

Material Safety Data Sheet

Revision Date: 08/08/01



Restek Corporation

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I. PRODUCT IDENTIFICATION

Catalog Number / Product Name: 32061, 32061-5XX, & 32161 / Herbicide Mix #4 / FA (Free Acid)
Revision Number: 1
Prior Version Date: None
Intended use: For Laboratory use only

II. COMPOSITION/INFORMATION ON INGREDIENTS AND CONTROL PARAMETERS:

Chemical Name	CAS #	% Composition	IDLH	ACGIH STEL	ACGIH TLV-TWA	Osha Exposure Limits
methanol	67-56-1	99.8400	6000 ppm IDLH	250 ppm STEL	200 ppm TWA	200 ppm TWA; 260 mg/m ³ TWA
bentazon	25057-89-0	0.0200	ND		No TLV	No PEL established
chloramben	133-90-4	0.0200	ND		No TLV	No PEL established
4-nitrophenol	100-02-7	0.0200	ND		No TLV	No PEL established
picloram	1918-02-1	0.0200	ND		No TLV	15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)
acifluorfen	50594-66-6	0.0200	ND		No TLV	No PEL established
tetrachloroterephthalic acid	2136-79-0	0.0200	ND		No TLV	No PEL established
pentachlorophenol	87-86-5	0.0200	ND		No TLV	0.5 mg/m ³ TWA
3,5-dichlorobenzoic acid	51-36-5	0.0200	ND		No TLV	No PEL established

III. HAZARDS IDENTIFICATION

Target Organs Potentially Affected by Exposure: skin, eyes, CNS, GI tract, respiratory system
Chemical Interactions That Change Toxicity: None Known

Immediate (Acute) Health Effects by Route of Exposure:

Inhalation Irritation: Can cause moderate respiratory irritation, dizziness, weakness, fatigue, nausea and headache.
Inhalation Toxicity: Harmful! Can cause systemic damage (see "Target Organs") Methanol can cause central nervous system depression and overexposure can cause damage to the optic nerve resulting in visual impairment or blindness.
Eye Contact: Can cause moderate irritation, tearing and reddening, but not likely to permanently injure eye tissue.
Ingestion Irritation: Irritating to mouth, throat, and stomach. Can cause abdominal discomfort, nausea, vomiting and diarrhea. Highly toxic and may be fatal if swallowed.
Ingestion Toxicity: Toxic if swallowed. May cause target organ failure and/or death.

Long-Term (Chronic) Health Effects:

Carcinogenicity:	No data.
Reproductive and Developmental Toxicity:	No data available to indicate product or any components present at greater than 0.1% may cause birth defects.
Mutagenicity:	No data available to indicate product or any components present at greater than 0.1% is mutagenic or genotoxic.
Inhalation:	Upon prolonged and/or repeated exposure, can cause moderate respiratory irritation, dizziness, weakness, fatigue, nausea and headache. Harmful! Can cause systemic damage upon prolonged and/or repeated exposure (see "Target Organs")
Ingestion:	Toxic if swallowed. May cause target organ failure and/or death.

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IV. FIRST-AID MEASURES

Inhalation:	Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen. If not breathing, give artificial respiration and have a trained individual administer oxygen. Get medical attention immediately
Eyes:	Flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get immediate medical attention.
Ingestion:	Do not induce vomiting and seek medical attention immediately. Drink two glasses of water or milk to dilute. Provide medical care provider with this MSDS.
Notes to Doctor:	No additional first aid information available

V. FIRE FIGHTING MEASURES

Flammability Summary:	Highly Flammable
Extinguishing Media:	Use alcohol resistant foam, carbon dioxide, or dry chemical extinguishing agents. Water may be ineffective but water spray can be used to extinguish a fire if swept across the base of the flames. Water can absorb heat and keep exposed material from being damaged by fire.
Fire and/or Explosion Hazards:	Vapors may be ignited by sparks, flames or other sources of ignition if material is above the flash point giving rise to a fire (Class B). Vapors are heavier than air and may travel to a source of ignition and flash back.
Fire Fighting Methods and Protection:	Do not enter fire area without proper protection including self-contained breathing apparatus and full protective equipment. Fight fire from a safe distance and a protected location due to the potential of hazardous vapors and decomposition products. Flammable component(s) of this material may be lighter than water and burn while floating on the surface.
Hazardous Combustion Products:	Carbon dioxide, Carbon monoxide
Flash Point:	11 deg. C
Autoignition Temperature:	464 deg. C
Upper Flammable/Explosive Limit, % in air:	36.0
Lower Flammable/Explosive Limit, % in air:	6.0

