

Material Safety Data Sheet

SULZER

METCO ANTI-BOND

Sulzer Metco

1 . Product and company identification

Common name : METCO ANTI-BOND
Material uses : Metal industry: Used by spraying
Supplier : Sulzer Metco (US) Inc.
1101 Prospect Avenue
Westbury, NY 11590
Telephone no. : (516) 334 - 1300 (7:30AM - 4:00PM)
Emergency Phone : **CHEMTREC 800-424-9300**
Calls Outside the United States : **+1 202-483-7616 (USA) 24 hour Chemtrec International Emergency Response Service**

2 . Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview

Physical state : Solid. [Paste.]
Color : Black.
Odor : Characteristic.
Health hazards : WARNING!
CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER.
MAY BE HARMFUL IF SWALLOWED.
CONTAINS MATERIAL WHICH MAY CAUSE DAMAGE TO THE FOLLOWING
ORGANS: KIDNEYS, CARDIOVASCULAR SYSTEM, RESPIRATORY TRACT, SKIN,
EYE, LENS OR CORNEA. MAY BE HARMFUL IF SWALLOWED.

Potential acute health effects

Routes of entry : Inhalation, Ingestion, Skin contact, Eye contact
Eyes : Moderately irritating to eyes.
Skin : Exposure to high concentrations may result in health complaints. Prolonged or repeated exposure may be irritating (redness, pain).
Inhalation : Exposure to high concentrations may result in health complaints. Irritating to respiratory system. Exposure may result in depressed respiration, coughing, nausea and sore throat. Prolonged or repeated exposure to large amounts may cause damage to lungs (lung edema).
Ingestion : Prolonged or repeated exposure may be irritating to mouth, throat and esophagus (sore throat, nausea).

Medical conditions aggravated by over-exposure : Repeated or prolonged exposure to the substance can produce target organs damage.

Environmental effects : No known significant effects or critical hazards.

3 . Composition/information on ingredients

<u>Ingredient name</u>	<u>CAS number</u>	<u>% by weight</u>
Graphite, natural	7782-42-5	9
Glycerin	56-81-5	7.4
Carbon Black	1333-86-4	3.7
Castor Oil Ethoxylate	61791-12-6	1.5
Silica, crystalline - quartz	14808-60-7	0.1 - 0.4

Date of issue
1/28/2010

MSDS#
50-248

Prepared by
Sulzer Metco

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4 . First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms appear.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5 . Fire-fighting measures

- Auto-ignition temperature** : Not available.
- Flash point** : Not available.
- Flammable limits** : Not available.
- Extinguishing media**
- Suitable** : In case of fire, use water spray (fog), foam, dry chemical or CO₂.
- Not suitable** : None known.
- Special exposure hazards** : No specific hazard.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- Special remarks on fire hazards** : Not available.

6 . Accidental release measures

- Personal precautions** : Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment.
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Methods for cleaning up** : Pick up solids and put in an appropriate sealable container for later disposal.

7 . Handling and storage

- Handling** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
- Storage** : Keep container tightly closed. Keep container in a cool, well-ventilated area.

8 . Exposure controls/personal protection

Product name Exposure limits
United States

Graphite	ACGIH TLV (United States, 1/2008). TWA: 2 mg/m ³ 8 hour(s). Form: Dust OSHA PEL Z3 (United States, 9/2005). TWA: 15 mppcf 8 hour(s).
Glycerol	ACGIH TLV (United States, 1/2008). TWA: 10 mg/m ³ 8 hour(s). Form: Mist OSHA PEL (United States, 11/2006). TWA: 5 mg/m ³ 8 hour(s). Form: Respirable fraction TWA: 15 mg/m ³ 8 hour(s). Form: Total dust
Carbon black	ACGIH TLV (United States, 1/2008). TWA: 3.5 mg/m ³ 8 hour(s). OSHA PEL (United States, 11/2006). TWA: 3.5 mg/m ³ 8 hour(s).
Quartz (SiO ₂)	OSHA PEL Z3 (United States, 9/2005). TWA: 10 mg/m ³ 8 hour(s). Form: Respirable TWA: 250 mppcf 8 hour(s). Form: Respirable TWA: 30 mg/m ³ 8 hour(s). Form: Total dust. ACGIH TLV (United States, 1/2008). TWA: 0.025 mg/m ³ 8 hour(s). Form: Respirable fraction

