# ADEPT

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
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## SECTION 1: Identification

### 1.1. Identification

Product form : Mixture
Product name : ADEPT
Other means of identification : EPA Reg. No. 400-477

### 1.2. Recommended use and restrictions on use

Recommended use : Insect growth regulator
Restrictions on use : Agriculture,For professional users only

### 1.3. Supplier

MacDermid Agricultural Solutions, Inc.
245 Freight Street
Waterbury, CT 06702 - USA
T 1-866-761-9397
sds.request@arysta.com

### 1.4. Emergency telephone number

Emergency number : FOR 24-HOUR MEDICAL EMERGENCY ASSISTANCE CALL PROPHARMA: 1-866-303-6952 or +1-651-603-3432
FOR 24-HOUR CHEMICAL EMERGENCY (Spill, leaks, fire, exposure or accident) call CHEMTREC: 1-800-424-9300 or +1-703-527-3887

## SECTION 2: Hazard(s) identification

### 2.1. Classification of the substance or mixture

**GHS-US classification**

| | | |
|---|---|---|
| Acute toxicity (inhal.), Category 4 | H332 | Harmful if inhaled |
| Serious eye damage/eye irritation, Category 2B | H320 | Causes eye irritation |
| Carcinogenicity, Category 1A | H350 | May cause cancer |
| Specific target organ toxicity — Repeated exposure, Category 2 | H373 | May cause damage to organs through prolonged or repeated exposure |
| Hazardous to the aquatic environment — Acute Hazard, Category 1 | H400 | Very toxic to aquatic life |
| Hazardous to the aquatic environment — Chronic Hazard, Category 1 | H410 | Very toxic to aquatic life with long lasting effects |
| Combustible Dust | | May form combustible dust concentrations in air |

Full text of H statements : see section 16

### 2.2. GHS Label elements, including precautionary statements

**GHS-US labelling**

Hazard pictograms (GHS-US) :

GHS07 GHS08 GHS09

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : May form combustible dust concentrations in air
H320 - Causes eye irritation
H332 - Harmful if inhaled
H350 - May cause cancer
H373 - May cause damage to organs through prolonged or repeated exposure
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (GHS-US) : P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P260 - Do not breathe dust
P261 - Avoid breathing dust
P264 - Wash hands, forearms and face thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P273 - Avoid release to the environment
P280 - Wear eye protection, protective gloves
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P308+P313 - If exposed or concerned: Get medical advice/attention
P312 - Call a doctor if you feel unwell
P314 - Get medical advice/attention if you feel unwell
P337+P313 - If eye irritation persists: Get medical advice/attention
P391 - Collect spillage
P405 - Store locked up
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

25.64% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral)
26.9% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)
25.64% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

| Name | Product identifier | % | GHS-US classification |
|---|---|---|---|
| N-[[(4-chlorophenyl)amino]carbonyl]-2,6-difluorobenzamide | (CAS-No.) 35367-38-5 | 25 | Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410<br>Comb. Dust |
| Surfactant | (CAS-No.) trade secret | 1 – 5 | STOT RE 2, H373 |
| Sulfuric acid, mono-C12-14 (even numbered)-alkyl esters, sodium salts | (CAS-No.) 85586-07-8 | 1 – 2 | Flam. Sol. 2, H228<br>Acute Tox. 4 (Oral), H302<br>Acute Tox. 4 (Inhalation), H332<br>Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>STOT SE 3, H335 |
| Sodium diisopropyl naphthalene sulfonate | (CAS-No.) 1322-93-6 | 1 – 2 | Acute Tox. 4 (Oral), H302<br>Acute Tox. 4 (Inhalation), H332<br>Eye Irrit. 2A, H319 |
| Silicon dioxide (cristobalite) | (CAS-No.) 14808-60-7 | < 1 | Carc. 1A, H350 |

***Chemical name, CAS number and/or exact concentration have been withheld as a trade secret**

Full text of hazard classes and H-statements : see section 16

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Call a poison center or a doctor if you feel unwell. Remove victim to fresh air and keep at rest in a position comfortable for breathing.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

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

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects : May cause damage to organs through prolonged or repeated exposure.

