

Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier

3MTM Adhesion Promoter AC-132

Product Identification Numbers

42-0044-2208-7, 70-0052-0036-8, 70-0052-2069-7, 70-0052-2070-5, 70-0052-2071-3, 70-0052-2072-1, 70-0052-2070-1, 70-0052-200-1, 70-0052-200-1, 70-0052-200-1, 70-0052-200-1, 70-0052-200-1, 70-0052-200-1, 70-0052-200-1, 70-00052-200-1, 70-

1.2. Recommended use and restrictions on use

Recommended use

Metal Adhesion Promoter, For industrial or professional use only.

1.3. Supplier's details

MANUFACTURER: 3M

DIVISION: Aerospace and Commercial Transportation Division **ADDRESS:** 3M Center, St. Paul, MN 55144-1000, USA **Telephone:** 1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification

Flammable Liquid: Category 3. Reproductive Toxicity: Category 2.

2.2. Label elements

Signal word

Warning

Symbols

Flame | Health Hazard |

Pictograms





Hazard Statements

Flammable liquid and vapor.

Suspected of damaging fertility or the unborn child.

Precautionary Statements

Prevention:

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Keep container tightly closed.

Use explosion-proof electrical/ventilating/lighting equipment.

Wear protective gloves and eye/face protection.

Response:

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF exposed or concerned: Get medical advice/attention.

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

Storage:

Store in a well-ventilated place. Keep cool.

Store locked up.

Disposal:

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Hazards not otherwise classified

None.

1% of the mixture consists of ingredients of unknown acute oral toxicity.

3% of the mixture consists of ingredients of unknown acute dermal toxicity.

3% of the mixture consists of ingredients of unknown acute inhalation toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
4-CHLOROBENZOTRIFLUORIDE	98-56-6	90 - 98
TETRABUTYL TITANATE	5593-70-4	1 - 2 Trade Secret *
ORGANIC TITANATE (NJ TS RN 00850201001-522P)	Trade Secret*	1 - 2
ISOPROPYL ALCOHOL	67-63-0	< 0.5
METHYL ALCOHOL	67-56-1	< 0.2 Trade Secret *

NJTS or NJTSRN: New Jersey Trade Secret Registry Number.

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*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eve Contact:

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

· · · · · · · · · · · · · · · · · · ·	
Substance	<u>Condition</u>
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Chloride	During Combustion
Hydrogen Fluoride	During Combustion

5.3. Special protective actions for fire-fighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. When fire fighting conditions are severe and total thermal decomposition of the product is possible, wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools.

Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Contain spill. Cover spill area with a fire-extinguishing foam. An appropriate aqueous film forming foam (AFFF) is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not breathe thermal decomposition products. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (gloves, respirators, etc.) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from heat. Store away from acids. Store away from strong bases.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient		C.A.S. No.	Agency	Limit type	Additional Comments
METHYL A	ALCOHOL	67-56-1	ACGIH	TWA:200 ppm;STEL:250 ppm	SKIN
METHYL A	ALCOHOL	67-56-1	OSHA	TWA:260 mg/m3(200 ppm)	
ISOPROPY	L ALCOHOL	67-63-0	OSHA	TWA:980 mg/m3(400 ppm)	
ISOPROPY	L ALCOHOL	67-63-0	ACGIH	TWA:200 ppm;STEL:400 ppm	A4: Not class. as human
					carcin

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

CMRG: Chemical Manufacturer's Recommended Guidelines

OSHA: United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Provide appropriate local exhaust when product is heated. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment. Use explosion-proof ventilation equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect Vented Goggles

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.

Gloves made from the following material(s) are recommended: Butyl Rubber

Respiratory protection

Use a positive pressure supplied-air respirator if there is a potential for over exposure from an uncontrolled release, exposure levels are not known, or under any other circumstances where air-purifying respirators may not provide adequate protection. An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form: Liquid

Odor, Color, Grade:Organic odor; red liquidOdor thresholdNo Data AvailablepHNo Data AvailableMelting pointNo Data Available

Boiling Point272 °F [Details: Test Data] **Flash Point**85 °F [Test Method: Closed

Flash Point 85 °F [Test Method: Closed Cup] [Details: Test Data]
Evaporation rate No Data Available
Flammability (solid, gas) Not Applicable

Flammability (solid, gas)
Flammable Limits(LEL)
Flammable Limits(UEL)
Vapor Pressure
Vapor Density
No Data Available
No Data Available
No Data Available
No Data Available

Specific Gravity 1.29 [Ref Std: WATER=1]

Solubility in Water

Solubility- non-water

Negligible
No Data Available
Partition coefficient: n-octanol/ water

No Data Available

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Autoignition temperature

Decomposition temperature

No Data Available

No Data Available

Viscosity

No Data Available

VOC Less H2Q & Exempt Solvents

140 7 g/l [Test Met

VOC Less H2O & Exempt Solvents 140.7 g/l [Test Method: calculated SCAQMD rule 443.1]

SECTION 10: Stability and reactivity

10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Heat

Sparks and/or flames

10.5. Incompatible materials

Strong acids
Strong bases
Strong oxidizing agents

10.6. Hazardous decomposition products

Substance

None known.

Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

Extreme heat arising from situations such as misuse or equipment failure can generate hydrogen fluoride as a decomposition product.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

May be harmful if inhaled.

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

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May cause additional health effects (see below).

Skin Contact:

May be harmful in contact with skin.

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. May cause additional health effects (see below).