Canada

Graphite	CA Alberta Provincial (Canada, 6/2008). 8 hrs OEL: 2 mg/m ³ 8 hour(s). CA British Columbia Provincial (Canada, 6/2008). TWA: 2 mg/m ³ 8 hour(s). Form: Respirable CA Quebec Provincial (Canada, 6/2008). TWAEV: 2 mg/m ³ 8 hour(s). Form: Respirable dust. CA Ontario Provincial (Canada, 6/2008). TWAEV: 2 mg/m ³ 8 hour(s). Form: The notation "respirable" following the name of an agent in this Schedule means that size fraction of the airborne particulate deposited in the gas-exchange region of the respiratory tract and collected during air sampling with a particle size-selective device that, (a) meets the American Conference of Governmental Industrial Hygienists (ACGIH) particle size-selective criteria; and (b) has the cut point of 4 microns at 50 per cent collective efficiency.
Glycerol	CA Alberta Provincial (Canada, 6/2008). 8 hrs OEL: 10 mg/m ³ 8 hour(s). Form: Mist CA British Columbia Provincial (Canada, 6/2008). TWA: 10 mg/m ³ 8 hour(s). Form: Mist TWA: 3 mg/m ³ 8 hour(s). Form: Respirable mist CA Ontario Provincial (Canada, 6/2008). TWAEV: 10 mg/m ³ 8 hour(s). Form: mist CA Quebec Provincial (Canada, 6/2008). TWAEV: 10 mg/m ³ 8 hour(s). Form: mist
Carbon black	CA Alberta Provincial (Canada, 6/2008). 8 hrs OEL: 3.5 mg/m ³ 8 hour(s). CA British Columbia Provincial (Canada, 6/2008). TWA: 3.5 mg/m ³ 8 hour(s). CA Ontario Provincial (Canada, 6/2008). TWAEV: 3.5 mg/m ³ 8 hour(s). CA Quebec Provincial (Canada, 6/2008). TWAEV: 3.5 mg/m ³ 8 hour(s).
Quartz (SiO ₂)	CA British Columbia Provincial (Canada, 6/2008). TWA: 0.025 mg/m ³ 8 hour(s). Form: Respirable CA Quebec Provincial (Canada, 6/2008). TWAEV: 0.1 mg/m ³ 8 hour(s). Form: Respirable dust. CA Alberta Provincial (Canada, 6/2008).

8 hrs OEL: 0.1 mg/m³ 8 hour(s). Form: Respirable particulate**Mexico**

Graphite

NOM-010-STPS (Mexico, 9/2000).LMPE-PPT: 2 mg/m³ 8 hour(s).

Glycerol

NOM-010-STPS (Mexico, 9/2000).LMPE-PPT: 10 mg/m³ 8 hour(s). Form: mist

Carbon black

NOM-010-STPS (Mexico, 9/2000).LMPE-CT: 7 mg/m³ 15 minute(s). Form: smokeLMPE-PPT: 3.5 mg/m³ 8 hour(s). Form: smoke**Consult local authorities for acceptable exposure limits.**

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Personal protective equipment

Eyes : Safety glasses with side shields.

Skin : Chemical resistant apron.

Respiratory : A respirator is not needed under normal and intended conditions of product use.

Hands : Rubber or other appropriate gloves should be worn to minimize contact. For hygienic reasons rubber gloves should not be worn for more than 2 hours.