Symptoms/effects after inhalation : May cause cancer by inhalation.

Symptoms/effects after eye contact : Causes eye irritation.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Specific hazards arising from the chemical

Fire hazard : Combustible Dust. Burning produces irritating, toxic and noxious fumes. Dust may form explosive mixture in air.

Reactivity : No dangerous reactions known.

### 5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Wear a self contained breathing apparatus.

## SECTION 6: Accidental release measures

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

General measures : Avoid contact with skin, eyes and clothing. Avoid creating or spreading dust. Do not breathe dust. Use personal protective equipment as required.

#### 6.1.1. For non-emergency personnel

Protective equipment : Refer to section 8.2.

Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : Refer to section 8.2.

Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Do not allow to enter drains or water courses.

### 6.3. Methods and material for containment and cleaning up

For containment : Avoid generating dust. Contain and collect as any solid.

Methods for cleaning up : On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

### 6.4. Reference to other sections

Section 13: disposal information. Section 7: safe handling. Section 8: personal protective equipment.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Provide good ventilation in process area to prevent formation of vapour. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with skin, eyes and clothing. Avoid creating or spreading dust. Do not breathe dust. Use personal protective equipment as required.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed.

Incompatible products : Strong bases. Strong acids. Strong oxidizers.

Incompatible materials : Sources of ignition. Direct sunlight.

Storage area : Store in dry, cool, well-ventilated area.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

| **N-[[(4-chlorophenyl)amino]carbonyl]-2,6-difluorobenzamide (35367-38-5)** |
|---|
| Not applicable |

| Surfactant (trade secret) | | |
|---|---|---|
| ACGIH | ACGIH TWA (mg/m³) | 10 mg/m³ (Inhalable particulates not otherwise specified); 3 mg/m3 (Respirable particulates not otherwise specified) |

| Sodium diisopropyl naphthalene sulfonate (1322-93-6) |
|---|
| Not applicable |

| Sulfuric acid, mono-C12-14 (even numbered)-alkyl esters, sodium salts (85586-07-8) |
|---|
| Not applicable |

| Silicon dioxide (cristobalite) (14808-60-7) | | |
|---|---|---|
| ACGIH | ACGIH TWA (mg/m³) | 0.025 mg/m³ |
| ACGIH | Remark (ACGIH) | (respirable dust) |
| OSHA | OSHA PEL (TWA) (ppm) | 250 mppcf |
| OSHA | Remark (OSHA) | (3) See Table Z-3. |
| NIOSH | NIOSH REL (TWA) (mg/m³) | 0.05 mg/m³ |
| NIOSH | Remark (NIOSH) | (respirable dust) |

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Avoid dispersal of dust in the air (ie, clearing dust surfaces with compressed air). Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide local exhaust or general room ventilation.

Environmental exposure controls : Prevent leakage or spillage.

### 8.3. Individual protection measures/Personal protective equipment

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear suitable gloves resistant to chemical penetration. barrier laminate. Butyl rubber. nitrile rubber gloves. neoprene gloves. Viton.

Eye protection : Chemical goggles or safety glasses.

Respiratory protection : Wear appropriate mask.

Other information : Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Powder.

Colour : white to yellow

Odour : Faint

Odour threshold : No data available

pH : 7.97 ca.; concentration 10 g/l

Melting point : No data available

Freezing point : No data available

Boiling point : No data available

Flash point : No data available

Relative evaporation rate (butylacetate=1) : No data available

Flammability (solid, gas) : Non flammable.

Vapour pressure : No data available

Relative vapour density at 20 °C : No data available

Relative density : No data available

Density : 18.7 lb/cu. ft.

Solubility : Dispersible.

