

# MATERIAL SAFETY DATA SHEET



Emergency Phone: 800-992-5994  
Dow AgroSciences LLC  
Indianapolis, IN 46268

Date: 6/1/01  
Product Code: 88835

## VISOR\* 2E HERBICIDE

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: Visor\* 2E Herbicide

#### COMPANY IDENTIFICATION:

Dow AgroSciences  
9330 Zionsville Road  
Indianapolis, IN 46268

#### EMERGENCY TELEPHONE NUMBER:

800-992-5994

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

No		CAS REG NO	WEIGHT (%)
1	Thiazopyr .....	117718-60-2	22-23
2	Solvent naphtha, petroleum, heavy arom. ....	64742-94-5	77-78
3	Petroleum distillates, catalytic reformer fractionator residue, low boiling .....	68477-31-6	
4	Butyrolactone .....	96-48-0	
5	Related reaction products .....	None	
6	Surfactant mixture .....	Undisclosed	

NOTE: The -|-, or -Bar-, in the WEIGHT (%) column is used to denote two or more components whose weight percents sum to the total shown by the figure either to the right of or immediately above the -Bar-.

See Section 8, Exposure Controls / Personal Protection

### 3. HAZARDS IDENTIFICATION

#### Primary Routes of Exposure

Inhalation  
Skin Contact  
Eye Contact

#### Inhalation

Inhalation of solvent vapor or mist can cause the following:

- irritation of nose and throat - drowsiness - slurred speech - headache - nausea - dizziness - stupor - unconsciousness

#### Eye Contact

Direct contact with material can cause the following:

- substantial irritation

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### Skin Contact

Prolonged or repeated skin contact can cause the following:

- moderate skin irritation - defatting and drying of the skin which can lead to irritation and dermatitis - reddening

### Ingestion

Material can cause the following:

- neurotoxic effects

### Delayed Effects

Repeated overexposure to the active ingredient in this material can cause the following:

- kidney effects - liver effects - blood effects - thyroid damage

Prolonged or repeated overexposure to naphtha can cause the following:

- liver damage - kidney damage

## 4. FIRST AID MEASURES

### Inhalation

Move subject to fresh air. If breathing is difficult, give oxygen. Give artificial respiration if breathing has stopped. Call a physician.

### Eye Contact

Flush eyes with a large amount of water for at least 15 minutes. See a physician.

### Skin Contact

Wash affected skin areas thoroughly with soap and water. See a physician. Remove and wash contaminated clothing thoroughly. Do not take clothing home to be laundered.

### Ingestion

If swallowed, give 2 glasses of water to drink. See a physician. Never give anything by mouth to an unconscious person. DO NOT induce vomiting, petroleum distillate present. Careful gastric lavage may be indicated.

## 5. FIRE FIGHTING MEASURES

Flash Point .....	98°C/208°F Tag Closed Cup
Auto-ignition Temperature .....	484°C/903°F Solvent
Lower Explosive Limit .....	1.8% Solvent
Upper Explosive Limit .....	11.8% Solvent

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### Unusual Hazards

Pesticide particulates can become airborne.

### Extinguishing Agents

Use the following extinguishing media when fighting fires involving this material:  
- carbon dioxide - dry chemical - water spray - foam

### Personal Protective Equipment

Wear self-contained breathing apparatus (pressure-demand MSHA/NIOSH approved or equivalent) and full protective gear.

### Special Procedures

Contain run-off. Remain upwind. Avoid breathing smoke. Use water spray to cool containers exposed to fire.

## **6. ACCIDENTAL RELEASE MEASURES**

### Personal Protection

Appropriate protective equipment must be worn when handling a spill of this material. See SECTION 8, Exposure Controls/Personal Protection, for recommendations. If exposed to material during clean-up operations, see SECTION 4, First Aid Measures, for actions to follow. Remove all contaminated clothing promptly. Wash all exposed skin areas with soap and water immediately after exposure. Thoroughly launder clothing before reuse. Do not take clothing home to be laundered.

### Procedures

Eliminate all ignition sources. Ventilate the spill area. Avoid breathing vapor. Contain spills immediately with inert materials (e.g. sand, earth). Transfer liquids and solid diking material to separate suitable containers for recovery or disposal.  
CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

## **7. HANDLING AND STORAGE**

### Storage Conditions

Do not store this material near food, feed or drinking water. Store in a well-ventilated area. Store away from excessive heat (e.g. steam pipes, radiators), from sources of ignition and from reactive materials. Ground all metal containers during storage and handling.

### Handling Procedures

Do not handle material near food, feed or drinking water. Ground all containers when transferring material.

