

SAFETY DATA SHEET

1. Identification

Product identifier Scepter 70 DG Herbicide
Other means of identification
SDS number 517
Synonym(s) Imazaquin
Recommended use Herbicide.
Recommended restrictions Keep out of the Reach of Children!
EPA Registration number EPA: 5481-610

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name AMVAC Chemical Corporation
Address 4100 E Washington Blvd
Los Angeles, CA 90023 USA
Telephone AMVAC Chemical Corp 323-264-3910
AMVAC Chemical Corp 323-268-1028 (FAX)
Website www.Amvac-Chemical.com
E-mail CustServ@Amvac-Chemical.com
Emergency phone number Medical 888-681-4261
CHEMTREC® (USA+Canada) 800-424-9300
Product Use 888-462-6822
CHEMTREC® (Outside USA) +1-703-527-3887

2. Hazard(s) identification

Physical hazards Not classified.
Health hazards Not classified.
Environmental hazards Not classified.
OSHA defined hazards Combustible dust

Label elements

Hazard symbol None.
Signal word This product does not require a hazard warning label in accordance with GHS criteria.
Hazard statement Not available.
Precautionary statement
Prevention Avoid release to the environment.
Response Collect spillage.
Storage Store away from incompatible materials.
Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) Very toxic to aquatic life.

Supplemental information This product is not combustible in the form in which it is shipped by the manufacturer, but may form a combustible dust through downstream activities (e.g. grinding, pulverizing) that reduce its particle size.

3. Composition/information on ingredients

Mixtures

| Chemical name | Common name and synonyms | CAS number | % |
|---------------|--------------------------|------------|---------------|
| Imazaquin | | 81335-37-7 | 70 |
| Kaolin | | 1332-58-7 | 15.0 - 25.0 % |

| Additional components | Common name and synonyms | CAS number | % |
|---|--------------------------|------------|--------|
| Chemical name | | | |
| free respirable Crystalline (quartz) Silica | | 14808-60-7 | >= 0.1 |
| Titanium Dioxide | | 1317-70-0 | >= 0.1 |

4. First-aid measures

| | |
|---|---|
| Inhalation | Move to fresh air. Call a physician if symptoms develop or persist. |
| Skin contact | Wash off with soap and water. |
| Eye contact | Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists. |
| Ingestion | Rinse mouth. Drink plenty of water. Get medical attention if symptoms occur. |
| Most important symptoms/effects, acute and delayed | No significant reaction of the human body to the product is known. |
| Indication of immediate medical attention and special treatment needed | Treat symptomatically. |
| General information | Take off all contaminated clothing immediately. If you feel unwell, seek medical advice (show the label where possible). |

5. Fire-fighting measures

| | |
|--|---|
| Suitable extinguishing media | Foam. Dry chemical powder. Carbon dioxide (CO2). Water spray. |
| Unsuitable extinguishing media | Do not use water jet as an extinguisher, as this will spread the fire. |
| Specific hazards arising from the chemical | During fire, gases hazardous to health may be formed. |
| 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 | Move containers from fire area if you can do so without risk. Dike and collect extinguishing water. Evacuate area of all unnecessary personnel.. Do not allow contaminated water to enter drains or waterways. Dusty conditions may ignite explosively in the presence of an ignition source, causing a flash fire. |
| 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. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). 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 | Dike the spilled material, where this is possible. Prevent product from entering drains. Shovel up and place in a container for salvage or disposal. Spilled substance should be recovered whenever possible and applied according to label rates. Following product recovery, decontaminate the surface and flush area with water. Collect any wash water for approved disposal. For waste disposal, see section 13 of the SDS. |
| Environmental precautions | Do not discharge into the subsoil/soil. Do not discharge into drains, water courses or onto the ground. Contain contaminated water/firefighting water. |

