

Version 2.0

Revision Date 12/08/2015 Ref. 130000034023

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : DuPont[™] Enlite[®] Herbicide Tradename/Synonym : DuPont[™] Herbicide 780 SB

DPX-QGC78

Chlorimuron ethyl (Ethyl 2-[[[(4-chloro-6-methoxypyrimidin-2-

yl)amino]carbonyl]amino]sulfonyl]benzoate)

Flumioxazin (2-[7-fluor-3,4-dihydro-3oxo-4-(2-propynyl)-

2H-1,4-benzoxazin-6-yl]-4,5,6,7-tetrahydro-1H-isoindole-1,3(2H)-dione)

Thifensulfuron methyl (Methyl 3-[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-2-thiophenecarboxylate)

Product Use : Herbicide

Restrictions on use :

Do not use product for anything outside of the above specified uses

Manufacturer/Supplier : DuPont

974 Centre Road

Wilmington, DE 19805, USA

Product Information : 1-800-441-7515 (outside the U.S. 1-302-774-1000) Medical Emergency : 1-800-441-3637 (outside the U.S. 1-302-774-1139)

Transport Emergency : CHEMTREC: +1-800-424-9300 (outside the U.S. +1-703-527-3887)

SECTION 2. HAZARDS IDENTIFICATION

Product hazard category

Acute toxicity (Inhalation) Category 4
Reproductive toxicity Category 2



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Label content

Pictogram :



Signal word : Warning

Hazardous warnings : Harmful if inhaled.

Suspected of damaging fertility or the unborn child.

Hazardous prevention

measures

: Obtain special instructions before use.

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

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

Use only outdoors or in a well-ventilated area.
Use personal protective equipment as required.

IF INHALED: Remove victim to fresh air and keep at rest in a position

comfortable for breathing.

IF exposed or concerned: Get medical advice/attention.

Store locked up.

Dispose of contents/ container to an approved waste disposal plant.

Other hazards

Information presented in Section 2 conforms to the requirements of the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard of 2012. See Section 15 for applicable information conforming to the requirements of the Federal Insecticide Fungicide and Rodenticide Act (FIFRA), as required by the US Environmental Protection Agency (EPA), or by state Regulatory Agencies.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Safety Data Sheet



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Component	CAS-No.	Concentration
Thifensulfuron methyl	79277-27-3	8.8 %
Chlorimuron ethyl	90982-32-4	2.85 %
Flumioxazin	103361-09-7	36.21 %
Sodium carbonate	497-19-8	1 - 5 %
Titanium dioxide	13463-67-7	0.1 - 0.5 %
Sodium dodecyl sulphate	151-21-3	1 - 5 %
Other Ingredients		41.64 - 50.04 %

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4. FIRST AID MEASURES



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General advice : Information presented in Section 4 conforms to the requirements of the

> Occupational Safety and Health Administration (OSHA) Hazard Communication Standard of 2012. See Section 15 for applicable information conforming to the requirements of the Federal Insecticide Fungicide and Rodenticide Act (FIFRA), as required by the US Environmental Protection Agency (EPA), or by state

Regulatory Agencies.

For medical emergencies involving this product, call toll free 1-800-441-3637.

See Label for Additional Precautions and Directions for Use.

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 poison

control center or doctor for treatment advice.

Skin contact : Take off all contaminated clothing immediately. Rinse skin immediately with

plenty of water for 15-20 minutes. Call a poison control center or doctor for

treatment advice.

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 poison control center or doctor for treatment advice.

: Call a poison control center or doctor for treatment advice. Have person sip a Ingestion

> glass of water if able to swallow. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Do not give anything by mouth to an

unconscious person.

Most important

symptoms/effects, acute

and delayed

Protection of first-aiders

Notes to physician

: No applicable data available.

: No applicable data available. : No applicable data available.

