

# Material Safety Data Sheet

## Display™ Herbicide

SDS #: 6905-A  
Revision Date: 2012-04-11  
Version 1



This MSDS has been prepared to meet U.S. OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Workplace Hazardous Materials Information System (WHMIS) requirements.

## 1. PRODUCT AND COMPANY IDENTIFICATION

|  |  |
|--|--|
| <b>Product name</b>  | Display™ Herbicide   |
| <b>Active Ingredient(s)</b>  | Carfentrazone-ethyl , Fluthiacet-methyl  |
| <b>Synonyms</b>  | FMC 116426; ethyl (RS)-2-chloro-3-[2-chloro-5-(4-difluoromethyl-4,5-dihydro-3-methyl-5-oxo-1H-1,2,4-triazol-1-yl)-4-fluorophenyl] propionate; ethyl $\alpha$ ,2-dichloro-5-[4-(difluoromethyl)-4,5-dihydro-3-methyl-5-oxo-1H-1,2,4-triazol-1-yl]-4-fluorobenzenepropanoate ; Acetic acid, [[2-chloro-4-fluoro-5-[(tetrahydro-3-oxo-1H,3H-[1,3,4] thiadiazolo [3,4- $\alpha$ ] pyridazin-1-ylidene) amino] phenyl] thio]-, methyl ester |
| <b>Chemical Family</b>   | Triazolinones, Imine chemicals   |
| <b>Recommended use</b>   | Herbicide  |
| <b>Manufacturer</b><br>FMC Corporation<br>Agricultural Products Group<br>1735 Market Street<br>Philadelphia, PA 19103<br>General Information:<br>Phone: (215) 299-6000<br>E-Mail: msdsinfo@fmc.com | <b><u>Emergency telephone number</u></b><br><br>Medical Emergencies:<br>(800) 331-3148 (U.S.A. & Canada)<br>+1 (651) 632-6793 (All Other Countries - Collect)<br>For leak, fire, spill or accident emergencies, call:<br>+1 800 / 424 9300 (CHEMTREC - U.S.A.)<br>+1 703 / 527 3887 (CHEMTREC - Collect - All Other Countries)   |

## 2. Hazards identification

|  |  |
|--|--|
| <b><u>Appearance</u></b>                   | amber liquid   |
| <b><u>Physical state</u></b>               | liquid   |
| <b><u>Odor</u></b>                         | Aromatic hydrocarbon   |
| <b><u>Potential health effects</u></b>     |  |
| <b><u>Principle Routes of Exposure</u></b> | Eye contact, Skin contact, Inhalation, Ingestion.  |
| <b><u>Acute effects</u></b>                |  |
| <b><u>Eyes</u></b>                         | May cause moderate eye irritation.   |
| <b><u>Skin</u></b>                         | May cause moderate skin irritation. May cause sensitization by skin contact.   |
| <b><u>Inhalation</u></b>                   | May cause irritation of respiratory tract. May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination.   |
| <b><u>Ingestion</u></b>                    | Harmful if swallowed. Potential for aspiration if swallowed. May cause central nervous system depression. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.  |
| <b><u>Chronic effects</u></b>              | Prolonged exposure may cause chronic effects. Possible risks of irreversible effects. Repeated or prolonged exposure may cause central nervous system effects. Chronic exposure to aromatic hydrocarbons may cause liver and kidney damage. Naphthalene causes cataracts in humans, rats, rabbits and mice. It has been classified as potential carcinogen based on animal data. |

**3. Composition/information on ingredients****Hazardous ingredients**

| Chemical Name                       | CAS-No      | Weight % |
|-------------------------------------|-------------|----------|
| Naphtha (petroleum), heavy aromatic | 64742-94-5  | 50-60    |
| Carfentrazone-ethyl                 | 128639-02-1 | 18.04    |
| 2-Methylnaphthalene                 | 91-57-6     | <15      |
| Acetophenone                        | 98-86-2     | 10-20    |
| Naphthalene                         | 91-20-3     | <8       |
| 1-Methylnaphthalene                 | 90-12-0     | <8       |
| Fluthiacet-methyl                   | 117337-19-6 | 4.75     |
| ISOBUTYL ALCOHOL                    | 78-83-1     | 1-5      |