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### Other

CONTAINERS HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue (vapors and/or liquid) follow all MSDS and label warnings even after container is emptied. Residual vapors in empty containers may explode on ignition. DO NOT cut, drill, grind or weld on or near container. Triple rinse (or equivalent) and puncture empty container. Dispose empty container in a sanitary landfill or by incineration as allowed by state and local authorities. Avoid inhalation of smoke if incinerated.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Exposure Limit Information

No		CAS REG NO	WEIGHT (%)
1	Thiazopyr .....	117718-60-2	22-23
2	Solvent naphtha, petroleum, heavy arom. ....	64742-94-5	77-78
3	Petroleum distillates, catalytic reformer fractionator residue, low boiling .....	68477-31-6	
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6	Surfactant mixture .....	Undisclosed	

Comp. No.	Units	Dow AgroSciences		OSHA		ACGIH	
		TWA	STEL	TWA	STEL	TWA	STEL
1	mg/m3	0.50	1.50	None	None	None	None
2		None	None	None	None	None	None
3		None	None	None	None	None	None
4		None	None	None	None	None	None
5		None	None	None	None	None	None
6		None	None	None	None	None	None

#### Respiratory Protection

A respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. None required if airborne concentrations are maintained below the exposure limit listed in 'Exposure Limit Information'.

**Up to 10 times the exposure limit:** Wear a MSHA/NIOSH approved (or equivalent) half-mask, air-purifying respirator.

**Up to 100 times the exposure limit:** Wear a MSHA/NIOSH approved (or equivalent) full-face piece, air-purifying respirator,  
OR  
full-face piece, airline respirator in the demand mode.

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**Above 100 times the exposure limit or Unknown:** Wear a MSHA/NIOSH approved (or equivalent) self-contained breathing apparatus in the pressure demand mode,  
OR  
MSHA/NIOSH approved (or equivalent) full-face piece, airline respirator in the pressure demand mode with emergency escape provision.

Air-purifying respirators should be equipped with MSHA/NIOSH approved (or equivalent) cartridges for protection against pesticides.

### Eye Protection

Use chemical splash goggles (ANSI Z87.1 or approved equivalent). Eye protection worn must be compatible with respiratory protection system employed.

### Hand Protection

Chemical-resistant gloves should be worn whenever this material is handled. Glove permeation data does not exist for this material. The following glove(s) should be used for splash protection only:  
- Neoprene  
Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough.  
Rinse and remove gloves immediately after use. Wash hands with soap and water.

### Other Protection

Use chemically resistant apron or other impervious clothing to avoid prolonged or repeated skin contact.

### Engineering Controls (Ventilation)

Use explosion proof local exhaust ventilation with a minimum capture velocity of 100 ft/min. (0.5 m/sec.) at the point of vapor evolution. Refer to the current edition of Industrial Ventilation: A Manual of Recommended Practice published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

### Other Protective Equipment

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

Color .....	Amber
State .....	Liquid
Odor Characteristic .....	Aromatic odor
pH .....	4.7 1% Solution
Viscosity .....	8.47 CPS
Specific Gravity (Water = 1) .....	1.08
Melting Point .....	-10°C/14°F Solvent
Boiling Point .....	236° to 282°C/457° to 540°F Solvent
Solubility in Water .....	Emulsifiable
Percent Volatility .....	77%
Evaporation Rate (BAc = 1) .....	< 1

See Section 5, Fire Fighting Measures

### 10. STABILITY AND REACTIVITY

#### Instability

This material is considered stable. However, avoid contact with ignition sources (e.g. sparks, open flame, heated surfaces).

#### Hazardous Decomposition Products

There are no known hazardous decomposition products for this material.

#### Hazardous Polymerization

Product will not undergo polymerization.

#### Incompatibility

Avoid contact with the following:  
- strong oxidizers - nitric acid - sulfuric acid

### 11. TOXICOLOGICAL INFORMATION

#### Acute Data

Oral LD50 - rat: 2180 mg/kg  
Dermal LD50 - rat: >5000 mg/kg  
Inhalation LC50 - rat: 2.9 mg/L for 4 hr  
Skin Irritation - rabbit: moderate irritation  
Eye Irritation - rabbit: substantial irritation

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### Subchronic/Chronic Data

The following data pertains to studies conducted with the technical material, 95-96% active ingredient:  
Following repeated exposures (90 days) to thiazopyr technical in their feed, dogs showed reduced weight gain and effects on the liver and thyroid (NOEL - 10 ppm).  
Rats dosed for 90 days showed similar effects plus effects on blood and kidneys (NOEL - 100 ppm).  
In a short term pilot study, mice also showed adverse liver effects (NOEL 100 ppm).  
Skin application to rats (21 days) produced liver and kidney effects (NOEL 100 mg/Kg).

