



## MATERIAL SAFETY DATA SHEET

### SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: BUEHLER METADI AEROSOL  
 IDENTIFICATION NUMBER: 40-6260 THRU 40-6288  
 PRODUCT USE/CLASS: Aerosol

SUPPLIER:  
 BUEHLER, a division of Illinois Tool Works Inc.  
 41 WAUKEGAN ROAD  
 LAKE BLUFF, IL 60044

EMERGENCY: 800-424-9300  
 INFORMATION: 847-295-6500  
 PREPARER: Technical Department, 847-295-6500  
 PREPARE DATE:

### SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT%			
01	Isopropanol	67-63-0	30.0-60.0			
02	Polyalkylene glycol	Unknown	10.0-30.0			
03	1,1,1,2-tetrafluoroethane	811-97-2	30.0-60.0			
ITEM	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL – CEILING	COMPANY TLV-TWA	SKIN
01	400 ppm	500 ppm	400 ppm	N.E.	400 ppm	NO
02	N.E.	N.E.	N.E.	N.E.	N.E.	NO
03	1000 ppm	N.E.	1000 ppm	N.E.	N.E.	NO

(SEE SECTION 16 FOR ABBREVIATION LEGEND)

### SECTION 3 – HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** Harmful if inhaled. High vapor concentrations may cause drowsiness. Contents under pressure. Respiratory irritant. May cause skin irritation. Irritating to eyes.

**ACUTE EFFECTS – EYE CONTACT:** Severely irritating to the eyes.

**ACUTE EFFECTS - SKIN CONTACT:** Frequent or prolonged contact may irritate the skin and cause a skin rash (dermatitis).

**ACUTE EFFECTS – INHALATION:** Can cause severe central nervous system depression, including unconsciousness. Causes respiratory tract irritation. \*Extreme overexposure to 1,1,1,2-tetrafluoroethane may cause cardiac arrhythmia. Effects are worsened by activity following overexposure.

**ACUTE EFFECTS - INGESTION:** Small amounts (a tablespoonful) swallowed during normal handling operations are not likely to cause injury.

**CHRONIC OVEREXPOSURE EFFECTS:** \*Preexisting pulmonary and dermatological disorders may be aggravated by exposure to hazardous components.

**OTHER INFORMATION:** Not Applicable.

**PRIMARY ROUTE(S) OF ENTRY:** SKIN CONTACT, INHALATION, EYE CONTACT

### SECTION 4 – FIRST AID MEASURES

**EYE CONTACT:** Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

**SKIN CONTACT:** Wash with soap and water. Get medical attention.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**INGESTION:** If swallowed, do NOT induce vomiting. Give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

**NOTES TO PHYSICIAN:** In case of poisoning, do not give epinephrin. Treat ventricular arrhythmias with beta-blocking agents. Keep patient calm.

### SECTION 5 – FIRE FIGHTING MEASURES

**FLASH POINT:** Does not flash (SETAFLASH CLOSED CUP)

**LOWER EXPLOSIVE LIMIT:** N.A.

**UPPER EXPLOSIVE LIMIT:** N.A.

**AUTOIGNITION TEMPERATURE:** No data

**EXTINGUISHING MEDIA:** CO<sub>2</sub>, DRY CHEMICAL, FOAM, WATER FOG

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Closed containers may rupture or explode (due to pressure build-up) when exposed to extreme heat. "Empty" containers may retain dangerous product residues or explosive vapors. DO NOT pressurize, cut, weld, braze, solder, drill or grind on or near empty containers. Store full and empty containers away from heat, sparks, flame, and other sources of ignition. Observe all labeled precautions until containers are cleaned and/or reconditioned. Irritating and/or toxic gases or fumes may be generated by thermal decomposition or combustion.

**SPECIAL FIREFIGHTING PROCEDURES:** Use NIOSH-approved self-contained breathing apparatus and full protective clothing. Use water to cool exposed containers. Water stream directed into fire may cause frothing with subsequent spread of flame.

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wipe up excess. Dispose of in accordance with federal, state, and local regulations. Dispose of damaged aerosol container in accordance with state and local regulations regarding "empty" chemical containers.

## SECTION 7 – HANDLING AND STORAGE

HANDLING: Use with adequate ventilation. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid contact with skin and eyes. FOR INDUSTRIAL USE ONLY.

STORAGE: Keep away from heat, sparks and flame. Do not store in direct sunlight. KEEP OUT OF THE REACH OF CHILDREN.

## SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Local exhaust as needed to control vapor or dust levels to below lowest component TLV.

RESPIRATORY PROTECTION: If TLV/PEL is exceeded, if use is performed in a poorly-ventilated space, or if inhalation effects occur, use NIOSH-approved vapor cartridge respirator in accordance with applicable health and safety regulations and manufacturer's recommendations.

SKIN PROTECTION: Clean clothing to cover skin. Butyl rubber gloves. Neoprene gloves.

EYE PROTECTION: Safety glasses.

OTHER PROTECTIVE EQUIPMENT: Accessible eye wash and safety shower.

HYGIENIC PRACTICES: Follow good general industrial safety practices during use. Do not smoke or eat during use. Follow all MSDS/label precautions even after container is emptied.