7. Handling and storage

| | |
|---|---|
| Precautions for safe handling | Pesticide Applicators & Workers: Refer to the Product Label for Handling Instructions. Handling and processing operations should be conducted in accordance with 'best practices' (e.g. NFPA-654). Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid contact with eyes, skin, and clothing. Avoid dust formation. Keep away from sources of ignition - No smoking. Ground container and transfer equipment to eliminate static electric sparks. Handle and open container with care. Avoid release to the environment. Wash hands thoroughly after handling. |
| Conditions for safe storage, including any incompatibilities | Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). Prevent contamination with other crop protection products, fertilizers, food, and feed. Store in tightly closed original container in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Do not store at temperatures above 40°C (104°F). |

8. Exposure controls/personal protection

Occupational exposure limits

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

| Components | Type | Value | Form |
|------------------------|------|---------------------|-------------------------------------|
| Kaolin (CAS 1332-58-7) | PEL | 5 mg/m3 15 mg/m3 | Respirable fraction. Total dust. |

| Additional components | Type | Value | Form |
|----------------------------------|------|----------|-------------|
| Titanium Dioxide (CAS 1317-70-0) | PEL | 15 mg/m3 | Total dust. |

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

| Additional components | Type | Value | Form |
|--|------|-----------|-------------|
| free respirable Crystalline (quartz) Silica (CAS 14808-60-7) | TWA | 0.3 mg/m3 | Total dust. |
| | | 0.1 mg/m3 | Respirable. |

US. ACGIH Threshold Limit Values

| Components | Type | Value | Form |
|------------------------|------|---------|----------------------|
| Kaolin (CAS 1332-58-7) | TWA | 2 mg/m3 | Respirable fraction. |

| Additional components | Type | Value | Form |
|--|------|-------------|----------------------|
| free respirable Crystalline (quartz) Silica (CAS 14808-60-7) | TWA | 0.025 mg/m3 | Respirable fraction. |
| Titanium Dioxide (CAS 1317-70-0) | TWA | 10 mg/m3 | |

US. NIOSH: Pocket Guide to Chemical Hazards

| Components | Type | Value | Form |
|------------------------|------|---------------------|----------------------|
| Kaolin (CAS 1332-58-7) | TWA | 5 mg/m3 10 mg/m3 | Respirable. Total |

| Additional components | Type | Value | Form |
|--|------|------------|------------------|
| free respirable Crystalline (quartz) Silica (CAS 14808-60-7) | TWA | 0.05 mg/m3 | Respirable dust. |

Biological limit values

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

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks.

Individual protection measures, such as personal protective equipment

Eye/face protection If contact is likely, safety glasses with side shields are recommended.

Skin protection

Hand protection For prolonged or repeated skin contact use suitable protective gloves.

Other

Wear suitable protective clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

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 | Dry flowable water dispersible granules. |

| | |
|---|---|
| Color | Off-white to beige. |
| Odor | Faint odor; Nutty |
| Odor threshold | Not available. |
| pH | 3 - 5 (0.1%(m), approx 20°C) |
| Melting point/freezing point | 426.2 - 431.6 °F (219 - 222 °C) (a.i.) / 426.2 °F (219 °C) estimated |
| Initial boiling point and boiling range | Has not been tested |
| Flash point | Not applicable (solid) |
| Evaporation rate | Not available. |
| Flammability (solid, gas) | Not applicable. |
| Upper/lower flammability or explosive limits | |
| Flammability limit - lower (%) | Not available. |
| Flammability limit - upper (%) | Not available. |
| Explosive limit - lower (%) | No hazard is expected as long as the product is used appropriately and in accordance with the intended use. |
| Explosive limit - upper (%) | No hazard is expected as long as the product is used appropriately and in accordance with the intended use. |
| Vapor pressure | Negligible |
| Vapor density | Not available. |
| Relative density | Not available. |
| Solubility(ies) | |
| Solubility (water) | Dispersible |
| Partition coefficient (n-octanol/water) | 0.93 (Imazaquin) |
| Auto-ignition temperature | > 572 °F (> 300 °C) (Imazaquin) |
| Decomposition temperature | 383 °F (195 °C) (Imazaquin) |
| Viscosity | Not available. |
| Other information | |
| Bulk density | 481 - 609 kg/m ³ (approx) 4.67 lb/gal (US, approx) |
| Chemical family | Imidazole derivative |
| Dust explosion properties | |
| Kst | < 200 bar.m/s |
| St class | 1 |
| Explosive properties | Not explosive. |
| Flammability | Based on the structure or composition there is no indication of flammability |
| Oxidizing properties | Not oxidizing. |