SECTION 5. FIREFIGHTING MEASURES

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

Unsuitable extinguishing

media

: High volume water jet, (contamination risk)

Specific hazards : No applicable data available.



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for firefighters

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

Further information : (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

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Safeguards (Personnel) : Evacuate personnel, thoroughly ventilate area, use self-contained breathing

apparatus. Use personal protective equipment.

Environmental precautions : Prevent material from entering sewers, waterways, or low areas.

Spill Cleanup : Soak up with inert absorbent material. Sweep up or vacuum up spillage and

> collect in suitable container for disposal. Flush away traces with water and detergent. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. For minor spills,

leaks, etc., follow all precautions indicated on the label and clean up

immediately.

If spill area is on ground near valuable plants or trees, remove top 2 inches of

soil after initial cleanup.

Accidental Release Measures : Never return spills in original containers for re-use. Dispose of in accordance

with local regulations.

SECTION 7. HANDLING AND STORAGE

Handling (Personnel) : Wash hands thoroughly with soap and water after handling and before eating,

drinking, chewing gum, using tobacco, or using the toilet. Remove

clothing/PPE immediately if material gets inside. Wash thoroughly and put on clean clothing. Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon

as possible, wash thoroughly and change into clean clothing.

: Keep away from heat and sources of ignition. Handling (Physical Aspects)



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Dust explosion class : No applicable data available.

Storage : Store in original container. Do not contaminate water, other pesticides,

fertilizer, food or feed in storage. Store in a cool, dry place. Keep out of the

reach of children.

Storage period : No applicable data available.

Storage temperature : No applicable data available.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls : Information presented in Section 8 conforms to the requirements of the

Occupational Safety and Health Administration (OSHA) Hazard

Communication Standard of 2012. See Section 15 for applicable information conforming to the requirements of the Federal Insecticide Fungicide and Rodenticide Act (FIFRA), as required by the US Environmental Protection Agency (EPA), or by state Regulatory Agencies. When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS. IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE

specified for "Applicators and Other Handlers" and have such PPE

immediately available for use in an emergency, such as a spill or equipment

breakdown.

Personal protective equipment

Skin and body protection : Mixers, loaders, applicators and other handlers must wear:

Long sleeved shirt and long pants

Chemical resistant gloves made of any waterproof material, such as polyvinyl

chloride, nitrile rubber, or butyl rubber

Shoes plus socks

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has

been treated, such as plants, soil, or water, is:

Coveralls

Chemical resistant gloves made of any waterproof material, such as

polyethylene or polyvinyl chloride.

Shoes plus socks

Protective measures : Follow manufacturer's instructions for cleaning/maintaining PPE. If no such

instructions for washables exist, use detergent and hot water. Keep and



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wash PPE separately from other laundry. Use this product in accordance with its label.

Exposure Guidelines
Exposure Limit Values

Sodium carbonate

AEL * (DUPONT) 5 mg/m3 8 & 12 hr. TWA Total dust.

Thifensulfuron methyl

AEL * (DUPONT) 5 mg/m3 8 & 12 hr. TWA Total dust.

Chlorimuron ethyl

AEL * (DUPONT) 10 mg/m3 8 & 12 hr. TWA Total dust.
AEL * (DUPONT) 5 mg/m3 8 & 12 hr. TWA Respirable dust.

Flumioxazin

No applicable data available.

Titanium dioxide

Permissible (OSHA) 15 mg/m3 8 hr. TWA Total dust.

exposure limit:

TLV (ACGIH) 10 mg/m3 TWA

AEL * (DUPONT) 10 mg/m3 8 & 12 hr. TWA Total dust.
AEL * (DUPONT) 5 mg/m3 8 & 12 hr. TWA Respirable dust.

Sodium dodecyl sulphate

No applicable data available.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

^{*} AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.



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Physical state : solid

Form : solid, granules
Color : ivory, light brown

Odor : slight

Odor threshold : No applicable data available.

pH : 6.9 - 7.7

Melting point/range : No applicable data available.