Eye Contact:

Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

Additional Health Effects:

Reproductive/Developmental Toxicity:

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE 2,000 - 5,000 mg/kg
Overall product	Inhalation- Vapor(4 hr)		No data available; calculated ATE 20 - 50 mg/l
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
4-CHLOROBENZOTRIFLUORIDE	Dermal	Rabbit	LD50 > 2,700 mg/kg
4-CHLOROBENZOTRIFLUORIDE	Inhalation- Vapor (4 hours)	Rat	LC50 33 mg/l
4-CHLOROBENZOTRIFLUORIDE	Ingestion	Rat	LD50 > 6,650 mg/kg
TETRABUTYL TITANATE	Ingestion	Rat	LD50 4,640 mg/kg
ISOPROPYL ALCOHOL	Dermal	Rabbit	LD50 12,870 mg/kg
ISOPROPYL ALCOHOL	Inhalation- Vapor (4 hours)	Rat	LC50 72.6 mg/l
ISOPROPYL ALCOHOL	Ingestion	Rat	LD50 4,710 mg/kg
METHYL ALCOHOL	Dermal		LD50 estimated to be 1,000 - 2,000 mg/kg
METHYL ALCOHOL	Inhalation- Vapor		LC50 estimated to be 10 - 20 mg/l
METHYL ALCOHOL	Ingestion		LD50 estimated to be 50 - 300 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Skiii Corrosion/1111tation		
Name	Species	Value
	-	
4-CHLOROBENZOTRIFLUORIDE	Rabbit	No significant irritation
TETRABUTYL TITANATE	Professio	Irritant
	nal	
	judgeme	
	nt	
ISOPROPYL ALCOHOL	Multiple	No significant irritation
	animal	
	species	

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METHYL ALCOHOL Rabbit Mild irritant	
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Serious Eye Damage/Irritation

Name	Species	Value
4-CHLOROBENZOTRIFLUORIDE	Rabbit	No significant irritation
TETRABUTYL TITANATE	Professio	Severe irritant
	nal	
	judgeme	
	nt	
ISOPROPYL ALCOHOL	Rabbit	Severe irritant
METHYL ALCOHOL	Rabbit	Moderate irritant

Skin Sensitization

Name	Species	Value
TETRABUTYL TITANATE		Not sensitizing
ISOPROPYL ALCOHOL	Guinea	Not sensitizing
	pig	
METHYL ALCOHOL	Guinea	Not sensitizing
	pig	

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
4-CHLOROBENZOTRIFLUORIDE	In Vitro	Not mutagenic
4-CHLOROBENZOTRIFLUORIDE	In vivo	Not mutagenic
ISOPROPYL ALCOHOL	In Vitro	Not mutagenic
ISOPROPYL ALCOHOL	In vivo	Not mutagenic
METHYL ALCOHOL	In Vitro	Some positive data exist, but the data are not sufficient for classification
METHYL ALCOHOL	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Carcinogenicity			
Name	Route	Species	Value
ISOPROPYL ALCOHOL	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
METHYL ALCOHOL	Inhalation	Multiple animal species	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
ISOPROPYL ALCOHOL	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 400 mg/kg/day	during organogenesi s
ISOPROPYL ALCOHOL	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	LOAEL 9 mg/l	during gestation
METHYL ALCOHOL	Ingestion	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,600 mg/kg/day	21 days
METHYL ALCOHOL	Ingestion	Toxic to development	Mouse	LOAEL 4,000 mg/kg/day	during organogenesi s
METHYL ALCOHOL	Inhalation	Toxic to development	Mouse	NOAEL 1.3	during

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		mg/l	organogenesi
			S

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
4- CHLOROBENZOTRIFLU ORIDE	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
ISOPROPYL ALCOHOL	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
ISOPROPYL ALCOHOL	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
ISOPROPYL ALCOHOL	Inhalation	auditory system	Some positive data exist, but the data are not sufficient for classification	Guinea pig	NOAEL 13.4 mg/l	24 hours
ISOPROPYL ALCOHOL	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
METHYL ALCOHOL	Inhalation	blindness	Causes damage to organs	Human	NOAEL Not available	occupational exposure
METHYL ALCOHOL	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	not available
METHYL ALCOHOL	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	6 hours
METHYL ALCOHOL	Ingestion	blindness	Causes damage to organs	Human	NOAEL Not available	poisoning and/or abuse
METHYL ALCOHOL	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
4- CHLOROBENZOTRIFLU ORIDE	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 3.7 mg/l	28 days
4- CHLOROBENZOTRIFLU ORIDE	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 7.4 mg/l	28 days
4- CHLOROBENZOTRIFLU ORIDE	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.8 mg/l	90 days
4- CHLOROBENZOTRIFLU ORIDE	Ingestion	liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 500 mg/kg/day	90 days
ISOPROPYL ALCOHOL	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 12.3 mg/l	24 months
ISOPROPYL ALCOHOL	Inhalation	nervous system	All data are negative	Rat	NOAEL 12 mg/l	13 weeks
ISOPROPYL ALCOHOL	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 400 mg/kg/day	12 weeks
METHYL ALCOHOL	Inhalation	liver	All data are negative	Rat	NOAEL 6.55 mg/l	4 weeks
METHYL ALCOHOL	Inhalation	respiratory system	All data are negative	Rat	NOAEL 13.1 mg/l	6 weeks
METHYL ALCOHOL	Ingestion	liver nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 2,500 mg/kg/day	90 days

Aspiration Hazard

For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

This material contains a chemical which requires export notification under TSCA Section 12[b]:

Ingredient (Category if applicable)C.A.S. NoRegulationStatus4-CHLOROBENZOTRIFLUORIDE98-56-6Toxic Substances Control Act (TSCA) 4ApplicableTest Rule Chemicals

15.2. State Regulations

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Contact 3M for more information.

California Proposition 65

IngredientC.A.S. No.ClassificationMETHYL ALCOHOL67-56-1Developmental Toxin

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 2 Flammability: 3 Instability: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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