10. Stability and reactivity

| | |
|---|---|
| Reactivity | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| Chemical stability | Material is stable under normal conditions. |
| Possibility of hazardous reactions | Hazardous polymerization does not occur. No dangerous reaction known under conditions of normal use. |
| Conditions to avoid | Avoid conditions which create dust. Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the decomposition temperature. Avoid electro-static discharge. Avoid high temperatures. Contact with incompatible materials. |
| Incompatible materials | Strong oxidizing agents., Strong acids., Strong bases. |
| Hazardous decomposition products | No hazardous decomposition products are known. Emits hazardous fumes and smoke of unknown composition when heated to decomposition or burned. |

11. Toxicological information

Information on likely routes of exposure

| | |
|---|--|
| Inhalation | Prolonged inhalation may be harmful. |
| Skin contact | No adverse effects due to skin contact are expected. |
| Eye contact | Direct contact with eyes may cause temporary irritation. |
| Ingestion | Expected to be a low ingestion hazard. |
| Symptoms related to the physical, chemical and toxicological characteristics | Direct contact with eyes may cause temporary irritation. |

Information on toxicological effects

| | |
|-----------------------|---|
| Acute toxicity | Virtually nontoxic after single ingestion. Slightly toxic after short-term skin contact. Relatively nontoxic after short-term inhalation. |
|-----------------------|---|

| Product | Species | Test Results |
|---|--|--|
| Scepter 70 DG | | |
| Acute | | |
| Dermal | | |
| <i>Solid</i> | | |
| LD50 | Rabbit | > 2000 mg/kg |
| Inhalation | | |
| <i>Dust</i> | | |
| LC50 | Rat | > 5.7 mg/l, 4 h (Imazaquin only) |
| Oral | | |
| <i>Solid</i> | | |
| LD50 | Rat | > 6598 mg/kg (male/female) |
| Skin corrosion/irritation | Prolonged skin contact may cause temporary irritation. | |
| Irritation Corrosion - Skin | | |
| Scepter 70 DG | | Result: Minimally irritating Species: Rabbit Organ: skin |
| Serious eye damage/eye irritation | Direct contact with eyes may cause temporary irritation. | |
| Respiratory or skin sensitization | | |
| Respiratory sensitization | Not a respiratory sensitizer. | |
| Skin sensitization | This product is not expected to cause skin sensitization. | |
| Germ cell mutagenicity | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. | |
| Carcinogenicity | | |
| IARC Monographs. Overall Evaluation of Carcinogenicity | | |
| free respirable Crystalline (quartz) Silica (CAS 14808-60-7) | 1 | Carcinogenic to humans. |
| Titanium Dioxide (CAS 1317-70-0) | 2B | Possibly carcinogenic to humans. |
| OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) | | |
| | | Not regulated. |
| US. National Toxicology Program (NTP) Report on Carcinogens | | |
| free respirable Crystalline (quartz) Silica (CAS 14808-60-7) | | Known To Be Human Carcinogen. |
| Reproductive toxicity | This product is not expected to cause reproductive or developmental effects. | |
| Specific target organ toxicity - single exposure | Not classified. | |
| Specific target organ toxicity - repeated exposure | Not classified. | |
| Aspiration hazard | Not an aspiration hazard. | |

Chronic effects Prolonged inhalation may be harmful. This product may contain greater than 0.1% crystalline silica. Repeated exposure to high concentrations of crystalline silica may result in silicosis, a disease characterized by coughing, difficult breathing, wheezing, scarring of the lungs, and repeated, non-specific chest illnesses.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

| Product | Species | Test Results |
|----------------|---------|---|
| Scepter 70 DG | | |
| <i>Acute</i> | | |
| Other | EC50 | Selenastrum capricornutum (new name Pseudokirchnerella subca 101.6 mg/l, 96 h |
| Aquatic | | |
| <i>Acute</i> | | |
| Crustacea | EC50 | Daphnia 316 mg/l, 48 h |
| Fish | LC50 | Pimephales promelas 127 mg/l, 96 h |

| Components | Species | Test Results |
|----------------------------|---------|--|
| Imazaquin (CAS 81335-37-7) | | |
| Aquatic | | |
| <i>Acute</i> | | |
| Other | EC50 | Lemna gibba (fronds) 0.034 mg/l, 14 d |
| | NOEC | Lemna gibba (fronds) 0.0136 mg/l, 14 d |

