

## 1. Identification

<b>Product identifier</b>	<b>Hyvar<sup>®</sup> X Crop Herbicide</b>	
<b>Other means of identification</b>		
<b>SDS number</b>	513	
<b>Product registration number</b>	5481-632	
<b>Synonyms</b>	Bromacil (5-Bromo-3-sec-butyl-6-methyluracil)	
<b>Recommended use</b>	Herbicide.	
<b>Recommended restrictions</b>	No other uses are advised. Keep out of the Reach of Children!	
<b>EPA Registration number</b>	EPA: 5481-632	
<b>Manufacturer/Importer/Supplier/Distributor information</b>		
<b>Manufacturer</b>		
<b>Company name</b>	AMVAC Chemical Corporation	
<b>Address</b>	4695 MacArthur Court Suite 1200 Newport Beach, CA 92660	
<b>Telephone</b>	AMVAC Chemical Corp	949-260-1200
	AMVAC Chemical Corp	949-260-6270(FAX)
<b>Website</b>	www.amvac.com	
<b>E-mail</b>	CustServ@amvac.com	
<b>Emergency phone number</b>	Medical	888-681-4261
	CHEMTREC <sup>®</sup> (USA+Canada)	800-424-9300
	Product Use	888-462-6822
	CHEMTREC <sup>®</sup> (Outside USA)	+1-703-527-3887

## 2. Hazard(s) identification

<b>Physical hazards</b>	Not classified.	
<b>Health hazards</b>	Acute toxicity, oral	Category 4
	Carcinogenicity	Category 1A
	Specific target organ toxicity, repeated exposure	Category 2
<b>Environmental hazards</b>	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1
<b>OSHA defined hazards</b>	Combustible dust	

### Label elements



<b>Signal word</b>	Danger
<b>Hazard statement</b>	May form combustible dust concentrations in air. May cause cancer. May cause damage to organs through prolonged or repeated exposure. (Respiratory system, Kidney) Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

## Precautionary statement

### Prevention

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Do not breathe dust/fume/gas/mist/vapors/spray.  
Wash skin thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Avoid release to the environment.

### Response

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
Rinse mouth.  
IF exposed or concerned: Get medical advice/attention.  
Collect spillage.

### Storage

Store locked up.

### Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

### Hazard(s) not otherwise classified (HNOC)

None known.

### Supplemental information

None.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Bromacil	5-Bromo-3-sec-butyl-6-methyluracil	314-40-9	80.0%
Sodium alkylnaphthalene sulfonate		68442-09-1	1-5%

### Additional components

Chemical name	Common name and synonyms	CAS number	%
Other compounds			15-19%
Crystalline Silica		14808-60-7	≥ 0.1%

## 4. First-aid measures

### Inhalation

If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.

### Skin contact

Take off immediately all contaminated clothing.  
Wash off immediately with plenty of water for at least 15 minutes.

### Eye contact

Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses.  
Call a physician or poison control center immediately.  
If there will be a delay in getting medical attention, rinse the eyes an additional 15 minutes.

### Ingestion

Call a physician or poison control center immediately.

Have person sip a glass of water if able to swallow. Never give anything by mouth to a victim who is unconscious or is having convulsions.  
Do not induce vomiting without advice from poison control center.

### Most important symptoms/effects, acute and delayed

Exposure to dusts may cause temporary irritation of the eyes, skin, and respiratory tract.

### Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

### General information

Have the product label with you when calling a poison control center or doctor or going for treatment.  
For medical emergencies involving this product, call toll free 1-888-681-4261.  
See Label for Additional Precautions and Directions for Use.

## 5. Fire-fighting measures

### Suitable extinguishing media

Water spray. Foam.

### Unsuitable extinguishing media

Do not use water jet. (contamination risk)

### Specific hazards arising from the chemical

Not applicable.

### Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions**

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 all applicable 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.  
Control Runoff.

**Specific methods**

Use standard firefighting procedures and consider the hazards of other involved materials.

**General fire hazards**

No unusual fire or explosion hazards noted.

**6. Accidental release measures****Personal precautions, protective equipment and emergency procedures**

Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up**

Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up. Follow all applicable Federal, State/Provincial and Local laws/regulations.

Wear appropriate protective equipment and clothing during clean-up.

Shovel up, sweep up or vacuum up the material and place in a container for salvage or disposal. If spill area is on ground near valuable plants or trees, remove top 2 inches of soil after initial cleanup.

**Environmental precautions**

Avoid discharge into drains, sewers, water courses or low areas.

**7. Handling and storage****Precautions for safe handling**

Handling and processing operations should be conducted in accordance with 'best practices' (e.g. NFPA-654). Keep away from heat and sources of ignition. Remove clothing/PPE immediately if material gets inside. Wash thoroughly and put on clean clothing. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.

**Conditions for safe storage, including any incompatibilities**

Store in original tightly closed container. Store in cool, dry place. Do not contaminate water, other pesticides, fertilizer, food or feed products. Keep out of the reach of children.

**8. Exposure controls/personal protection****Occupational exposure limits**

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Additional components	Type	Value	Form
Crystalline Silica (CAS 14808-60-7)	PEL	0.05 mg/m <sup>3</sup>	Respirable dust.