Protective Clothing (Pictograms) :



Personal protection in case of a large spill : Wear suitable protective clothing, gloves and eye/face protection.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

9 . Physical and chemical properties

Physical state : Solid. [Paste.]

Color : Black.

Odor : Characteristic.

Molecular weight : Not applicable.

Molecular formula : Not applicable.

pH : Not applicable.

Boiling/condensation point : Not available.

Explosive properties : No specific hazard.

Specific gravity : Weighted average: 1.69 (Water = 1)

Vapor pressure : Not available.

Volatility : Not available.

Odor threshold : Not available.

Evaporation rate : Not available.

VOC : Not available.

Ionicity (in water) : Not available.

Dispersibility properties : Not available.

Solubility : Easily soluble in the following materials: cold water and hot water.

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Physical/chemical properties comments : Miscible.

Flash points : Not available.

Flammable limits : Not available.

Auto-ignition temperature : Not available.

10 . Stability and reactivity

Stability and reactivity : The product is stable under normal storage conditions.

Hazardous decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to avoid : Store and use away from heat, sparks, open flame or any other ignition source.

Materials to avoid : Avoid contact with combustible materials, acids, oxidizing agents, halogenated hydrocarbons.

Conditions of reactivity : Not available.
Not available.

Conditions of instability : Not available.

11 . Toxicological informationToxicity data

Product/ingredient name	Result	Species	Dose	Exposure
Glycerol	LD50	Rat	4420 mg/kg	-
	Intraperitoneal			
	LD50 Intravenous	Rat	5566 mg/kg	-
	LD50 Oral	Rat	12600 mg/kg	-
	LD50	Rat	100 mg/kg	-
	Subcutaneous			
	LDLo	Rat	10 mL/kg	-
	Intramuscular			
	LDLo	Rat	10 mg/kg	-
	Intramuscular			
	TDLo	Rat	4 mL/kg	-
	Intramuscular			
	TDLo	Rat	>5000 mg/kg	-
	Intramuscular			
TDLo	Rat	4000 mg/kg	-	
Carbon black	Intramuscular			
	LD50 Dermal	Rabbit	>3 g/kg	-
	LD50 Oral	Rat	>15400 mg/kg	-
	TDLo	Rat	15 mg/kg	-
	Intratracheal			
	TDLo	Rat	10 mg/kg	-
Quartz (SiO ₂)	Intratracheal			
	TDLo	Rat	16 mg/kg	-
	Intratracheal			
	LDLo	Rat	250 mg/kg	-
	Intratracheal			
	LDLo	Rat	200 mg/kg	-
	Intratracheal			
LDLo Intravenous	Rat	90 mg/kg	-	
TDLo	Rat	100 mg/kg	-	
Intratracheal				
	TDLo	Rat	50 mg/kg	-

Intratracheal TDLo	Rat	30 mg/kg	-
Intratracheal TDLo	Rat	25 mg/kg	-
Intratracheal TDLo	Rat	15.69 mg/kg	-
Intratracheal TDLo	Rat	10 mg/kg	-
Intratracheal TDLo	Rat	5 mg/kg	-
Intratracheal TDLo	Rat	1.5 mg/kg	-
Intratracheal TDLo	Rat	1 mg/kg	-
Intratracheal TDLo	Rat	1250 ug/kg	-
Intratracheal TDLo	Rat	150 mg/kg	-
Intratracheal TDLo Oral	Rat	120 g/kg	-

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Graphite	-	-	-	None.	-	-
Glycerol	-	-	-	None.	-	-
Carbon black	A4	2B	-	+	-	-
Quartz (SiO2)	A2	1	-	+	Proven.	-

MUTAGENIC EFFECTS: Classified None for humans.