**4. First aid measures**

|                    |  |
|--------------------|--|
| Eye contact        | Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.              |
| Skin contact       | Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.  |
| Inhalation         | Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.                      |
| Ingestion          | Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not induce vomiting or give anything by mouth to an unconscious person. |
| Notes to physician | Treatment is symptomatic and supportive. Contains petroleum distillate. Vomiting may cause aspiration pneumonia.   |

**5. Fire-fighting measures**

|  |   |
|--|---|
| <b>Flash Point</b>   | No information available.   |
| <b>Sensitivity to Mechanical Impact</b>                      | not applicable  |
| <b>Sensitivity to Static Discharge</b>                       | not applicable  |
| <b>Suitable extinguishing media</b>                          | Carbon dioxide (CO <sub>2</sub> ), Foam, Dry powder, Water spray. |
| <b>Protective equipment and precautions for firefighters</b> | Wear self-contained breathing apparatus and protective suit.      |

**NFPA**

|                        |   |
|------------------------|---|
| <b>Health Hazard</b>   | 1 |
| <b>Flammability</b>    | 1 |
| <b>Stability</b>       | 0 |
| <b>Special Hazards</b> | - |

**6. Accidental release measures**

|                             |  |
|-----------------------------|--|
| <b>Personal precautions</b> | Isolate and post spill area. Remove all sources of ignition. Wear suitable protective clothing, gloves and eye/face protection. For personal protection see section 8. |
|-----------------------------|--|

|                                  |  |
|----------------------------------|--|
| <b>Environmental precautions</b> | Keep people and animals away from and upwind of spill/leak. Keep material out of lakes, streams, ponds, and sewer drains.  |
| <b>Methods for containment</b>   | Dike to prevent runoff. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.   |
| <b>Methods for cleaning up</b>   | Clean and neutralize spill area, tools and equipment by washing with bleach water and soap. Absorb rinsate and add to the collected waste. Waste must be classified and labeled prior to recycling or disposal. Dispose of waste as indicated in Section 13. |
| <b>Other</b>                     | For further clean-up instructions call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.  |

**7. Handling and storage**

|                 |   |
|-----------------|---|
| <b>Handling</b> | Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.   |
| <b>Storage</b>  | Keep in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep out of reach of children and animals. Store in original container only. |

**8. Exposure controls/personal protection**

Exposure guidelines

| Chemical Name                  | ACGIH TLV                        | OSHA PEL                                | NIOSH   | Mexico   |
|--------------------------------|----------------------------------|---|---|--|
| 2-Methylnaphthalene<br>91-57-6 | S*<br>TWA: 0.5 ppm               |   |   |  |
| Acetophenone<br>98-86-2        | TWA: 10 ppm                      |   |   |  |
| Naphthalene<br>91-20-3         | S*<br>STEL 15 ppm<br>TWA: 10 ppm | TWA: 10 ppm TWA: 50 mg/m <sup>3</sup>   | IDLH: 250 ppm<br>TWA: 10 ppm TWA: 50 mg/m <sup>3</sup><br>STEL: 15 ppm STEL: 75 mg/m <sup>3</sup> | Mexico: TWA 10 ppm Mexico:<br>TWA 50 mg/m <sup>3</sup><br>Mexico: STEL 15 ppm Mexico:<br>STEL 75 mg/m <sup>3</sup>   |
| 1-Methylnaphthalene<br>90-12-0 | S*<br>TWA: 0.5 ppm               |   |   |  |
| ISOBUTYL ALCOHOL<br>78-83-1    | TWA: 50 ppm                      | TWA: 100 ppm TWA: 300 mg/m <sup>3</sup> | IDLH: 1600 ppm<br>TWA: 50 ppm TWA: 150 mg/m <sup>3</sup>  | Mexico: TWA 50 ppm Mexico:<br>TWA 150 mg/m <sup>3</sup><br>Mexico: STEL 75 ppm Mexico:<br>STEL 225 mg/m <sup>3</sup> |

