

## Material Safety Data Sheet

### AccuDri<sup>®</sup> SF<sub>6</sub> - Sulfur Hexafluoride

#### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** AccuDri<sup>®</sup> SF<sub>6</sub> - Sulfur Hexafluoride

**OTHER/GENERIC NAMES:** Sulfur Fluoride

**PRODUCT USE:** Industrial chemical.

**MANUFACTURER:** Honeywell  
Fluorine Specialties  
101 Columbia Road, Box 1053  
Morristown, New Jersey 07962-1053

**FOR MORE INFORMATION CALL:**  
(Monday-Friday, 8:00am-5:00pm, EST)  
1-800-522-8001

**IN CASE OF EMERGENCY CALL:**  
(24 Hours/Day, 7 Days/Week)  
1-800-707-4555 or  
Chemtrec 1-800-424-9300

#### 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT NAME</u>	<u>CAS NUMBER</u>	<u>WEIGHT %</u>
Sulfur Hexafluoride	2551-62-4	100

Trace impurities and additional material names not listed above may also appear in Section 15 towards the end of the MSDS. These materials may be listed for local "Right-To-Know" compliance and for other reasons.

#### 3. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** A colorless, odorless gas with no warning properties. Non-flammable. Avoid breathing vapors. Wear self-contained breathing apparatus or air-supplied respirator.

##### POTENTIAL HEALTH HAZARDS

**SKIN:** Direct contact with the liquefied material or escaping compressed gas may cause frostbite injury.

**EYES:** Direct contact with the liquefied material or escaping compressed gas may cause frostbite injury.

**INHALATION:** Pure SF<sub>6</sub> is of a low order of toxicity, but may act as an asphyxiant if oxygen is reduced to below 16%, as indicated by paleness and possible cyanosis (blue skin).

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**INGESTION:** Not applicable (gas at normal conditions).

**DELAYED EFFECTS:** None known.

**Ingredients found on one of the OSHA designated carcinogen lists are listed below.**

<u>INGREDIENT NAME</u>	<u>NTP STATUS</u>	<u>IARC STATUS</u>	<u>OSHA LIST</u>
*No ingredients listed in this section*			

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### **4. FIRST AID MEASURES**

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**SKIN:** Wash exposed area extremely thoroughly, but gently in cases of frostbite-like injury, with soap and water. Contact a physician if irritation or pain persists.

**EYES:** Flush eyes with copious amounts of warm water for at least 15 minutes. Contact a physician if irritation, pain, swelling, excessive tearing, or photophobia (painful sensitiveness to strong light) persists.

**INHALATION:** Immediately remove to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen provided a qualified operator is available. Contact a physician.

**INGESTION:** Not applicable.

**ADVICE TO PHYSICIAN:** No specific treatment. Treat according to symptoms present.

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### **5. FIRE FIGHTING MEASURES**

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#### FLAMMABLE PROPERTIES

FLASH POINT:	Not Applicable.
FLASH POINT METHOD:	Not Applicable.
AUTOIGNITION TEMPERATURE:	Not Applicable.
UPPER FLAME LIMIT (volume % in air):	Not Applicable.
LOWER FLAME LIMIT (volume % in air):	Not Applicable.
FLAME PROPAGATION RATE (solids):	Not Applicable.
OSHA FLAMMABILITY CLASS:	Non-combustible gas.

#### **EXTINGUISHING MEDIA:**

If involved in a fire, use dry chemical or carbon dioxide for small fires or water spray, fog, or regular foam for large fires.

#### **UNUSUAL FIRE AND EXPLOSION HAZARDS:**

Cylinders may explode in heat of fire. Fire may produce irritating or poisonous gases.

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#### **SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS:**

Wear self-contained breathing apparatus. Cool cylinders exposed to heat of fire with flooding amounts of water. Apply water from as far a distance as possible.

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#### **6. ACCIDENTAL RELEASE MEASURES**

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**IN CASE OF SPILL OR OTHER RELEASE:** (Always wear recommended personal protective equipment.)  
Evacuate unprotected personnel. Stay upwind. Protected personnel (see Section 8) may shut off leak if without risk. Product will disperse itself.

Spills and releases may have to be reported to Federal and/or local authorities. See Section 15 regarding reporting requirements.

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#### **7. HANDLING AND STORAGE**

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**NORMAL HANDLING:** (Always wear recommended personal protective equipment.)  
Observe precautions on cylinder label. Protect cylinders from physical damage.

#### **STORAGE RECOMMENDATIONS:**

Protect cylinders from physical damage, heat, and sunlight. Store in an area of low fire risk. For additional information, see Compressed Gas Association Pamphlet, "Safe Handling of Compressed Gases in Containers," 7<sup>th</sup> Ed., 1984.

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#### **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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#### **ENGINEERING CONTROLS:**

General mechanical ventilation.

#### **PERSONAL PROTECTIVE EQUIPMENT**

#### **SKIN PROTECTION:**

Rubber gloves and coveralls.

#### **EYE PROTECTION:**

Safety glasses.