Log Pow : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity, kinematic : No data available

| | | |
|---|---|---|
| Viscosity, dynamic | : | No data available |
| Explosive limits | : | No data available |
| Explosive properties | : | No data available |
| Oxidising properties | : | No data available |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No dangerous reactions known.

### 10.2. Chemical stability

Dust may form flammable and explosive mixture with air.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

### 10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizers.

### 10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

| | | |
|---|---|---|
| Likely routes of exposure | : | Inhalation; Skin and eye contact |
| Acute toxicity | : | Inhalation: Harmful if inhaled. |

| **ADEPT** | |
|---|---|
| LD50 oral rat | > 10000 mg/kg |
| LD50 dermal rat | > 20000 mg/kg |
| LC50 inhalation rat (mg/l) | > 3.52 mg/l/4h |
| ATE US (gases) | 4500 ppmv/4h |
| ATE US (vapours) | 11 mg/l/4h |
| ATE US (dust,mist) | 1.5 mg/l/4h |

| **Surfactant (trade secret)** | |
|---|---|
| LD50 oral rat | > 12000 mg/kg |

| **Sodium diisopropyl naphthalene sulfonate (1322-93-6)** | |
|---|---|
| ATE US (oral) | 500 mg/kg bodyweight |
| ATE US (gases) | 4500 ppmv/4h |
| ATE US (vapours) | 11 mg/l/4h |
| ATE US (dust,mist) | 1.5 mg/l/4h |

| **Sulfuric acid, mono-C12-14 (even numbered)-alkyl esters, sodium salts (85586-07-8)** | |
|---|---|
| LD50 oral rat | 1800 mg/kg |
| LD50 dermal rabbit | > 2000 mg/kg |
| ATE US (oral) | 1800 mg/kg bodyweight |
| ATE US (gases) | 4500 ppmv/4h |
| ATE US (vapours) | 11 mg/l/4h |
| ATE US (dust,mist) | 1.5 mg/l/4h |

| | | |
|---|---|---|
| Skin corrosion/irritation | : | Not classified<br>(Not irritating to skin) |
| Serious eye damage/irritation | : | Causes eye irritation. |
| Respiratory or skin sensitisation | : | Not classified<br>(No sensitizing reaction was observed for guinea pigs) |
| Germ cell mutagenicity | : | Not classified |

Carcinogenicity : May cause cancer.

| Silicon dioxide (cristobalite) (14808-60-7) | |
|---|---|
| IARC group | 1 - Carcinogenic to humans |

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : May cause damage to organs through prolonged or repeated exposure.

| Sulfuric acid, mono-C12-14 (even numbered)-alkyl esters, sodium salts (85586-07-8) | |
|---|---|
| NOAEL (oral, rat, 90 days) | 488 mg/kg bodyweight/day |

Aspiration hazard : Not classified

Symptoms/effects after inhalation : May cause cancer by inhalation.

Symptoms/effects after eye contact : Causes eye irritation.

## SECTION 12: Ecological information

### 12.1. Toxicity

| N-[[(4-chlorophenyl)amino]carbonyl]-2,6-difluorobenzamide (35367-38-5) | |
|---|---|
| LC50 fish 1 | > 0.13 mg/l 96 h Cyprinodon sp. |
| EC50 Daphnia 1 | 0.003 mg/l 48 h |
| EC50 other aquatic organisms 1 | 0.00064 mg/l 96 h |
| LC50 fish 2 | > 0.2 mg/l 96 h Oncorhynchus mykiss |
| NOEC (chronic) | 0.1 mg/l Cyprinodon sp. |
| NOEC chronic fish | 0.2 mg/l 21 d |
| NOEC chronic crustacea | 0.00004 mg/l 21 d Daphnia magna |

| Surfactant (trade secret) | |
|---|---|
| LC50 fish 1 | 361 ppm 96h Pimephales promelas |

| Sulfuric acid, mono-C12-14 (even numbered)-alkyl esters, sodium salts (85586-07-8) | |
|---|---|
| LC50 fish 1 | 3.6 mg/l 96 h Oncorhynchus mykiss |
| EC50 Daphnia 1 | 4.7 mg/l 48 h |
| NOEC chronic fish | 0.508 mg/l 45 d |
| NOEC chronic crustacea | 0.508 mg/l 21 d |