VI. ACCIDENTAL RELEASE MEASURES

Personal Precautions and Equipment:	Exposure to the spilled material may be severely irritating or toxic. Follow personal protective equipment recommendations found in Section VIII of this MSDS. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits.
Methods for Clean-up:	Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section VIII at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

VII. HANDLING AND STORAGE

Handling Technical Measures and Precautions:	Harmful or irritating material. Avoid contacting and avoid breathing the material. Use only in a well ventilated area. Use spark-proof tools and explosion-proof equipment
Storage Technical Measures and Conditions:	Store in a cool dry ventilated location. Isolate from incompatible materials and conditions. Keep container(s) closed. Keep away from sources of ignition
Recommended storage:	Refrigerate.

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VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures:	No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.
Respiratory Protection:	No respiratory protection required under normal conditions of use. Provide general room exhaust ventilation if symptoms of overexposure occur as explained Section III. A respirator is not normally required. If an exposure limit is exceeded or if an operator is experiencing symptoms of inhalation overexposure as explained in Section III, provide respiratory protection.
Eye Protection:	Wear chemically resistant safety glasses with side shields when handling this product. Do not wear contact lenses.
Skin Protection:	Wear protective gloves. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work
Gloves:	No information available

IX. PHYSICAL AND CHEMICAL PROPERTIES

Odor:	Mild
Solubility in Water:	Moderate; 50-99%
Vapor Density:	
Melting Point:	-98 degree C
Specific Gravity:	.791 - .792 g/cm ³ at 20 degree C

X. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions.
Conditions to Avoid:	None known.
Materials to Avoid/Chemical Incompatibility:	Strong oxidizing agents
Hazardous Decomposition Products:	Carbon dioxide, Carbon monoxide

XI. TOXICOLOGICAL INFORMATION

Component Toxicology Data (NIOSH):

Chemical Name	CAS Number	LD50/LC50
Methanol	67-56-1	Inhalation LC50 Rat : 64000 ppm/4H; Oral LD50 Rat : 5628 mg/kg; Oral LD50 Mouse : 7300 mg/kg; Dermal LD50 Rabbit : 15800 mg/kg

Component Carcinogenic data (OSHA):

XII. ECOLOGICAL INFORMATION

Overview:	Slight ecological hazard. In high concentrations, this product may be dangerous to plants and/or wildlife.
Mobility:	No data
Persistence:	No data
Bioaccumulation:	No data
Degradability:	Biodegrades slowly.
Ecological Toxicity Data:	0

XIII. DISPOSAL CONSIDERATIONS

Waste Description for Spent Product:	Spent or discarded material is a hazardous waste.
Disposal Methods:	Dispose of by incineration following Federal, State, Local, or Provincial regulations.
Waste Disposal Code(s):	D001

XIV. TRANSPORTATION INFORMATION

DOT Basic Description:	Methanol
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UN Number: UN# 1230

XV. REGULATORY INFORMATION

Chemical Name	CAS#	CERCLA	SARA 313	SARA EHS 313	TSCA
methanol	67-56-1	X	X	-	X
bentazon	25057-89-0		-	-	X
chloramben	133-90-4		X	-	X
4-nitrophenol	100-02-7		X	-	X
picloram	1918-02-1		X	-	X
acifluorfen	50594-66-6		-	-	X
tetrachloroterephthalic acid	2136-79-0		-	-	-
pentachlorophenol	87-86-5		X	-	X
3,5-dichlorobenzoic acid	51-36-5		-	-	-

The following chemicals are listed on CA Prop 65:

Chemical Name	CAS #	Regulation	% Range
Pentachlorophenol	87-86-5	Prop 65 Cancer	0.01 - 0.1

XVI. ADDITIONAL INFORMATION

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