



Material Safety Data Sheet

**BAYER ADVANCED DURAZONE™ CONCENTRATE
WEED & GRASS KILLER**

MSDS Number: 102000025082
MSDS Version 1.0
Revision Date: 04/26/2011
Print Date: 04/26/2011

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product name BAYER ADVANCED DURAZONE™ CONCENTRATE WEED & GRASS KILLER
MSDS Number 102000025082
EPA Registration No. 72155-100
Product Use Herbicide

Bayer Environmental Science
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
USA

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)
For Product Information call: 1-800-331-2867

SECTION 2. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview Caution! Harmful if swallowed or absorbed through skin. Moderate eye irritation. Avoid contact with skin, eyes and clothing.

Physical State liquid

Odor characteristic

Appearance off-white to pink

Exposure routes Ingestion, Skin Absorption, Eye contact

Immediate Effects

Eye Moderate eye irritation. Avoid contact with eyes.

Skin May cause skin irritation. Harmful if absorbed through skin. Avoid contact with skin and clothing.

Ingestion Harmful if swallowed. Do not take internally.

Chronic or Delayed Long-Term This product or its components may have target organ effects.

Potential Environmental Effect Toxic to fish and aquatic invertebrates. This product may cause adverse effects on non-target plants.



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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

| <u>Hazardous Component Name</u> | <u>CAS-No.</u> | <u>Average % by Weight</u> |
|---------------------------------|----------------|----------------------------|
| Indaziflam | 950782-86-2 | 0.089 |
| Diquat dibromide | 85-00-7 | 0.89 |
| Glyphosate, isopropylamine salt | 38641-94-0 | 20.46 |
| Synthetic amorphous silica | 112926-00-8 | 1.00 |

SECTION 4. FIRST AID MEASURES

| | |
|-------------------------------------|---|
| General | When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment. |
| Eye | Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately. |
| Skin | Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately. |
| Ingestion | Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended. |
| Inhalation | Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately. |
| Notes to physician Treatment | Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote. |

SECTION 5. FIRE FIGHTING MEASURES

| | |
|---------------------------------|----------------------|
| Flash point | > 93.4 °C / 200.1 °F |
| Autoignition temperature | no data available |
| Lower Flammability Limit | no data available |
| Upper Flammability Limit | no data available |



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Suitable extinguishing media Water spray, Foam, Carbon dioxide (CO2), Dry chemical

Fire Fighting Instructions Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses. Whenever possible, contain fire-fighting water by diking area with sand or earth.

Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional advice Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal. Do not allow product to contact vegetation.

SECTION 7. HANDLING AND STORAGE

Handling procedures Handle and open container in a manner as to prevent spillage. Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.

Storing Procedures Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area. Protect from freezing.

Work/Hygienic Procedures Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection There are no known hazards associated with this product when used according to the label directions. The following guidelines should be followed.

Avoid inhalation of vapour or mist. Avoid contact with skin and eyes.



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Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.

Do not allow children or pets to enter the treated area until it has dried.

Exposure Limits

| | | | | |
|------------------------------------|-------------|-----------|---------|------------|
| Indaziflam | 950782-86-2 | OES BCS* | TWA | 0.14 mg/m3 |
| Diquat dibromide | 85-00-7 | NIOSH | REL | 0.5 mg/m3 |
| | | US CA OEL | TWA PEL | 0.5 mg/m3 |
| | | TX ESL | ST ESL | 1 ug/m3 |
| | | TX ESL | AN ESL | 0.1 ug/m3 |
| | | TN OEL | TWA | 0.5 mg/m3 |
| Glyphosate, isopropylamine salt | 38641-94-0 | TX ESL | ST ESL | 50 ug/m3 |
| | | TX ESL | AN ESL | 5 ug/m3 |
| Synthetic amorphous silica | 112926-00-8 | OSHA Z1A | TWA | 6 mg/m3 |
| | | TX ESL | ST ESL | 40 ug/m3 |
| | | TX ESL | AN ESL | 4 ug/m3 |
| | | | TWA | 6 mg/m3 |