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE:	180 - 180 F	VAPOR DENSITY:	Is heavier than air
ODOR:	Strong solvent	ODOR THRESHOLD:	No data
APPEARANCE:	Clear	EVAPORATION RATE:	Is faster than Butyl Acetate
SOLUBILITY IN H <sub>2</sub> O:	Insoluble		
FREEZE POINT:	No data	SPECIFIC GRAVITY:	0.4679
VAPOR PRESSURE:	30 psig @ 70 F	pH @ 0.0%:	N.A.
PHYSICAL STATE:	Gas	VISCOSITY:	N.A.
COEFFICIENT OF WATER/OIL DISTRIBUTION:	No data		

(SEE SECTION 16 FOR ABBREVIATION LEGEND)

## SECTION 10 – STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Prolonged exposure to heat.

INCOMPATIBILITY: Strong Lewis or mineral acids. Strong bases or oxidants. Metals. Surface-active compounds.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

## SECTION 11 – TOXICOLOGICAL PROPERTIES

### COMPONENT TOXICOLOGICAL INFORMATION:

----- CHEMICAL NAME -----	----- LD50 -----	----- LC50 -----
Isopropanol	Oral rat 5045mg/kg	Not Applicable
Polyalkylene glycol	Oral-rat=>2g/kg	Not Applicable
1,1,1,2-tetrafluoroethane	No information	Inh-rat=1500g/m3/4

## SECTION 12 – ECOLOGICAL INFORMATION

ECOLOGICAL TEST DATA: Not Available

## SECTION 13 – DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Review all current federal, state, and local regulations regarding health and disposal for appropriate disposal procedures.

## SECTION 14 – TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Consumer Commodity ORM-D

DOT TECHNICAL NAME: N.A.

DOT HAZARD CLASS: N.A.

HAZARD SUBCLASS: N.A.

DOT UN/NA CLASS: N.A.

PACKAGING GROUP: N.A.

RESP. GUIDE PAGE:

INTERNATIONAL SHIPPING NAME: ICAO/IATA: Aerosols, non-flammable  
IMO/IMDG : Aerosols

INTERNATIONAL ID NUMBER: UN1950

IMDG CLASS (1°, 2°): 2, none

IMDG PAGE NUMBER: N.A.

IMDG EMS: 213

IATA CLASS (1°, 2°): 2.2, none

ADR ITEM NO.: N.A.

ADR TREMCARD: N.A.

SUPPLEMENTAL INFORMATION: Not Applicable.

## SECTION 15 – REGULATORY INFORMATION

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)

CERCLA – SARA HAZARD CATEGORY: THIS PRODUCT HAS BEEN REVIEWED, AND IS CONSIDERED, UNDER APPLICABLE DEFINITIONS, TO MEET THE FOLLOWING CATEGORIES: IMMEDIATE HEALTH HAZARD

SARA SECTION 313: THIS PRODUCT CONTAINS THE FOLLOWING SUBSTANCES SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 AND 40 CFR PART 372:

----- CHEMICAL NAME ----- CAS NUMBER WT/WT % IS LESS THAN

No SARA Section 313 components exist in this product.

TOXIC SUBSTANCE CONTROL ACT: THE CHEMICAL SUBSTANCES IN THIS PRODUCT ARE ON THE TSCA SECTION 8 INVENTORY. THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL SUBSTANCES SUBJECT TO THE REPORTING REQUIREMENTS OF TSCA 12(B) IF EXPORTED FROM THE UNITED STATES:

----- CHEMICAL NAME ----- CAS NUMBER

Isopropanol 67-63-0

NEW JERSEY RIGHT-TO-KNOW: THE FOLLOWING MATERIALS ARE NON-HAZARDOUS, BUT ARE AMONG THE TOP 5 COMPONENTS IN THIS PRODUCT:

----- CHEMICAL NAME ----- CAS NUMBER

No non-hazardous materials are among the top five ingredients.

PENNSYLVANIA RIGHT-TO-KNOW: THE FOLLOWING NON-HAZARDOUS INGREDIENTS ARE PRESENT IN THE PRODUCT AT GREATER THAN 3%:

----- CHEMICAL NAME ----- CAS NUMBER

No non-hazardous ingredients are present at greater than 3%.

CALIFORNIA PROPOSITION 65: No Proposition 65 chemicals known to exist in this product.

CANADIAN WHMIS: THIS MSDS HAS BEEN PREPARED IN COMPLIANCE WITH CONTROLLED PRODUCT REGULATIONS EXCEPT FOR USE OF THE 16 HEADINGS.

CANADIAN WHMIS CLASS: A, D2B

COMPONENT RCRA CLASSIFICATIONS: None

COMPONENT RCRA CODES: N.E.

CERCLA RQ VALUE (MINIMUM): None

## SECTION 16 – OTHER INFORMATION

### HMIS RATINGS

HEALTH: 1

FLAMMABILITY: 1

REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: 05/12/03; 12 MAY 03

REASON FOR REVISION: Administrative change for new format.

VOLATILE ORGANIC COMPOUNDS: 101 grams/ltr

### LEGEND:

N.A. – NO INFORMATION

N.E. – NOT ESTABLISHED

N.D. – NOT DETERMINED

ABBREVIATIONS: ACGIH = AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS; OSHA = OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION; TLV-TWA = THRESHOLD LIMIT VALUE – TIME WEIGHTED AVERAGE (8 HOURS); STEL = SHORT-TERM EXPOSURE LIMIT (15 MINUTES); C = CEILING VALUE; PEL = PERMISSIBLE EXPOSURE LIMIT

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