**US. OSHA Table Z-3 (29 CFR 1910.1000)**

Additional components	Type	Value	Form
Crystalline Silica (CAS 14808-60-7)	TWA	0.1 mg/m <sup>3</sup>	Respirable.
		2.4 mppcf	Respirable.

**US. ACGIH Threshold Limit Values Components**

Components	Type	Value
Bromacil (CAS 314-40-9)	TWA	10 mg/m <sup>3</sup>

Additional components	Type	Value	Form
Crystalline Silica (CAS 14808-60-7)	TWA	0.025 mg/m <sup>3</sup>	Respirable fraction.

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value
Bromacil (CAS 314-40-9)	TWA	10 mg/m <sup>3</sup>
		1 ppm

**US. NIOSH: Pocket Guide to Chemical Hazards****Additional components****Type****Value****Form**Crystalline Silica (CAS  
14808-60-7)

TWA

0.05 mg/m<sup>3</sup>

Respirable dust.

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**

Ensure 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 [CFR 170.240 (D)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS. Refer to the product label for additional Engineering Controls.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Wear safety glasses with side shields (or goggles).

**Skin protection****Hand protection**

Chemical resistant gloves.

**Other**

Long-sleeved shirt and long pants or coveralls, socks and closed toe shoes are required.

**Respiratory protection**

The label should be consulted for more detailed instructions on appropriate PPE.

Use a NIOSH/MSHA approved dust/mist filtering respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. The label should be consulted for more specific information with regards to respiratory protection.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**9. Physical and chemical properties****Appearance****Physical state**

Solid.

**Form**Solid.  
Wettable powder.**Color**

Beige

**Odor**

None.

**Odor threshold**

Not available.

**pH**

8.5 - 9.5 @ 20 g/l (20°C/68°F)

**Melting point/freezing point**

Not available.

**Initial boiling point and boiling range**

Not available.

**Flash point**

Not available.

**Evaporation rate**

Not available.

**Flammability (solid, gas)**

Not available.

**Upper/lower flammability or explosive limits****Flammability limit - lower (%)**

Not available.

**Flammability limit - upper (%)**

Not available.

**Explosive limit - lower (%)**

0.11

**Explosive limit - upper (%)**

Not available.

**Vapor pressure**

Not available.

**Vapor density**

Not available.

**Relative density**

Not available.

**Solubility(ies)****Solubility (water)**

Dispersible

**Auto-ignition temperature**

Not available.

**Decomposition temperature**

Not available.

**Viscosity**

Not available.

## Other information

<b>Bulk density</b>	0.53 g/cm <sup>3</sup>
<b>Explosive properties</b>	Under dusting conditions, this material may form explosive mixtures in air.
<b>Flammability</b>	May form combustible dust concentrations in air.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Stable at normal conditions and storage conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Contact with incompatible materials.
<b>Incompatible materials</b>	Amines, especially primary amines.
<b>Hazardous decomposition products</b>	Emits hazardous fumes and smoke of unknown composition when heated to decomposition or burned.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Inhalation of dusts may cause respiratory irritation. Prolonged inhalation may be harmful.
<b>Skin contact</b>	Not a skin irritant or skin sensitizer.
<b>Eye contact</b>	Not an eye irritant.
<b>Ingestion</b>	Harmful if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics** Exposure may cause temporary irritation, redness, or discomfort.

### Information on toxicological effects

**Acute toxicity** Harmful if swallowed.

<b>Product</b>	<b>Species</b>	<b>Test Results</b>
Hyvar® X Crop Herbicide		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	> 2000 mg/kg
<b>Inhalation</b>		
<i>Dust</i>		
LC50	Rat	> 5.2 mg/l, 4 h
<b>Oral</b>		
LD50	Rat	2000 mg/kg (male) 1300 mg/kg (female)

**Skin corrosion/irritation** Non-irritating (rabbit).

**Serious eye damage/eye irritation** Non-irritating (rabbit).  
Minimal effects that do not meet the threshold for classification.

### Respiratory or skin sensitization

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

**Skin sensitization** Animal test did not cause sensitization by skin contact (Guinea pig).

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

## 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).

Bromacil: Not classifiable as a human carcinogen. The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions. An increased incidence of tumors was observed in laboratory animals. An increased incidence of tumors was observed in laboratory animals.

Quartz (respirable): Human carcinogen. An increased incidence of tumors was observed in laboratory animals. An increased risk of cancer in humans has been shown in workplace-based studies. Respirable crystalline silica is listed as being carcinogenic by both IARC and NTP. It is present at less than 0.01% in the product.

### IARC Monographs. Overall Evaluation of Carcinogenicity

Crystalline Silica (CAS 14808-60-7) 1 Carcinogenic to humans.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Crystalline Silica (CAS 14808-60-7) Cancer

### US. National Toxicology Program (NTP) Report on Carcinogens

Crystalline Silica (CAS 14808-60-7) Known To Be Human Carcinogen.

## Reproductive toxicity

Bromacil: No evidence of reproductive toxicity has been observed.

