electrostatic charge. Vapours may form explosive mixture

with air. Use only explosion-proof equipment.

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.



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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.

# Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children,

preferably in a locked storage area.

**Advice on common storage** Keep away from food, drink and animal feedingstuffs.

### **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **Control parameters**

Components	CAS-No.	Control parameters	Update	Basis	
Ethofumesate	26225-79-6	10 mg/m3 (TWA)		OES BCS*	
Cyclohexanone	108-94-1	20 ppm (TWA)	02 2012	ACGIH	
Cyclohexanone	108-94-1	50 ppm (STEL)	02 2012	ACGIH	
Cyclohexanone	108-94-1	100 mg/m3/25 ppm (REL)	2010	NIOSH	
Cyclohexanone	108-94-1	200 mg/m3/50 ppm (PEL)	02 2006	OSHA Z1	
Cyclohexanone	108-94-1	100 mg/m3/25 ppm (TWA)	1989	OSHA Z1A	
Cyclohexanone	108-94-1	100 mg/m3/25 ppm (TWA)	06 2008	TN OEL	
Cyclohexanone	108-94-1	100 mg/m3/25 ppm (TWA PEL)	08 2010	US CA OEL	
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	200 mg/m3 (TWA)	03 2014	ACGIH	
(Non-aerosol.)		100			
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	100 mg/m3 (REL)	2010	NIOSH	
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	1,600 mg/m3/400 ppm (TWA PEL)	08 2010	US CA OEL	
Naphthalene	91-20-3	10 ppm 02 20° (TWA)		ACGIH	
Naphthalene	91-20-3	50 mg/m3/10 ppm 2010 (REL)		NIOSH	
Naphthalene	91-20-3	75 mg/m3/15 ppm	2010	NIOSH	



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		(STEL)		
Naphthalene	91-20-3	50 mg/m3/10 ppm (PEL)	02 2006	OSHA Z1
Naphthalene	91-20-3	50 mg/m3/10 ppm (TWA)	06 2008	TN OEL
Naphthalene	91-20-3	75 mg/m3/15 ppm (STEL)	01 2019	TN OEL
Naphthalene	91-20-3	0.5 mg/m3/0.1 ppm (TWA PEL)	10 2014	US CA OEL

<sup>\*</sup>OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

### **Biological occupational exposure limits**

Components	CAS-No.	Parameters	Biological specimen	Sampling time	Conc.	Basis
Cyclohexanone	108-94-1	1,2- Cyclohexane diol, with hydrolysis	Urine	Sampling time: End of shift at end of work week.	80 mg/l	ACGIH BEI
Cyclohexanone	108-94-1	Cyclohexanol , with hydrolysis	Urine	Sampling time: End of shift.	8 mg/l	ACGIH BEI
Naphthalene	91-20-3	1-Naphthol, with hydrolysis + 2-Naphthol, with hydrolysis		Sampling time: End of shift.		ACGIH BEI

### **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 Chemical resistant nitrile rubber gloves

**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.



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### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Information on basic physical and chemical properties

Form clear, Liquid
Colour yellow to brown

**Odour** aromatic

Odour ThresholdpHNo data availableMelting point/rangeNo data available

**Boiling Point** 

No data available

Flash point 44.5 °C

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

Lower explosion limit

No data available

Vapour pressure

No data available

Evaporation rate

Relative vapour density

Relative density

No data available

Water solubility soluble

Partition coefficient: n-

octanol/water

Ethofumesate: log Pow: 2.7 (25 °C)

Viscosity, dynamic

Viscosity, kinematic

Oxidizing properties

No data available

No data available

No data available

Not applicable



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### **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.

Heat, flames and sparks.

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, Ingestion, Eye contact, Inhalation

Immediate Effects

Eye Corrosive - causes irreversible eye damage.

Skin May cause skin irritation.

Harmful if inhaled. Inhalation

Information on toxicological effects

Acute oral toxicity LD50 (Rat) > 5,660 mg/kg

Test conducted with a similar formulation.

Acute inhalation toxicity LC50 (male/female combined Rat) > 5.4 mg/l

Exposure time: 4 h

Determined in the form of liquid aerosol. Test conducted with a similar formulation.

Acute dermal toxicity LD50 (Rat) > 4,000 mg/kg

Test conducted with a similar formulation.

Skin corrosion/irritation Slight irritant effect - does not require labelling. (Rabbit)

Test conducted with a similar formulation.

Serious eye damage/eye

irritation

Severe eye irritation. (Rabbit)

Test conducted with a similar formulation.

Respiratory or skin Skin: Non-sensitizing. (Guinea pig)

Test conducted with a similar formulation. sensitisation

### Assessment STOT Specific target organ toxicity - single exposure

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



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### Assessment STOT Specific target organ toxicity - repeated exposure

Ethofumesate did not cause specific target organ toxicity in experimental animal studies. Cyclohexanone did not cause specific target organ toxicity in experimental animal studies.

### **Assessment mutagenicity**

Ethofumesate was not mutagenic or genotoxic in a battery of in vitro and in vivo tests. Cyclohexanone was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

### Assessment carcinogenicity

Ethofumesate was not carcinogenic in lifetime feeding studies in rats and mice. Cyclohexanone is not considered carcinogenic.