| Chemical Name                  | British Columbia                    | Quebec   | Ontario TWAEV                       | Alberta  |
|--------------------------------|-------------------------------------|--|-------------------------------------|--|
| 2-Methylnaphthalene<br>91-57-6 | TWA: 0.5 ppm<br>Skin                |  | TWA: 0.5 ppm<br>Skin                |  |
| Acetophenone<br>98-86-2        | TWA: 10 ppm                         | TWA: 10 ppm TWA: 49 mg/m <sup>3</sup>  | TWA: 10 ppm                         | TWA: 10 ppm TWA: 49 mg/m <sup>3</sup>  |
| Naphthalene<br>91-20-3         | TWA: 10 ppm<br>STEL: 15 ppm<br>Skin | TWA: 10 ppm TWA: 52 mg/m <sup>3</sup><br>STEL: 15 ppm STEL: 79 mg/m <sup>3</sup> | TWA: 10 ppm<br>STEL: 15 ppm<br>Skin | TWA: 10 ppm TWA: 52 mg/m <sup>3</sup><br>STEL: 15 ppm STEL: 79 mg/m <sup>3</sup><br>Skin |
| 1-Methylnaphthalene<br>90-12-0 | TWA: 0.5 ppm<br>Skin                |  | TWA: 0.5 ppm<br>Skin                |  |
| ISOBUTYL ALCOHOL<br>78-83-1    | TWA: 50 ppm                         | TWA: 50 ppm TWA: 152 mg/m <sup>3</sup>   | TWA: 50 ppm                         | TWA: 50 ppm TWA: 152 mg/m <sup>3</sup>   |

Occupational exposure controls

|                             |  |
|-----------------------------|--|
| <b>Engineering measures</b> | Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment. |
|-----------------------------|--|

**Personal Protective Equipment**

|                                 |   |
|---------------------------------|---|
| <b>General Information</b>      | If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers. These recommendations apply to the product as supplied.  |
| <b>Respiratory protection</b>   | For dust, splash, mist or spray exposures wear a filtering mask.  |
| <b>Eye/face protection</b>      | For dust, splash, mist or spray exposure, wear chemical protective goggles or a face-shield.  |
| <b>Skin and body protection</b> | Wear long-sleeved shirt, long pants, socks, shoes, and gloves.  |
| <b>Hand protection</b>          | Protective gloves   |
| <b>Hygiene measures</b>         | Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking, chewing gum or using tobacco. Shower or bathe at the end of working. Remove and wash contaminated clothing before re-use. Launder work clothing separately from regular household laundry. |

**9. Physical and chemical properties**

|                                 |                           |
|---------------------------------|---------------------------|
| <b>Appearance</b>               | amber liquid              |
| <b>Color</b>                    | amber                     |
| <b>Physical state</b>           | liquid                    |
| <b>Odor</b>                     | Aromatic hydrocarbon      |
| <b>pH</b>                       | 4.87                      |
| <b>Melting Point/Range</b>      | No information available. |
| <b>Freezing point</b>           | No information available  |
| <b>Boiling Point/Range</b>      | not applicable            |
| <b>Flash Point</b>              | No information available. |
| <b>Evaporation rate</b>         | not applicable            |
| <b>Autoignition Temperature</b> | not applicable            |
| <b>Vapor pressure</b>           | No information available  |
| <b>Vapor density</b>            | No information available  |
| <b>Density</b>                  | 9.0 lb/gal                |
| <b>Specific Gravity</b>         | 1.08                      |
| <b>Water solubility</b>         | No information available  |
| <b>Percent volatile</b>         | No information available  |
| <b>Partition coefficient:</b>   | not applicable            |
| <b>Viscosity</b>                | 37.1 cSt                  |
| <b>Oxidizing properties</b>     | not applicable            |

