

**DuPont™ Hyvar® X Herbicide**

Version 2.0

Revision Date 06/19/2015

Ref. 130000023988

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™ Hyvar® X Herbicide
Tradename/Synonym : DPX-N0976 80WP
B10048052
BROMACIL (5-bromo-3-sec-butyl-6-methyluracil)
DPX-N0976

Product Use : Herbicide

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

Manufacturer/Supplier : DuPont
4417 Lancaster Pike
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**

Combustible dust	
Acute toxicity (Oral)	Category 4
Carcinogenicity	Category 1A
Specific target organ toxicity - repeated exposure	Category 2

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Label content

Pictogram :



Signal word :

Danger

Hazardous warnings :

May form combustible dust concentrations in air.
Harmful if swallowed.
May cause cancer.
May cause damage to organs through prolonged or repeated exposure.
(Respiratory system, Kidney)

Hazardous prevention measures :

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use personal protective equipment as required.
IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
IF exposed or concerned: Get medical advice/ attention.
Rinse mouth.
Store locked up.
Dispose of contents/ container to an approved waste disposal plant.

Other hazards

No applicable data available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

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Component	CAS-No.	Concentration
Bromacil	314-40-9	80 %
Sodium alkylnaphthalene sulfonate		1 - 5 %
Other Ingredients		15 - 19 %

Present as an impurity in the clay component of this product:

Quartz	14808-60-7	0.5 - 1 %
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The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4. FIRST AID MEASURES

- General advice : Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
For medical emergencies involving this product, call toll free 1-800-441-3637.
See Label for Additional Precautions and Directions for Use.
Never give anything by mouth to an unconscious person.
- 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.

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- 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.
- Ingestion : Call a poison control center or doctor for treatment advice. Have person sip a glass of water if able to swallow. 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.
- Most important symptoms/effects, acute and delayed : No applicable data available.
- Protection of first-aiders : No applicable data available.
- Notes to physician : No applicable data available.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray, Dry chemical, Foam, Carbon dioxide (CO2)
- Unsuitable extinguishing media : High volume water jet, (contamination risk)
- Specific hazards : Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. To reduce the potential for dust explosions, do not permit dust to accumulate.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.
- 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.
Dike off area to prevent runoff and contamination of water sources.

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.



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- Safeguards (Personnel) : No applicable data available.
- Environmental precautions : Prevent material from entering sewers, waterways, or low areas.
- Spill Cleanup : Spills of fine material should be cleaned using gentle sweeping or vacuuming. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used.
- 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) : Airborne dusts are potentially explosive. Handling and processing operations should be conducted in accordance with best practices (e.g.NFPA-654). Pneumatic conveying and other mechanical handling operations can generate combustible dust. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. 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.
- Handling (Physical Aspects) : Keep away from heat and sources of ignition. Avoid dust formation in confined areas. During processing, dust may form explosive mixture in air. All conductive elements of the system that come in contact with this material should be electrically bonded and grounded. Take measures to prevent the build up of electrostatic charge.
- Dust explosion class : No applicable data available.
- Storage : Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Store in original container. Keep tightly closed in a dry, cool and well-ventilated 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



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- Engineering controls : Use only with adequate ventilation. 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.

- Personal protective equipment
 - Respiratory protection : Mixers and loaders must also wear a non-powered air purifying respirator equipped with a N, R, or P series filter (NIOSH approved number prefix 84A) for mixing and loading.

 - Skin and body protection : Applicators and other handlers must wear:
 - Long sleeved shirt and long pants
 - Chemical resistant gloves made of any waterproof material
 - 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
 - Shoes plus socks

- Protective measures : Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Exposure Guidelines
Exposure Limit Values

Bromacil			
TLV	(ACGIH)	10 mg/m ³	TWA
AEL *	(DUPONT)	10 mg/m ³	8 & 12 hr. TWA

Quartz			
Permissible exposure limit:	(OSHA)	2.4 millions of particles per cubic foot of air	TWA
		Respirable.	
		Remarks	The exposure limit is calculated from the equation, 250/(%SiO ₂ +5), using a value of 100% SiO ₂ . Lower percentages of SiO ₂ will yield higher exposure limits.


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Permissible exposure limit:	(OSHA)	0.1 mg/m ³	TWA Respirable.
		Remarks	The exposure limit is calculated from the equation, $10/(\%SiO_2+2)$, using a value of 100% SiO ₂ . Lower percentages of SiO ₂ will yield higher exposure limits.
Permissible exposure limit:	(OSHA)	0.3 mg/m ³	TWA Total dust.
		Remarks	The exposure limit is calculated from the equation, $30/(\%SiO_2+2)$, using a value of 100% SiO ₂ . Lower values of % SiO ₂ will give higher exposure limits.
TLV	(ACGIH)	0.025 mg/m ³	TWA Respirable fraction.
AEL *	(DUPONT)	0.01 mg/m ³	12 hr. TWA Respirable dust.
AEL *	(DUPONT)	0.02 mg/m ³	8 hr. TWA Respirable dust.
Naphthalenesulfonic acid, sodium salt, isopropylated			
AEL *	(DUPONT)	0.05 mg/m ³	8 & 12 hr. TWA

Other Ingredients
No applicable data available.