#### **ACGIH**

Cyclohexanone	108-94-1	Group A3
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	Group A3
Naphthalene	91-20-3	Group A3

**NTP** 

Naphthalene 91-20-3

**IARC** 

Cyclohexanone 108-94-1 Overall evaluation: 3 Naphthalene 91-20-3 Overall evaluation: 2B

**OSHA** 

None.

### Assessment toxicity to reproduction

Ethofumesate did not cause reproductive toxicity in a two-generation study in rats. Cyclohexanone did not cause reproductive toxicity in a two-generation study in rats.

#### Assessment developmental toxicity

Ethofumesate did not cause developmental toxicity in rats and rabbits. Cyclohexanone did not cause developmental toxicity in rats and rabbits.

#### **Aspiration hazard**

May be fatal if swallowed and enters airways.

### **SECTION 12: ECOLOGICAL INFORMATION**

**Toxicity to fish** LC50 (Danio rerio (Zebra fish)) 45 mg/l

Exposure time: 96 h

Test conducted with a similar formulation.

Toxicity to aquatic EC50 (Daphnia magna (Water flea)) 93.2 mg/l

**invertebrates** Exposure time: 48 h

Test conducted with a similar formulation.



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Toxicity to aquatic plants IC50 (Desmodesmus subspicatus (green algae)) 3.9 mg/l

Exposure time: 72 h

The value mentioned relates to the active ingredient ethofumesate.

EC50 (Lemna minor (common duckweed)) 50.4 mg/l

Biomass; Exposure time: 336 h

The value mentioned relates to the active ingredient ethofumesate.

EC50 (Lemna minor (common duckweed)) > 52.8 mg/l

Growth rate; Exposure time: 336 h

The value mentioned relates to the active ingredient ethofumesate.

**Biodegradability** Ethofumesate:

Not rapidly biodegradable

**Koc** Ethofumesate: Koc: 147

**Bioaccumulation** Ethofumesate: Bioconcentration factor (BCF) 144

Does not bioaccumulate.

Mobility in soil Ethofumesate: Moderately mobile in soils

Results of PBT and vPvB assessment

PBT and vPvB assessment Ethofumesate: 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 other effects to be mentioned.

**Environmental precautions** Do not allow to get into surface water, drains and ground water.

Do not contaminate surface or ground water by cleaning equipment or

disposal of wastes, including equipment wash water.

### **SECTION 13: DISPOSAL CONSIDERATIONS**

Waste treatment methods

**Product** Dispose in accordance with all local, state/provincial and federal

regulations.

Contaminated packaging Consult state and local regulations regarding the proper disposal of

container.

Follow advice on product label and/or leaflet.

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.



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49CFR

UN number 1993 Class 3 Packaging group III

Proper shipping name FLAMMABLE LIQUIDS, N.O.S.

(HYDROCARBONS, C9, AROMATICS, CYCLOHEXANONE)

RQ Reportable Quantity is reached with 33,333 lb of product.

**IMDG** 

UN number 1993
Class 3
Packaging group III
Marine pollutant YES

Proper shipping name FLAMMABLE LIQUID, N.O.S.

(HYDROCARBONS, C9, AROMATICS)

IATA

UN number 1993
Class 3
Packaging group III
Environm. Hazardous Mark NO

Proper shipping name FLAMMABLE LIQUID, N.O.S.

(HYDROCARBONS, C9, AROMATICS)

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.

Freight Classification: COMPOUNDS, TREE OR WEED KILLING, N.O.I. other than

poison, HAVING A DENSITY OF 20 LBS OR GREATER PER

**CUBIC FOOT** 

### **SECTION 15: REGULATORY INFORMATION**

**EPA Registration No.** 432-941

**US Federal Regulations** 

**TSCA list** 

Cyclohexanone 108-94-1
Branched calcium dodecyl benzene 68953-96-8

sulfonate

Solvent Naphtha (petroleum), heavy 64742-94-5

aromatic

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.



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# **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.

Naphthalene 91-20-3

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

**US State Right-To-Know Ingredients** 

Cyclohexanone 108-94-1 CA, CT, IL, MN, NJ, RI

Solvent Naphtha (petroleum), heavy 64742-94-5 CT, NJ, RI

aromatic

**Environmental** 

**CERCLA** 

Yes

Cyclohexanone 108-94-1

Listed

Clean Water Section 307(a)(1)

Yes

Naphthalene 91-20-3 **Safe Drinking Water Act Maximum Contaminant Levels** 

Yes

Naphthalene 91-20-3

#### **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: Danger!

**Hazard statements:** Corrosive - causes irreversible eye damage.

Harmful if swallowed. Causes skin irritation.

#### **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



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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 - 3 Flammability - 2 Instability - 0 Others - none

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

Health - 3 Flammability - 2 Physical Hazard - 1 PPE -

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

**Reason for Revision:** The following sections have been revised: Section 14: Transport Information.

Section 15: Regulatory information. Reviewed and updated for general editorial purposes.

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