**10. Stability and reactivity**

|   |   |
|---|---|
| <b>Stability</b>                        | Stable under recommended storage conditions.                                |
| <b>Conditions to avoid</b>              | Heat, flames and sparks   |
| <b>Hazardous decomposition products</b> | Carbon oxides, Hydrogen chloride, Hydrogen fluoride, nitrogen oxides (NOx). |
| <b>Hazardous polymerization</b>         | Hazardous polymerization does not occur                                     |

**11. Toxicological information**

|                    |                                |
|--------------------|--------------------------------|
| <b>Eye contact</b> | Moderately irritating (rabbit) |
|--------------------|--------------------------------|

**Skin contact** Moderately irritating (rabbit)  
**Ingestion** Potential for aspiration if swallowed. Vomiting after ingestion of this product may cause aspiration of aromatic hydrocarbons into the lungs, which may result in fatal pulmonary edema. Naphthalene, if ingested, may cause red blood cell hemolysis, especially in individuals with glucose-6-phosphate dehydrogenase deficiency.  
**Inhalation** Inhalation of aromatic hydrocarbon vapors may cause dizziness, disturbances in vision, drowsiness, respiratory irritation, and eye, skin and mucous membrane irritation.  
**LD50 Dermal** > 5000 mg/kg (rat)  
**LD50 Oral** 3129 mg/kg (rat)  
**LC50 Inhalation:** > 2.04 mg/L (rat)  
**Sensitization** Sensitizer

**Chronic Toxicity - Other Ingredient(s)**

**Chronic Toxicity** Prolonged exposure may cause chronic effects. Possible risks of irreversible effects. Repeated or prolonged exposure may cause central nervous system effects. Chronic exposure to aromatic hydrocarbons may cause liver and kidney damage. Naphthalene causes cataracts in humans, rats, rabbits and mice. It has been classified as potential carcinogen based on animal data.

**Carcinogenicity** Carfentrazone-ethyl: Did not show carcinogenic effects in animal experiments. Fluthiacet-methyl caused increases in benign tumors of pancreas in male rats at highest dose, along with pancreatic and liver toxicity. Increase in liver tumors at two highest doses in male mouse, along with hepatotoxicity, that could both be secondary to porphyria. There was no evidence of carcinogenic activity of naphthalene in male mice, but there was some evidence of carcinogenic activity in female mice and clear evidence of carcinogenic activity in male and female rats in 2-year inhalation studies conducted by the National Toxicology Program (NTP).

**Mutagenicity** Carfentrazone-ethyl: Not genotoxic. Fluthiacet-methyl was positive in in-vitro chromosomal aberation tests and negative in in-vivo tests of mutagenicity, chromosomal aberrations, clastogenicity, DNA damage and dominant lethality.

**Reproductive toxicity** Carfentrazone-ethyl: No toxicity to reproduction. Fluthiacet-methyl: Reproductive toxicity was observed in the rat only at doses well in excess of those causing systemic toxicity in parents.

**Neurological Effects** Fluthiacet-methyl: Not neurotoxic.

**Developmental Toxicity** Carfentrazone-ethyl: Not teratogenic in animal studies. Fluthiacet-methyl: A slight delay in fetal development in the rat, with no effects in the rabbit.

**Target Organ Effects** Carfentrazone-ethyl: Chronic and subchronic toxicity tests have shown effects on the liver, bone marrow, spleen, pancreas, lymphatic system, hematopoietic system, uterus and blood at high doses. High doses of fluthiacet-methyl have been shown to increase the incidence of liver tumors in male mice and pancreatic tumors in male rats. Red blood cell reduction can occur due to hemoglobin biosynthesis inhibition. Accumulation of precursors of hemoglobin may lead to secondary toxicity to liver and other organs.