Boiling point/boiling range : No applicable data available.

Flash point : No applicable data available.

Evaporation rate : No applicable data available.

Flammability (solid, gas) : No applicable data available.

Upper explosion limit : No applicable data available.

Lower explosion limit : No applicable data available.

Vapour Pressure : No applicable data available.

Vapour density : No applicable data available.

Specific gravity (Relative

density)

: No applicable data available.

Water solubility : No applicable data available.

Solubility(ies) : No applicable data available.

Partition coefficient: n-

octanol/water

: No applicable data available.

Auto-ignition temperature : No applicable data available.

Decomposition temperature : No applicable data available.

Viscosity, kinematic : No applicable data available.

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Viscosity, dynamic : No applicable data available.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No applicable data available.

Chemical stability : Stable at normal temperatures and storage conditions.

Possibility of hazardous

reactions

Polymerization will not occur.

Conditions to avoid : None reasonably foreseeable.

Incompatible materials : No materials to be especially mentioned.

Hazardous decomposition

products

: No materials to be especially mentioned.

SECTION 11. TOXICOLOGICAL INFORMATION

DuPont[™] Enlite[®] Herbicide

Inhalation 4 h Acute

: > 1.4 mg/l , Rat

toxicity estimate

Dermal Acute toxicity

: > 2,421 mg/kg , Rabbit

estimate

Dermal

Skin irritation

Rat

Oral Acute toxicity estimate : > 5,000 mg/kg, Rat

. No okio imitotion Dobbit

No skin irritation, Rabbit
 Minimal effects that do not meet the threshold for classification.

Eye irritation : No eye irritation, Rabbit

Minimal effects that do not meet the threshold for classification.

Sensitisation : Did not cause sensitisation on laboratory animals., Guinea pig

Further information : Information presented in this Section conforms to the requirements of

the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard of 2012. See Section 15 for applicable information conforming to the requirements of the Federal Insecticide Fungicide and Rodenticide Act (FIFRA), as required by the US Environmental Protection Agency (EPA), or by state Regulatory

Agencies.

Thifensulfuron methyl



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Repeated dose toxicity

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

Carcinogenicity : Animal testing did not show any carcinogenic effects.

Mutagenicity : Tests on bacterial or mammalian cell cultures did not show mutagenic

effects.

Animal testing did not show any mutagenic effects.

Reproductive toxicity : No toxicity to reproduction

Animal testing showed no reproductive toxicity.

Teratogenicity : 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.

Chlorimuron ethyl

Repeated dose toxicity

The following effects occurred at levels of exposure that significantly

exceed those expected under labeled usage conditions.

Dermal Rabbit

_

No toxicologically significant effects were found.

Oral Dog

_

No toxicological effects warranting significant target organ toxicity classification were seen below the recommended guidance values for classification., Abnormal decrease in number of red blood cells

Oral Rat

-

No adverse effect has been observed in chronic toxicity tests.



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Carcinogenicity : Not classifiable as a human carcinogen.

Animal testing did not show any carcinogenic effects.

Mutagenicity : Tests on bacterial or mammalian cell cultures did not show mutagenic

effects.

Animal testing did not show any mutagenic effects.

Reproductive toxicity : No toxicity to reproduction

Teratogenicity : Animal testing showed effects on embryo-fetal development at levels

equal to or above those causing maternal toxicity.

Flumioxazin

Repeated dose toxicity : Ingestion

Rat

No toxicological effects warranting significant target organ toxicity classification were seen below the recommended guidance values for

classification., altered hematology, Organ weight changes

Ingestion Dog

No toxicological effects warranting significant target organ toxicity classification were seen below the recommended guidance values for

classification., altered hematology, Organ weight changes

Carcinogenicity : Animal testing did not show any carcinogenic effects.

Mutagenicity : Animal testing did not show any mutagenic effects.

Did not cause genetic damage in cultured bacterial cells.