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---------------------------------|---------------------------------|
| Appearance | off-white to pink |
| Physical State | liquid |
| Odor | characteristic |
| pH | 4.0 - 6.0 (100 %) |
| Vapor Pressure | no data available |
| Vapor Density (Air = 1) | no data available |
| Density | 1.10 g/cm ³ at 20 °C |
| Evaporation rate | no data available |
| Boiling Point | no data available |
| Melting / Freezing Point | no data available |



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| | |
|---|-------------------|
| Water solubility | soluble |
| Minimum Ignition Energy | no data available |
| Decomposition temperature | no data available |
| Partition coefficient: n-octanol/water | no data available |
| Viscosity | 300 - 800 cps |

SECTION 10. STABILITY AND REACTIVITY

| | |
|---|---|
| Conditions to avoid | freezing |
| Incompatibility | no data available |
| Hazardous Decomposition Products | Thermal decomposition can lead to release of: Carbon oxides nitrogen oxides (NOx) Oxides of phosphorus |
| Hazardous reactions | No hazardous reactions when stored and handled according to prescribed instructions. |
| Chemical Stability | Stable under normal conditions. |

SECTION 11. TOXICOLOGICAL INFORMATION

Only acute toxicity studies have been performed on the formulated product.

| | |
|----------------------------------|---|
| Acute oral toxicity | rat: LD50: > 5,000 mg/kg |
| Acute dermal toxicity | rabbit: LD50: > 2,000 mg/kg |
| Acute inhalation toxicity | rat: LC50: > 2.04 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. |
| | rat: LC50: > 8.16 mg/l Exposure time: 1 h Determined in the form of liquid aerosol. Extrapolated from the 4 hr LC50. |
| Skin irritation | rabbit: Moderate skin irritation. |



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Eye irritation rabbit: Mild eye irritation.

Sensitisation guinea pig: Non-sensitizing.

Chronic toxicity Diquat dibromide: may cause effects to skin, lungs, liver and kidneys.

Glyphosate, isopropylamine salt: may decrease body weight gains and effects to liver.

ACGIH
None.
NTP
None.
IARC
OSHA
None.

SECTION 12. ECOLOGICAL INFORMATION

Environmental precautions Do not allow to get into surface water, drains and ground water. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Drift or runoff from treated areas may adversely affect non-target plants. Do not apply when weather conditions favor runoff or drift. Apply this product as specified on the label.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines. Never place unused product down any indoor or outdoor drain.

Container Disposal Do not re-use empty containers. Place empty container in trash.

RCRA Information Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

SECTION 14. TRANSPORT INFORMATION

According to national and international transport regulations this material is not classified as dangerous goods / hazardous material.



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SECTION 15. REGULATORY INFORMATION

EPA Registration No. 72155-100

US Federal Regulations

TSCA list

None.

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

None.

SARA Title III - Section 302 - Notification and Information

None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

None.

US States Regulatory Reporting

CA Prop65

This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients

| | | |
|------------------|---------|--------|
| Diquat dibromide | 85-00-7 | CA, RI |
|------------------|---------|--------|

Canadian Regulations

Canadian Domestic Substance List

| | |
|---------------------------------|-------------|
| Diquat dibromide | 85-00-7 |
| Glyphosate, isopropylamine salt | 38641-94-0 |
| Synthetic amorphous silica | 112926-00-8 |

Environmental

CERCLA

| | | |
|------------------|---------|-----------|
| Diquat dibromide | 85-00-7 | 1,000 lbs |
|------------------|---------|-----------|

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

International Regulations

European Inventory of Existing Commercial Substances (EINECS)

| | |
|---------------------------------|------------|
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SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 2 Flammability - 1 Reactivity - 1 Others - none

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 2 Flammability - 1 Physical Hazard - 1 PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: New Material Safety Data Sheet.

Revision Date: 04/26/2011

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