- Other toxic effects on humans** : No specific information is available in our database regarding the other toxic effects of this material to humans.
- Carcinogenic effects** : Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure.
- Reproduction toxicity** : Not available.
- Irritancy**
- Skin** : No known significant effects or critical hazards.
- Eyes** : Moderately irritating to eyes.
- Inhalation** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
Glycerol	-	Acute LC50 54 to 57 ml/L Fresh water	Fish - Rainbow trout, donaldson trout - Oncorhynchus mykiss - 0.9 g	96 hours

Conclusion/Summary : Not available.

Biodegradability

Conclusion/Summary : Not available.

Octanol/water partition coefficient : Not available.

Bioconcentration factor : Not available.

Mobility : Not available.

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Toxicity of the products of biodegradation : Not available.

Other adverse effects : No known significant effects or critical hazards.

Products of degradation : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Consult your local or regional authorities.

14 . Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Classification	Not regulated	-	-			
TDG Classification	Not regulated	-	-			
ADR/RID Class	Not regulated	-	-			
IMDG Class	Not regulated	-	-			
IATA-DGR Class	Not regulated	-	-			

15 . Regulatory informationUnited States

HCS Classification : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

U.S. Federal regulations : TSCA 8(b) inventory: All the ingredients are on the TSCA list.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: Graphite; Glycerol; Carbon black

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:

Graphite: Immediate (acute) health hazard; Glycerol: Immediate (acute) health hazard, Delayed (chronic) health hazard; Carbon black: Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

- State regulations**
- Connecticut Carcinogen Reporting:** None of the components are listed.
 - Connecticut Hazardous Material Survey:** None of the components are listed.
 - Florida substances:** None of the components are listed.
 - Illinois Chemical Safety Act:** None of the components are listed.
 - Illinois Toxic Substances Disclosure to Employee Act:** None of the components are listed.
 - Louisiana Reporting:** None of the components are listed.
 - Louisiana Spill:** None of the components are listed.
 - Massachusetts Spill:** None of the components are listed.
 - Massachusetts Substances:** The following components are listed: GRAPHITE (NATURAL)DUST; GLYCERINE MIST; CARBON BLACK
 - Michigan Critical Material:** None of the components are listed.
 - Minnesota Hazardous Substances:** None of the components are listed.
 - New Jersey Hazardous Substances:** The following components are listed: CARBON BLACK; SILICA, QUARTZ
 - New Jersey Spill:** None of the components are listed.
 - New Jersey Toxic Catastrophe Prevention Act:** None of the components are listed.
 - New York Acutely Hazardous Substances:** None of the components are listed.
 - New York Toxic Chemical Release Reporting:** None of the components are listed.
 - Pennsylvania RTK Hazardous Substances:** The following components are listed: GRAPHITE; 1,2,3-PROPANETRIOL; CARBON BLACK; QUARTZ (SIO2)
 - Rhode Island Hazardous Substances:** None of the components are listed.

WARNING: This product contains a chemical or chemicals known to the state of California to cause birth defects or other reproductive harm.: Carbon black; Quartz (SiO2)

WARNING: This product contains a chemical or chemicals known to the state of California to cause cancer.: Carbon black; Quartz (SiO2)

Canada

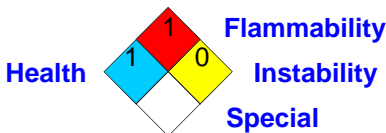
- WHMIS (Canada)** : Class D-2A: Material causing other toxic effects (Very toxic).
All the ingredients are on the DSL list.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

16 . Other information

- Label requirements** : WARNING!
CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER.
MAY BE HARMFUL IF SWALLOWED.
CONTAINS MATERIAL WHICH MAY CAUSE DAMAGE TO THE FOLLOWING
ORGANS: KIDNEYS, CARDIOVASCULAR SYSTEM, RESPIRATORY TRACT, SKIN,
EYE, LENS OR CORNEA. MAY BE HARMFUL IF SWALLOWED.

National Fire Protection Association (U.S.A.) :



Date of issue : 1/28/2010.

Version : 2.1

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.