Genetic damage in cultured mammalian cells was observed in some

laboratory tests but not in others.

Reproductive toxicity : Some evidence of adverse effects on sexual function and fertility,

and/or on development, based on animal experiments.

Teratogenicity : Animal testing showed effects on embryo-foetal development at levels

below those causing maternal toxicity.

Sodium carbonate

Repeated dose toxicity : Inhalation

Rat

-



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Respiratory tract irritation

Mutagenicity Tests on bacterial or mammalian cell cultures did not show mutagenic

effects.

Evidence suggests this substance does not cause genetic damage in

animals.

Reproductive toxicity : Animal testing showed no reproductive toxicity.

Teratogenicity Animal testing showed no developmental toxicity.

Titanium dioxide

Repeated dose toxicity Oral

Rat

NOAEL: 1,000 mg/kgMethod: OECD Test Guideline 408

No toxicologically significant effects were found.

Oral Rat

No toxicologically significant effects were found.

Carcinogenicity Not classifiable as a human carcinogen.

Overall weight of evidence indicates that the substance is not

carcinogenic.

Animal testing did not show any mutagenic effects. Mutagenicity

Tests on bacterial or mammalian cell cultures did not show mutagenic

effects.

Reproductive toxicity : Animal testing showed no reproductive toxicity.

Teratogenicity Animal testing showed no developmental toxicity.

Sodium dodecyl sulphate

Repeated dose toxicity Oral

Rat

NOAEL: > 430 mg/kgMethod: OECD Test Guideline 408

No toxicologically significant effects were found.

No toxicologically significant effects were found.



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Carcinogenicity : Not classifiable as a human carcinogen.

Mutagenicity : Tests on bacterial or mammalian cell cultures did not show mutagenic

effects.

Animal testing did not show any mutagenic effects.

Reproductive toxicity : No toxicity to reproduction

Animal testing showed no reproductive toxicity.

Teratogenicity : Animal testing showed no developmental toxicity.

Carcinogenicity

The carcinogenicity classifications for this product and/or its ingredients have been determined according to HazCom 2012, Appendix A.6. The classifications may differ from those listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or those found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition).

Material IARC NTP OSHA

Titanium dioxide 2B

SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity

Thifensulfuron methyl

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

14 d EC50 : Lemna minor (duckweed) 0.0013 mg/l

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

28 d : NOEC Americamysis bahia (mysid shrimp) 7.93 mg/l

Chlorimuron ethyl

96 h LC50 : Oncorhynchus mykiss (rainbow trout) > 1,000 mg/l

96 h LC50 : Lepomis macrochirus (Bluegill sunfish) > 100 mg/l

72 h EC50 : Pseudokirchneriella subcapitata (green algae) 0.001 mg/l



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48 h EC50 : Daphnia magna (Water flea) > 1,000 mg/l