### 12.2. Persistence and degradability

| ADEPT | |
|---|---|
| Persistence and degradability | Not established. |

| Surfactant (trade secret) | |
|---|---|
| Persistence and degradability | Biodegrades slowly. |
| Biochemical oxygen demand (BOD) | 0.021 g $O_2$/g substance (5 day/day); 0.043 g O2/g (30 day/days) |

| Sulfuric acid, mono-C12-14 (even numbered)-alkyl esters, sodium salts (85586-07-8) | |
|---|---|
| Persistence and degradability | Readily biodegradable. |

### 12.3. Bioaccumulative potential

| ADEPT | |
|---|---|
| Bioaccumulative potential | Not established. |

| N-[[(4-chlorophenyl)amino]carbonyl]-2,6-difluorobenzamide (35367-38-5) | |
|---|---|
| Bioaccumulative potential | Not expected to bioaccumulate. |

### 12.4. Mobility in soil

| ADEPT | |
|---|---|
| Ecology - soil | Not established. |

| Sulfuric acid, mono-C12-14 (even numbered)-alkyl esters, sodium salts (85586-07-8) | |
|---|---|
| Mobility in soil | < |

### 12.5. Other adverse effects

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

**Department of Transportation (DOT)**

In accordance with DOT

Non-Bulk (<= 882 pounds / 400 Kg) NOT REGULATED

Bulk (>882 pounds / 400 Kg) :

Transport document description : UN3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Diflubenzuron), 9, III

UN-No.(DOT) : UN3077

Proper Shipping Name (DOT) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Diflubenzuron)

Packing group (DOT) : III - Minor Danger

Hazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous materials)


Dangerous for the environment : Yes

Marine pollutant : Yes

**Additional information**

Emergency Response Guide (ERG) Number : 171

Other information : No supplementary information available.

**Transport by sea**

**IMDG**

Transport hazard class(es) (IMDG) : 9

:


Marine pollutant : Yes

UN-No. (IMDG) : 3077

Transport document description (IMDG) : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Diflubenzuron), 9, III, MARINE POLLUTANT

Class (IMDG) : 9 - Miscellaneous dangerous substances and articles

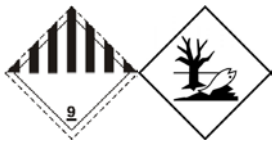
Packing group (IMDG) : III - substances presenting low danger

EmS-No. (Fire) : F-A

EmS-No. (Spillage) : S-F

**Air transport**

**IATA**

| | | |
|---|---|---|
| Transport hazard class(es) (IATA) | : | 9 |
| | : |  |
| Marine pollutant | : | Yes |
| UN-No. (IATA) | : | 3077 |
| Transport document description (IATA) | : | UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Diflubenzuron), 9, III |
| Class (IATA) | : | 9 - Miscellaneous Dangerous Goods |
| Packing group (IATA) | : | III - Minor Danger |

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

| | | |
|---|---|---|
| Sulfuric acid, mono-C12-14 (even numbered)-alkyl esters, sodium salts | CAS-No. 85586-07-8 | 1.5% |

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

| | | |
|---|---|---|
| N-[[(4-chlorophenyl)amino]carbonyl]-2,6-difluorobenzamide | CAS-No. 35367-38-5 | 25% |

| **Surfactant (trade secret)** | |
|---|---|
| EPA TSCA Regulatory Flag | XU - XU - indicates a substance exempt from reporting under the Inventory Update Reporting Rule, i.e, Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(C)). |