**Chronic Toxicity - Other Ingredient(s)** Chronic exposure to aromatic hydrocarbons may cause headaches, dizziness, loss of sensations or feelings (such as numbness), and liver and kidney damage.

| Chemical Name    | ACGIH | IARC | NTP                    | OSHA | NIOSH - Target Organs             |
|------------------|-------|------|------------------------|------|-----------------------------------|
| Naphthalene      |       | 2B   | Reasonably Anticipated | X    | eyes,blood,liver,kidneys,skin,CNS |
| ISOBUTYL ALCOHOL |       |      |                        |      | eyes,CNS,respiratory system,skin  |

**Legend:**

**IARC: (International Agency for Research on Cancer)**  
 Group 2B - Possibly Carcinogenic to Humans

**NTP: (National Toxicity Program)**

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

**OSHA: (Occupational Safety & Health Administration)**

X - Present

**12. Ecological information**

**Ecotoxicity**

**Carfentrazone-ethyl (128639-02-1)**

| Active Ingredient(s) | Duration   | Species        | Value     | Units |
|----------------------|------------|----------------|-----------|-------|
| Carfentrazone-ethyl  | 120 h LC50 | Algae          | 5.7 - 17  | µg/L  |
|                      | 96 h LC50  | Fish           | 1.6 - 2.0 | mg/L  |
|                      | 48 h LC50  | Daphnia        | >9.8      | mg/L  |
|                      | LD50 Oral  | Bobwhite quail | >2250     | mg/kg |

**Fluthiacet-methyl (117337-19-6)**

| Active Ingredient(s) | Duration  | Species          | Value   | Units |
|----------------------|-----------|------------------|---------|-------|
| Fluthiacet-methyl    | 72 h LC50 | Algae            | 0.00251 | mg/L  |
|                      | 48 h LC50 | Daphnia magna    | >2.3    | mg/L  |
|                      | LC50      | Bluegill sunfish | 0.14    | mg/L  |
|                      | LC50      | Rainbow trout    | 0.43    | mg/L  |
|                      | LD50 Oral | Bobwhite quail   | >2250   | mg/kg |
|                      | LD50 Oral | Mallard duck     | >2250   | mg/kg |

| Chemical Name                       | Toxicity to algae                            | Toxicity to fish  | Toxicity to microorganisms | Toxicity to daphnia and other aquatic invertebrates               |
|-------------------------------------|--|---|----------------------------|---|
| Naphtha (petroleum), heavy aromatic | 2.5 mg/L EC50 72 h (Skeletonema costatum)    | LC50 19 mg/L Pimephales promelas 96 h LC50 2.34 mg/L Oncorhynchus mykiss 96 h LC50 1740 mg/L Lepomis macrochirus 96 h LC50 45 mg/L Pimephales promelas 96 h LC50 41 mg/L Pimephales promelas 96 h                   |                            | EC50 0.95 mg/L 48 h   |
| Acetophenone                        |  | LC50 162 mg/L Pimephales promelas 96 h LC50 155 mg/L Pimephales promelas 96 h   |                            |   |
| Naphthalene                         | 0.4 mg/L EC50 72 h (Skeletonema costatum)    | LC50 5.74-6.44 mg/L Pimephales promelas 96 h LC50 1.6 mg/L Oncorhynchus mykiss 96 h LC50 0.91-2.82 mg/L Oncorhynchus mykiss 96 h LC50 1.99 mg/L Pimephales promelas 96 h LC50 31.0265 mg/L Lepomis macrochirus 96 h |                            | LC50 2.16 mg/L 48 h EC50 1.96 mg/L 48 h EC50 1.09 - 3.4 mg/L 48 h |
| ISOBUTYL ALCOHOL                    | 230 mg/L EC50 48 h (Desmodesmus subspicatus) | LC50 1370-1670 mg/L Pimephales promelas 96 h LC50 375 mg/L Pimephales promelas 96 h LC50 1480-1730 mg/L Lepomis macrochirus 96 h LC50 1120-1520 mg/L Oncorhynchus mykiss 96 h                                       |                            | EC50 1300 mg/L 48 h EC50 1070 - 1933 mg/L 48 h                    |