Flumioxazin

96 h LC50 : Cyprinus carpio (Carp) > 1.3 mg/l

72 h EC50 : Desmodesmus subspicatus (green algae) 0.0006 mg/l

72 h NOEC : Desmodesmus subspicatus (green algae) 0.00023 mg/l

48 h EC50 : Daphnia magna (Water flea) 17 mg/l

Sodium carbonate

96 h LC50 : Lepomis macrochirus (Bluegill sunfish) 300 mg/l

48 h LC50 : Ceriodaphnia dubia (water flea) 200 - 227 mg/l

4 d : EC50 Daphnia magna (Water flea) 228 - 297 mg/l

Titanium dioxide

96 h LC50 : Pimephales promelas (fathead minnow) > 1,000 mg/l

72 h ErC50 : Pseudokirchneriella subcapitata (green algae) > 100 mg/l see user

defined free text

72 h NOEC : Algae 5,600 mg/l see user defined free text

48 h EC50 : Daphnia magna (Water flea) > 100 mg/l OECD Test Guideline 202

Sodium dodecyl sulphate

96 h LC50 : Pimephales promelas (fathead minnow) 29 mg/l OECD Test

Guideline 203

72 h EbC50 : Desmodesmus subspicatus (green algae) 53 mg/l

72 h ErC50 : Desmodesmus subspicatus (green algae) > 120 mg/l

72 h NOEC : Desmodesmus subspicatus (green algae) 30 mg/l

48 h EC50 : Ceriodaphnia dubia (water flea) 5.55 mg/l

42 d : NOEC Pimephales promelas (fathead minnow) > 1.357 mg/l

21 d : NOEC Daphnia magna (Water flea) 2 - 4 mg/l



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Environmental Fate

Sodium carbonate

Biodegradability : The methods for determining biodegradability are not applicable to

inorganic substances.

Bioaccumulation : Does not bioaccumulate.

Sodium dodecyl sulphate

Biodegradability : 95 % OECD Test Guideline 301

Readily biodegradable

Additional ecological information : Environmental Hazards: This product is toxic to non-target plants.

Toxic to aquatic organisms. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate. Do not apply where/when conditions favour runoff. See product label for additional

application instructions relating to environmental precautions.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste disposal methods -

Product

: Do not contaminate water, food or feed by disposal. Wastes resulting from the $\,$

use of this product must be disposed of on site or at an approved waste

disposal facility.

Waste disposal methods -

Container

: Container Refilling and Disposal:

Refer to the product label for instructions.

Do not transport if this container is damaged or leaking.

In the event of a major spill, fire or other emergency, call 1-800-441-3637 day

or night.

Contaminated packaging : No applicable data available.

SECTION 14. TRANSPORT INFORMATION

IATA_C UN number : 3077



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IMDG

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Proper shipping name : Environmentally hazardous substance, solid, n.o.s.

(Flumioxazin)

Class : 9
Packing group : III
Labelling No. : 9MI
UN number : 3077

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE,

SOLID, N.O.S. (Flumioxazin)

Class : 9
Packing group : III
Labelling No. : 9

Marine pollutant : yes (Flumioxazin)

Not regulated as a hazardous material by DOT.

SECTION 15. REGULATORY INFORMATION

Other regulations : This Safety Data Sheet is for a pesticide product registered by the US

Environmental Protection Agency (USEPA) and various state regulatory agencies, and is therefore also subject to certain requirements under US and state pesticide laws, including the Federal Insecticide Fungicide and Rodenticide Act (FIFRA). These requirements differ from the classification criteria and hazard information required by OSHA for safety data sheets, and for workplace labels of non-pesticide chemicals. The following is information

determined by USEPA, and various states.

CAUTION!

Harmful if absorbed through the skin or inhaled. Causes moderate eye irritation. Avoid contact with skin, eyes and clothing. Avoid breathing dust or

spray mist. Remove and wash contaminated clothing before re-use.

SARA 313 Regulated

Chemical(s)

: Chlorimuron ethyl

PA Right to Know Regulated Chemical(s) : Substances on the Pennsylvania Hazardous Substances List present at a concentration of 1% or more (0.01% for Special Hazardous Substances):

Kaolin, Sucrose



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NJ Right to Know Regulated Chemical(s) : Substances on the New Jersey Workplace Hazardous Substance List present

at a concentration of 1% or more (0.1% for substances identified as carcinogens, mutagens or teratogens): Kaolin, Chlorimuron ethyl

Title III hazard classification

: Acute Health Hazard: Yes

Chronic Health Hazard: Yes

Fire: No

Reactivity/Physical hazard: No

Pressure: No

EPA Reg. No. : 352-757

In the United States this product is regulated by the US Environmental Protection Agency (EPA) under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.

SECTION 16. OTHER INFORMATION

Health : 1
Flammability : 1

Reactivity/Physical hazard : 0

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Contact person : DuPont Crop Protection, Wilmington, DE, 19805, Phone: 1-888-638-7668

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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