Sodium alkylnaphthalene sulfonate: No evidence of reproductive toxicity has been observed. Animal testing showed effects on reproduction at levels equal to or above those causing parental toxicity.

Teratogenicity:

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

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

## Specific target organ toxicity - single exposure

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

## Specific target organ toxicity - repeated exposure

Bromacil: 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

Sodium alkylnaphthalene sulfonate Inhalation (rat) - Target Organs: Respiratory Tract - respiratory tract damage, pathologic changes Oral (rat) - Target Organs: Kidney - Kidney effects, reduced body weight gain

## Aspiration hazard

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

## 12. Ecological information

### Ecotoxicity

Very toxic to aquatic life with long lasting effects.

Components		Species	Test Results
Bromacil (CAS 314-40-9)			
<b>Aquatic</b>			
<i>Acute</i>			
Algae	EC50	Pseudokirchnerella subcapitata	0.017 mg/l, 72 h
	NOEC	Algae	0.001 mg/l
Crustacea	EC50	Daphnia magna	119 mg/l, 48 h
Fish	LC50	Bluegill (Lepomis macrochirus)	127 mg/l, 96 h
		Rainbow Trout (oncorhynchus mykiss)	36 mg/l, 96 h

### Persistence and degradability

No data is available on the degradability of any ingredients in the mixture.

### Bioaccumulative potential

Not available.

### Partition coefficient n-octanol / water (log Kow)

Bromacil 2.11

<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this product.

### 13. Disposal considerations

<b>Disposal instructions</b>	Do not contaminate water, food or feed by disposal. Wastes resulting from the use of this product must be disposed on site or at an approved waste disposal facility.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Waste from residues / unused products</b>	Dispose of in accordance with all applicable regulations.
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal according to all applicable regulations.

### 14. Transport information

#### DOT

Not regulated as dangerous goods.

#### IATA

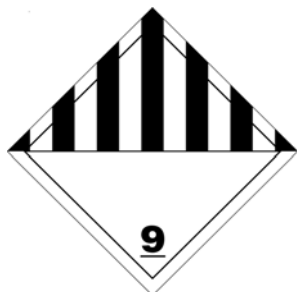
<b>UN number</b>	UN3077
<b>UN proper shipping name</b>	Environmentally hazardous substance, solid, n.o.s. (Bromacil)
<b>Transport hazard class(es)</b>	
<b>Class</b>	9
<b>Subsidiary risk</b>	-
<b>Packing group</b>	III
<b>Environmental hazards</b>	Yes
<b>ERG Code</b>	9L
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Other information</b>	
<b>Passenger and cargo aircraft</b>	Allowed with restrictions.
<b>Cargo aircraft only</b>	Allowed with restrictions.
Read safety instructions, SDS and emergency procedures before handling.	

#### IMDG

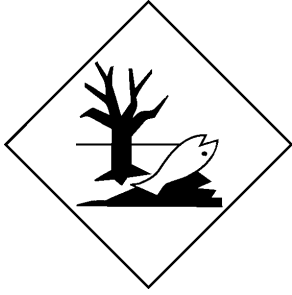
<b>UN number</b>	UN3077
<b>UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Bromacil), MARINE POLLUTANT
<b>Transport hazard class(es)</b>	
<b>Class</b>	9
<b>Subsidiary risk</b>	-
<b>Packing group</b>	III
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	Yes
<b>EmS</b>	F-A, S-F
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not available.

#### IATA; IMDG



## Marine pollutant



### General information

IMDG Regulated Marine Pollutant.

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.

## 15. Regulatory information

### US federal regulations

This chemical is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

#### CAUTION!

Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin, and clothing.

#### Environmental Hazards

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 water when cleaning equipment or disposing of equipment washwaters.

### Toxic Substances Control Act (TSCA)

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

### CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

### SARA 304 Emergency release notification

Not regulated.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Crystalline Silica (CAS 14808-60-7)

Cancer  
lung effects  
immune system effects  
kidney effects

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### SARA 302 Extremely hazardous substance

Not listed.

#### SARA 311/312 Hazardous chemical

Yes

#### Classified hazard categories

Combustible dust  
Acute toxicity (any route of exposure)  
Carcinogenicity  
Specific target organ toxicity (single or repeated exposure)

#### SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Bromacil	314-40-9	80.0%



## Other federal regulations

### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

## US state regulations

### California Proposition 65



**WARNING:** This product can expose you to Crystalline Silica, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### California Proposition 65 - CRT: Listed date/Carcinogenic substance

Crystalline Silica (CAS 14808-60-7)

Listed: October 1, 1988

### US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Crystalline Silica (CAS 14808-60-7)

## International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

<b>Issue date</b>	Oct-15-2019
<b>Revision date</b>	Oct-26-2020
<b>Version #</b>	1.2
<b>HMIS® ratings</b>	Health: 2* Flammability: 2 Physical hazard: 0
<b>NFPA ratings</b>	Health: 2 Flammability: 2 Instability: 0

### Disclaimer

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**Revision information**

This document has undergone significant changes and should be reviewed in its entirety.