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.:

| | |
|---|---|
| EPA Registration Number | 400-477 |
| FIFRA Signal Word | CAUTION |
| FIFRA Hazard Statement | Causes moderate eye irritation. Avoid contact with eyes or clothing. |
| FIFRA Other | This pesticide is toxic to aquatic invertebrates. For terrestrial uses, do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift or runoff from treated areas may be hazardous to aquatic invertebrate organisms in neighboring areas. Do not contaminate water when disposing of equipment wastewater or rinsate. |

### 15.2. International regulations

#### CANADA

| **N-[[(4-chlorophenyl)amino]carbonyl]-2,6-difluorobenzamide (35367-38-5)** |
|---|
| Listed on the Canadian NDSL (Non-Domestic Substances List) |

| **Surfactant (trade secret)** |
|---|
| Listed on the Canadian DSL (Domestic Substances List) inventory. |

| **Sulfuric acid, mono-C12-14 (even numbered)-alkyl esters,** sodium salts **(85586-07-8)** |
|---|
| Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List) |

| **Silicon dioxide (cristobalite) (14808-60-7)** |
|---|
| Listed on the Canadian DSL (Domestic Substances List) inventory. |

### 15.3. US State regulations

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer, developmental and/or reproductive harm

| Silicon dioxide (cristobalite) (14808-60-7) | | | | |
|---|---|---|---|---|
| U.S. - California - Proposition 65 - Carcinogens List | U.S. - California - Proposition 65 - Developmental Toxicity | U.S. - California - Proposition 65 - Reproductive Toxicity - Female | U.S. - California - Proposition 65 - Reproductive Toxicity - Male | No significant risk level (NSRL) |
| Yes | No | No | No | |

| N-[[(4-chlorophenyl)amino]carbonyl]-2,6-difluorobenzamide (35367-38-5) |
|---|
| U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities<br>U.S. - New Jersey - Right to Know Hazardous Substance List |

| Silicon dioxide (cristobalite) (14808-60-7) |
|---|
| U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations<br>U.S. - New Jersey - Right to Know Hazardous Substance List |

## SECTION 16: Other information

Data sources : ACGIH (American Conference of Government Industrial Hygienists).

Component Supplier SDSs.

European Chemicals Agency (ECHA) C&L Inventory database. Accessed at http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database.

Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition.

Manufacturer Information.

National Fire Protection Association. Fire Protection Guide to Hazardous Materials; 10th edition.

Occupational Health Guide for chemical Substances - Vol. II, September, 1978.

OSHA 29CFR 1910.1200 Hazard Communication Standard.

Chemical Substance Inventory. Accessed at http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html.

Other information : None.

Full text of H-statements:

| | |
|---|---|
| H228 | Flammable solid |
| H302 | Harmful if swallowed |
| H315 | Causes skin irritation |
| H318 | Causes serious eye damage |
| H319 | Causes serious eye irritation |
| H320 | Causes eye irritation |
| H332 | Harmful if inhaled |
| H335 | May cause respiratory irritation |
| H350 | May cause cancer |
| H373 | May cause damage to organs through prolonged or repeated exposure |
| H400 | Very toxic to aquatic life |
| H410 | Very toxic to aquatic life with long lasting effects |

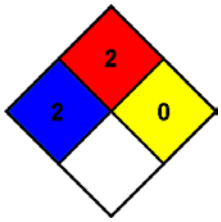
Abbreviations and acronyms:

| | |
|---|---|
| | ATE: Acute Toxicity Estimate |
| | CAS (Chemical Abstracts Service) number |
| | EC50: Environmental Concentration associated with a response by 50% of the test population. |
| | GHS: Globally Harmonized System (of Classification and Labeling of Chemicals). |
| | LD50: Lethal Dose for 50% of the test population |
| | OSHA: Occupational Safety & Health Administration |
| | STEL: Short Term Exposure Limits |
| | TSCA: Toxic Substances Control Act |
| | TWA: Time Weighted Average |

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard : 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and not reactive with water.

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*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*