**Environmental Fate**

**Carfentrazone-ethyl (128639-02-1)**

| Active Ingredient(s) | Type of Test                                 | Result                            |
|----------------------|--|-----------------------------------|
| Carfentrazone-ethyl  | Bioconcentration factor (BCF), Rainbow trout | 159                               |
|                      | Half-life in soil                            | <1.5 days                         |
|                      | log Pow                                      | 3.3                               |
|                      | Mobility in soil                             | Not expected to reach groundwater |
|                      | Stability in water                           | Hydrolysis unstable at pH 5 to 9. |

**Fluthiacet-methyl (117337-19-6)**

| Active Ingredient(s) | Type of Test  | Result   |
|----------------------|---|--|
| Fluthiacet-methyl    | Bioconcentration factor (BCF), Bluefill sunfish (Lepomis macrochirus) | 240  |
|                      | log Pow   | 4.1  |
|                      | Mobility in soil  | Not expected to reach groundwater  |
|                      | Soil degradation  | <2 days  |
|                      | Stability in water  | Hydrolysis half-life of 18 days (pH 7); Stable at pH 5 and unstable at pH 9. |

| Chemical Name                       | log Pow     |
|-------------------------------------|-------------|
| Naphtha (petroleum), heavy aromatic | 2.9 - 6.1   |
| 2-Methylnaphthalene                 | 3.86        |
| Acetophenone                        | 1.58 - 1.73 |
| Naphthalene                         | 3.3         |
| ISOBUTYL ALCOHOL                    | 0.79        |

**13. Disposal considerations**

**Waste disposal methods**

Improper disposal of excess pesticide, spray mixture, or rinsate is prohibited. If these wastes cannot be disposed of by use according to label instructions, contact appropriate disposal authorities for guidance.

**Contaminated packaging**

Containers must be disposed of in accordance with local, state and federal regulations. Refer to the product label for container disposal instructions.

**14. Transport information**

**DOT**

Not regulated for transportation if shipped in Non Bulk packaging. The classification below pertains to the shipment in Bulk packaging.

**Packaging Type**

Bulk

**Proper shipping name**

Other regulated substances, liquid, n.o.s.

**Hazard Class**

9

**UN/ID No**

NA3082

**Packing group**

III

**Reportable Quantity (RQ)**

Naphthalene

**Description**

NA3082, Other regulated substances, liquid, n.o.s. (naphthalene), 9, PGIII, RQ

**Additional information**

Naphthalene is an "RQ" quantity when this material meets or exceeds 1428 pounds (171 gallons) per package. Classification is not applicable when shipped at quantities less than the calculated RQ.

**TDG**

Classification below is only applicable when shipped by vessel and is not applicable when shipped by road or rail only.

**Proper shipping name**

Environmentally hazardous substance, liquid, n.o.s.

**Hazard Class**

9

**UN/ID No**

UN3082

**Packing group**

III

**Marine pollutant**

Carfentrazone-ethyl, Fluthiacet-methyl.