### Carcinogenicity Data

The following data pertains to studies conducted with the technical material, 95-96% active ingredient:  
Long term (one year) feeding study in dogs produced decreased weight gains and adverse effects on the liver (NOEL 20 ppm).  
Effects on the liver, kidney and lymph nodes were seen in mice following long term (18 months) administration of thiazopyr technical in their diet (NOEL 100 ppm); there was no treatment related oncogenic effect.  
Rats which were fed thiazopyr technical (two years) also had decreased body weight gains, adverse liver and kidney effects (NOEL 10 ppm), an increased incidence of thyroid tumors at the higher dose levels and an equivocal increase in kidney tumors at the highest level tested.

### Mutagenicity Data

The following data pertains to studies conducted with the technical material, 95-96% active ingredient:  
This product does not pose a mutagenic hazard.

### Reproductive/Teratology Data

The following data pertains to studies conducted with the technical material, 95-96% active ingredient:  
Rats given thiazopyr technical orally during pregnancy demonstrated developmental toxicity (skeletal variations), accompanied by decreased maternal body weight gains and effects on liver weights (developmental NOEL - 100 mg/Kg), while rabbits dosed orally had decreased maternal weight gain (175 mg/Kg). Neither species showed an increase in birth defects following treatment.  
No adverse effects were seen on the ability of male or female rats to reproduce when given thiazopyr technical for two successive generations (NOEL 1000 ppm), though parental animals showed adverse effects on the liver.  
Effects were noted on litter size and pup weight and survival at higher concentrations in the diet in a short-term pilot feeding study.

### Sensitization Data

Skin sensitization - guinea pig: No allergic response observed.

### Other Toxicity Data

Acute exposures at high doses to thiazopyr technical produced transient seizures and convulsions in rats and mice. The No Observed Effect Level (NOEL) is 500 mg/kg/day in rats; the NOEL in mice is 200 mg/kg/day.

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### 12. ECOLOGICAL INFORMATION

#### Environmental Toxicity

Honeybee, Oral LC50: > 1000 ppm  
Honeybee, LD50: > 100 µg/bee  
Bobwhite quail, Acute oral LD50: 1913 mg/kg  
Mallard duck, 5 Day Dietary LC50: > 5620 ppm  
Bobwhite quail, 5 Day Dietary LC50: > 5620 ppm  
Daphnia magna, 48 Hour LC50: 5.9 mg/l  
Rainbow trout (Salmo gairdneri), 96 Hour LC50: 3.2 mg/l  
Bluegill sunfish (Lepomis macrochirus), 96 Hour LC50: 3.4 mg/l

The above Environmental Toxicity data are from studies conducted on the technical material, 95-96% active ingredient.

### 13. DISPOSAL CONSIDERATIONS

#### Procedure

For disposal, incinerate this material at a facility that complies with local, state, and federal regulations.

### 14. TRANSPORT INFORMATION

US DOT Hazard Class ..... NON-REGULATED

### 15. REGULATORY INFORMATION

#### Workplace Classification

This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

This product is subject to regulation under the Canadian Pest Control Products Act (P.C.P. Act). Therefore, this product is excluded from the supplier labeling and material safety data sheet requirements as specified in Section 12 of the Hazardous Products Act.

#### SARA TITLE 3: Section 311/312 Categorizations (40 CFR 370)

This product is a hazardous chemical under 29 CFR 1910.1200, and is categorized as an immediate and delayed health hazard.

#### SARA TITLE 3: Section 313 Information (40 CFR 372)

This product does not contain a chemical, which is listed in Section 313 at or above de minimis concentrations.



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### CERCLA Information (40 CFR 302.4)

Releases of this material to air, land, or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to state and local emergency planning committees under the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304.

### Waste Classification

When a decision is made to discard this material as supplied, it does not meet RCRA's characteristic definition of ignitability, corrosivity, or reactivity, and is not listed in 40 CFR 261.33. The toxicity characteristic (TC), however, has not been evaluated by the Toxicity Characteristic Leaching Procedure (TCLP).

### United States

This product is subject to regulation under the US Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and is therefore exempt from U.S. Toxic Substances Control Act (TSCA) Inventory listing requirements.

## **16. OTHER INFORMATION**

**MSDS Status:** New  
Document Code: D03-875-001

The Information Herein Is Given In Good Faith, But No Warranty, Express or Implied, Is Made. Consult Dow AgroSciences for Further Information