#### **RESPIRATORY PROTECTION:**

Self-contained breathing apparatus or air-supplied respirator if needed. Note that an accidental release of SF<sub>6</sub> may reduce the oxygen content of the local atmosphere below 16% (see Section 3).

#### **ADDITIONAL RECOMMENDATIONS:**

None.

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### EXPOSURE GUIDELINES

<u>INGREDIENT NAME</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER LIMIT</u>
Sulfur Hexafluoride	1000 ppm (TWA)	1000 ppm (TWA)	None.

\* = Limit established by Honeywell.

\*\* = Workplace Environmental Exposure Level (AIHA).

\*\*\* = Biological Exposure Index (ACGIH).

### **OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS:**

None.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Colorless gas.		
PHYSICAL STATE:	Gas.		
MOLECULAR WEIGHT:	146.05		
CHEMICAL FORMULA:	SF <sub>6</sub>		
ODOR:	Odorless		
SPECIFIC GRAVITY (water = 1.0):	Not Applicable (gas).		
SOLUBILITY IN WATER (weight %):	Slight.		
pH:	Not Applicable.		
BOILING POINT:	Sublimes at -63.9°C, 1 atm		
MELTING POINT:	-50.8°C at 32.5 psia		
VAPOR PRESSURE:	Not Applicable (gas).		
VAPOR DENSITY (air = 1.0):	5.1 at 1 atm, 21.1°C		
EVAPORATION RATE:	Not Applicable.	COMPARED TO:	Not Applicable.
% VOLATILES:	Not Applicable (gas).		
FLASH POINT:	Not Applicable.		

(Flash point method and additional flammability data are found in Section 5.)

### 10. STABILITY AND REACTIVITY

#### **NORMALLY STABLE? (CONDITIONS TO AVOID):**

Stable under normal conditions.

#### **INCOMPATIBILITIES:**

Avoid leakage of a liquefied gas such as SF<sub>6</sub> onto water or contact with hot reactive metals.

#### **HAZARDOUS DECOMPOSITION PRODUCTS:**

Thermal and electrical arc decomposition products: GASES—fluorides of sulfur (particularly sulfur fluoride, a convulsant, and thionyl fluoride and thionyl tetrafluoride, pulmonary irritants). SOLIDS—metal fluorides and sulfides which can be highly toxic and irritating. Should the presence of decomposition products be suspected, a self-contained breathing apparatus must be worn to avoid possible contact.

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### HAZARDOUS POLYMERIZATION:

Will not occur.

## 11. TOXICOLOGICAL INFORMATION

### IMMEDIATE (ACUTE) EFFECTS:

LD<sub>50</sub> (rabbit): intravenous, 5790 mg/kg

### DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS:

None cited.

### OTHER DATA:

None.

## 12. ECOLOGICAL INFORMATION

Not Applicable (inorganic).

## 13. DISPOSAL CONSIDERATIONS

### RCRA

Is the unused product a RCRA hazardous waste if discarded? No.

If yes, the RCRA ID number is: Not Applicable.

### OTHER DISPOSAL CONSIDERATIONS:

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

## 14. TRANSPORT INFORMATION

US DOT PROPER SHIPPING NAME: Sulfur hexafluoride

US DOT HAZARD CLASS: 2.2

US DOT ID NUMBER: UN 1080

UN 1080 (PIN# in Canada)

For additional information on shipping regulations affecting this material, contact the information number found in Section 1.

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### 15. REGULATORY INFORMATION

#### TOXIC SUBSTANCES CONTROL ACT (TSCA)

**TSCA INVENTORY STATUS:** Material is listed on the TSCA inventory.

**OTHER TSCA ISSUES:** None.

#### SARA TITLE III/CERCLA

"Reportable Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs) exist for the following ingredients.

#### INGREDIENT NAME

#### SARA/CERCLA RQ (lb)

#### SARA EHS TPQ (lb)

\*No ingredients listed in this section\*

**Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center [(800) 424-8802] and to your Local Emergency Planning Committee.**

**SECTION 311 HAZARD CLASS:** Immediate. Pressure.

#### **SARA 313 TOXIC CHEMICALS:**

The following ingredients are SARA 313 "Toxic Chemicals". CAS numbers and weight percents are found in Section 2.

#### INGREDIENT NAME

#### COMMENT

\*No ingredients listed in this section\*

#### STATE RIGHT-TO-KNOW

In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

#### INGREDIENT NAME

#### WEIGHT %

#### COMMENT

\*No ingredients listed in this section\*

#### **ADDITIONAL REGULATORY INFORMATION:**

None.

#### **WHMIS CLASSIFICATION (CANADA):**

Class A. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

#### **FOREIGN INVENTORY STATUS:**

Canadian DSL (Domestic Substances List)

EINECS (European Inventory of Existing Commercial Chemical Substances)

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### **16. OTHER INFORMATION**

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**CURRENT ISSUE DATE:** February, 2003

**PREVIOUS ISSUE DATE:** January, 2000

**CHANGES TO MSDS FROM PREVIOUS ISSUE DATE ARE DUE TO THE FOLLOWING:**

Section 1: Updated contact information

Section 14: Modified shipping information

**OTHER INFORMATION:** None.