**Description** UN3082, Environmentally hazardous substance, liquid, N.O.S. (Carfentrazone-ethyl, Fluthiacet-methyl), 9, PG III, Marine Pollutant

**ICAO/IATA**

**UN/ID No** UN3082  
**Proper shipping name** Environmentally hazardous substance, liquid, n.o.s.  
**Hazard Class** 9  
**Packing group** III  
**Marine pollutant** Carfentrazone-ethyl, Fluthiacet-methyl  
**Description** UN3082, Environmentally hazardous substance, liquid, N.O.S. (Carfentrazone-ethyl, Fluthiacet-methyl), 9, PG III, Marine Pollutant

**IMDG/IMO**

**Proper shipping name** Environmentally hazardous substance, liquid, n.o.s.  
**Hazard Class** 9  
**UN/ID No** UN3082  
**Packing group** III  
**EmS No.** F-A, S-F  
**Marine pollutant** Carfentrazone-ethyl, Fluthiacet-methyl  
**Description** UN3082, Environmentally hazardous substance, liquid, N.O.S. (Carfentrazone-ethyl, Fluthiacet-methyl), 9, PG III, Marine Pollutant

**15. Regulatory information**

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical Name | CAS-No  | Weight % | SARA 313 - Threshold Values % |
|---------------|---------|----------|-------------------------------|
| Acetophenone  | 98-86-2 | 10-20    | 1.0                           |
| Naphthalene   | 91-20-3 | <8       | 0.1                           |

**SARA 311/312 Hazard Categories**

**Acute Health Hazard** yes  
**Chronic Health Hazard** yes  
**Fire Hazard** no  
**Sudden Release of Pressure Hazard** no  
**Reactive Hazard** no

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Chemical Name    | Hazardous Substances RQs | Extremely Hazardous Substances RQs |
|------------------|--------------------------|------------------------------------|
| Acetophenone     | 5000 lb                  |                                    |
| Naphthalene      | 100 lb                   |                                    |
| ISOBUTYL ALCOHOL | 5000 lb                  |                                    |

| Chemical Name    | U.S. - TSCA (Toxic Substances Control Act) - Section 4 - Chemical Test Rules (40 CFR 799) | U.S. - TSCA (Toxic Substances Control Act) - Section 5(a)(2) - Chemicals with Significant New Use Rules (SNURs) |
|------------------|---|---|
| Naphthalene      | 40 CFR 799.5115   |   |
| ISOBUTYL ALCOHOL | 40 CFR 799.5000   |   |



| Chemical Name                       | U.S. - TSCA (Toxic Substances Control Act) - Section 8(a) - Chemical-Specific Reporting and Recordkeeping |
|-------------------------------------|---|
| Naphtha (petroleum), heavy aromatic | Partially exempt chemical substance termed Petroleum Process Stream                                       |
| Naphthalene                         | PAIR: 08/04/1995  |

| Chemical Name    | U.S. - TSCA (Toxic Substances Control Act) - Section 8(d) - 716.120(a) - Health and Safety Reporting - List of Substances |
|------------------|---|
| Naphthalene      | 06/01/1987  |
| ISOBUTYL ALCOHOL | 03/07/1986  |

**International Regulations**

**Mexico - Grade**

Moderate risk, Grade 2

| Chemical Name    | Carcinogen Status | Mexico   |
|------------------|-------------------|--|
| Naphthalene      |                   | Mexico: TWA 10 ppm Mexico: TWA 50 mg/m <sup>3</sup><br>Mexico: STEL 15 ppm Mexico: STEL 75 mg/m <sup>3</sup>   |
| ISOBUTYL ALCOHOL |                   | Mexico: TWA 50 ppm Mexico: TWA 150 mg/m <sup>3</sup><br>Mexico: STEL 75 ppm Mexico: STEL 225 mg/m <sup>3</sup> |

**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

D2A Very toxic materials, D2B Toxic materials



**16. Other information**

Revision Date: 2012-04-11  
Reason for revision: Initial Release.

**Disclaimer**

FMC Corporation believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specified product designated and may not be applicable where such product is used in combination with any other materials or in any process. Further, since the conditions and methods of use are beyond the control of FMC Corporation, FMC corporation expressly disclaims any and all liability as to any results obtained or arising from any use of the products or reliance on such information.

**Prepared By**

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**End of Material Safety Data Sheet**