* 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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	: solid
Form	: solidwetable powder
Color	: beige
Odor	: none
Odor threshold	: No applicable data available.
pH	: 8.5 - 9.5 at 20 g/l 20 °C (68 °F)
Melting point/range	: No applicable data available.

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Boiling point/boiling range	: No applicable data available.
Flash point	: Not applicable
Evaporation rate	: No applicable data available.
Flammability (solid, gas)	: May form combustible dust concentrations in air.
Upper explosion limit	: No applicable data available.
Lower explosion limit	: 0.11 vol%
Vapour Pressure	: No applicable data available.
Vapour density	: No applicable data available.
Specific gravity (Relative density)	: No applicable data available.
Bulk density	: 0.53 g/cm ³
Water solubility	: dispersible
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.
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	: No applicable data available.


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reactions
 Conditions to avoid : No applicable data available.
 Incompatible materials : Amines especially primary amines

 Hazardous decomposition products : Decomposition will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

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Inhalation 4 h LC50 : > 5.2 mg/l , Rat

 Dermal LD50 : > 2,000 mg/kg , Rabbit

 Oral LD50 : 2,000 mg/kg , male, Rat

 Oral LD50 : 1,300 mg/kg , female, Rat

 Skin irritation : No skin irritation, Rabbit

 Eye irritation : No eye irritation, Rabbit
 Minimal effects that do not meet the threshold for classification.

 Sensitisation : Animal test did not cause sensitization by skin contact., Guinea pig

Bromacil

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

Oral
 Rat

-

Liver effects, Organ weight changes, Thyroid effects, Reduced body weight gain

Inhalation

Rat

-

Increased liver weight, altered blood chemistry

Carcinogenicity : Not classifiable as a human carcinogen.
 The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.


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An increased incidence of tumours was observed in laboratory animals.

Mutagenicity : Weight of evidence does not support classification as a germ cell mutagen.

Reproductive toxicity : No toxicity to reproduction
Animal testing showed no reproductive toxicity.

Teratogenicity : Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

Sodium alkylnaphthalene sulfonate
Repeated dose toxicity

: Inhalation
Rat
-
Target Organs: Respiratory Tract
Respiratory tract damage, Pathologic changes

Oral
Rat
-
Target Organs: Kidney
Kidney effects, Reduced body weight gain

Reproductive toxicity : No toxicity to reproduction
Animal testing showed effects on reproduction at levels equal to or above those causing parental toxicity.

Teratogenicity : Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

Quartz

Repeated dose toxicity : Inhalation
Rat
-
Target Organs: Lungs
The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.
Fluid retention in lungs (pulmonary oedema), lung effects, Inflammation, Chronic lung disease, Fibrosis

Carcinogenicity : Human carcinogen.
An increased incidence of tumours was observed in laboratory


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animals.

An increased risk of cancer in humans has been shown in workplace-based studies.

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
Quartz	1	X	

SECTION 12. ECOLOGICAL INFORMATION
Aquatic Toxicity
Bromacil

96 h LC50	:	Lepomis macrochirus (Bluegill sunfish) 127 mg/l
96 h LC50	:	Oncorhynchus mykiss (rainbow trout) 36 mg/l
72 h ErC50	:	Pseudokirchneriella subcapitata (green algae) 0.017 mg/l
NOEC	:	Algae 0.001 mg/l
48 h EC50	:	Daphnia magna (Water flea) 119 mg/l

Additional ecological information : Environmental Hazards: 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. 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


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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
	Proper shipping name	: Environmentally hazardous substance, solid, n.o.s. (Bromacil)
	Class	: 9
	Packing group	: III
	Labelling No.	: 9MI
IMDG	UN number	: 3077
	Proper shipping name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Bromacil)
	Class	: 9
	Packing group	: III
	Labelling No.	: 9
	Marine pollutant	: yes (Bromacil)

Not regulated as a hazardous material by DOT.

Marine Pollutants assigned UN number 3077 and 3082 in single or combination packaging containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 KG or less for solids may be transported as non-dangerous goods as provided in section 2.10.2.7 of IMDG code, IATA special provision A197, and ADR/RID special provision 375.

SECTION 15. REGULATORY INFORMATION



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- Other regulations : This Safety Data Sheet is for a pesticide product registered by the US Environmental Protection Agency (USEPA) and is therefore also subject to certain labeling requirements under US pesticide law (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 the mandatory hazard information required by USEPA on the pesticide label:
- CAUTION!**
- Harmful if swallowed or absorbed through the skin . Causes moderate eye irritation. Avoid contact with skin, eyes and clothing.
- SARA 313 Regulated Chemical(s) : Bromacil
- 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): Bromacil, Silicon dioxide, amorphous
- 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): Bromacil, Silicon dioxide, amorphous
- Title III hazard classification : Acute Health Hazard: Yes
Chronic Health Hazard: Yes
Fire: No
Reactivity/Physical hazard: No
Pressure: No
- EPA Reg. No. : 352-287
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.
- California Prop. 65 : **WARNING!** This product contains a chemical or chemicals known to the State of California to cause cancer.

SECTION 16. OTHER INFORMATION

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NFPA

Health	:	1
Flammability	:	1
Reactivity/Physical hazard	:	0

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Contact person : DuPont Crop Protection, Wilmington, DE, 19898, Phone: 1-888-638-7668

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