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

Scepter 70 DG 0.93, (imazaquin)

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal methods/information).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

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

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

This product is registered under EPA/FIFRA Regulations. It is a violation of Federal Law to use this product in any manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.

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.

HAZARD TO HUMANS

CAUTION!

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

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 disposing of equipment washwater.

Do not contaminate water when disposing of equipment washwaters.

This chemical demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly when the water table is shallow, may result in groundwater contamination.

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 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

| | |
|--------------------------|------------------------|
| Hazard categories | Immediate Hazard - No |
| | Delayed Hazard - No |
| | Fire Hazard - Yes |
| | Pressure Hazard - No |
| | Reactivity Hazard - No |

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

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

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

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

free respirable Crystalline (quartz) Silica (CAS 14808-60-7)

Titanium Dioxide (CAS 1317-70-0)

US. Massachusetts RTK - Substance List

free respirable Crystalline (quartz) Silica (CAS 14808-60-7)
 Kaolin (CAS 1332-58-7)
 Titanium Dioxide (CAS 1317-70-0)

US. New Jersey Worker and Community Right-to-Know Act

free respirable Crystalline (quartz) Silica (CAS 14808-60-7)
 Kaolin (CAS 1332-58-7)
 Titanium Dioxide (CAS 1317-70-0)

US. Pennsylvania Worker and Community Right-to-Know Law

free respirable Crystalline (quartz) Silica (CAS 14808-60-7)
 Kaolin (CAS 1332-58-7)
 Titanium Dioxide (CAS 1317-70-0)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

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

| | |
|--|---------------------------|
| free respirable Crystalline (quartz) Silica (CAS 14808-60-7) | Listed: October 1, 1988 |
| Titanium Dioxide (CAS 1317-70-0) | Listed: September 2, 2011 |

International Inventories

| Country(s) or region | Inventory name | On inventory (yes/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

| | |
|----------------------------|--|
| Issue date | 12-01-2015 |
| Revision date | 07-15-2016 |
| References | ACGIH®: American Conference of Governmental Industrial Hygienists CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act EPA: Environmental Protection Agency FIFRA: Federal Insecticide, Fungicide, and Rodenticide Act IARC: International Agency for Research on Cancer NTP: National Toxicology Program OSHA: Occupational Safety and Health Agency SARA: Superfund Amendments and Reauthorization Act TSCA: Toxic Substances Control Act DOT: Department of Transportation IMDG: International Maritime Dangerous Goods IATA: International Air Transport Association |
| Version # | 02 |
| Further information | Not available. |
| HMIS® ratings | Health: 0 Flammability: 2 Physical hazard: 0 |
| NFPA ratings | Health: 1 Flammability: 2 Instability: 0 |

Disclaimer

This information is provided for the limited guidance to the user. While AMVAC believes that the information is, as of the date hereof, reliable, it is the user's responsibility to determine the suitability of the information for its purposes. The user is advised not to construe the information as absolutely complete since additional information may be necessary or desirable when particular, exceptional, or variable conditions or circumstances exist (like combinations with other materials), or because of applicable regulations. No express or implied warranty of merchantability or fitness for a particular purpose or otherwise is made hereunder with respect to the information or the product to which the information relates. AMVAC Chemical Corporation cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

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CHEMTREC is a trademark of the American Chemistry Council, Inc.

HMIS is a trademark of the American Coatings Association.

NFPA is a trademark of the National Fire Protection Association, Inc.

Revision information

Product and Company Identification: Product Registration Numbers

Toxicological Information: Toxicological Property Data

Disposal considerations: Waste from residues / unused products

Other information, including date of preparation or last revision: Disclaimer

GHS: Classification