

MATERIAL SAFETY DATA SHEET

Date Printed: 05/24/2004

Date Updated: 04/03/2004

Version 1.7

Section 1 - Product and Company Information

Product Name	INHIBITOR REMOVER, DISPOSABLE COLUMN, FOR REMOVING TERT-BUTYL CATECHOL
Product Number	306320
Brand	ALDRICH
Company	Sigma-Aldrich
Street Address	3050 Spruce Street
City, State, Zip, Country	SAINT LOUIS MO 63103 US
Technical Phone:	314 771 5765
Emergency Phone:	414 273 3850 Ext. 5996
Fax:	800 325 5052

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
ALUMINA ACTIVATED	1344-28-1	Yes

Formula	Al ₂ O ₃
Synonyms	A 1 (Sorbent) * Abramant * Abramax * Abrarex * Abrasit * Activated aluminum oxide * A1-3945 E 1/16'' * A1-4126 E 1/16'' * Alcoa F 1 * Almite * Alon C * Aloxite * Alumina * alpha-Alumina * alpha-Alumina (ACGIH:OSHA) * Aluminite 37 * Aluminum oxide (Brockmann) * Aluminum oxide (ACGIH) * alpha-Aluminum oxide * beta-Aluminum oxide * gamma-Aluminum oxide * Aluminum sesquioxide * Alumite (oxide) * Alundum (OSHA) * Alundum 600 * A1-0109 P * A1-3916 P * A1-3970 P * A1-1401 P(MS) * A1-0104 T 3/16'' * A1-1404 T 3/16'' * A1-3438 T 1/8'' * A1-3980 T 5/32'' * A1-4028 T 3/16'' * Brockmann, aluminum oxide * Cab-O-grip * Catapal S * Catapal SB alumina * Compalox * Conopal * Diadur * Dialuminum trioxide * Dispal alumina * Dispal M * Dotment 324 * Dotment 358 * Dural * Exolon XW 60 * F 360 (Alumina) * Faserton * Fasertonerde * G 0 (Oxide) * G 2 (Oxide) * GK (Oxide) * Hypalox II * Jubenon R * KA 101 * Ketjen B * KHP 2 * LA 6 * Lucalox * Ludox CL * Martoxin * Microgrit WCA * Poraminar * PS 1 (Alumina) * Q
RTECS Number:	BD1200000

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Irritant.
Irritating to respiratory system.
Target organ(s): Lungs. Bones.

HMIS RATING

HEALTH: 2*
FLAMMABILITY: 0
REACTIVITY: 1

NFPA RATING

HEALTH: 2
FLAMMABILITY: 0
REACTIVITY: 1

*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

DERMAL EXPOSURE

In case of contact, immediately wash skin with soap and copious amounts of water.

EYE EXPOSURE

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

Section 5 - Fire Fighting Measures

CONDITIONS OF FLAMMABILITY

Material may have an exothermic reaction above 200°C with halocarbon vapors and may produce toxic hydrochloric acid and phosgene.

FLASH POINT

N/A

AUTOIGNITION TEMP

N/A

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s): Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING

User Exposure: Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE

Suitable: Keep tightly closed.

SPECIAL REQUIREMENTS

Very hygroscopic.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Government approved respirator.
Hand: Compatible chemical-resistant gloves.
Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

EXPOSURE LIMITS, RTECS

Country	Source	Type	Value
USA	MSHA Standard		
Remarks: Nuisance Particulates.			
USA	OSHA.	PEL	8H TWA 15 MG/M3, TOTAL DUST
New Zealand	OEL		
Remarks: check ACGIH TLV			

EXPOSURE LIMITS

Country	Source	Type	Value
Poland		NDS	2 MG/M3
Poland		NDSch	16 MG/M3
Poland		NDSP	-

Section 9 - Physical/Chemical Properties

Appearance	Physical State: Solid		
Property	Value	At Temperature or Pressure	
Molecular Weight	101.96 AMU		
pH	9.4 - 10.1	20 °C	
BP/BP Range	2,980 °C		
MP/MP Range	2,038 °C		
Freezing Point	N/A		
Vapor Pressure	1 mmHg	2,158 °C	
Vapor Density	N/A		
Saturated Vapor Conc.	N/A		
SG/Density	4 g/cm3		
Bulk Density	N/A		
Odor Threshold	N/A		
Volatile%	N/A		

VOC Content	N/A
Water Content	N/A
Solvent Content	N/A
Evaporation Rate	N/A
Viscosity	N/A
Surface Tension	N/A
Partition Coefficient	N/A
Decomposition Temp.	N/A
Flash Point	N/A
Explosion Limits	N/A
Flammability	N/A
Autoignition Temp	N/A
Refractive Index	1.76 - 1.768
Optical Rotation	N/A
Miscellaneous Data	N/A
Solubility	Solubility in Water:Insoluble.

N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Stable: Stable.

Conditions to Avoid: Protect from moisture.

Materials to Avoid: Strong acids, Strong bases, Chlorine trifluoride, Ethylene oxide, Halocarbons, Oxygen difluoride, Sodium nitrate, Vinyl acetate.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Aluminum oxide.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation.

Inhalation: Material is irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.

Ingestion: May be harmful if swallowed.

TARGET ORGAN(S) OR SYSTEM(S)

Lungs. Bones.

SIGNS AND SYMPTOMS OF EXPOSURE

Prolonged exposure can cause: Damage to the lungs. Exposure can cause: Coughing, chest pains, difficulty in breathing.

Gastrointestinal disturbances.

CHRONIC EXPOSURE - CARCINOGEN

Result: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

Species: Rat

Route of Application: Intrapleural

Dose: 90 MG/KG

Result: Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Lungs, Thorax, or Respiration: Tumors.

Species: Rat
Route of Application: Implant
Dose: 200 MG/KG
Result: Tumorigenic:Neoplastic by RTECS criteria.
Tumorigenic:Tumors at site or application.

Species: Rat
Route of Application: Implant
Dose: 200 MG/KG
Result: Tumorigenic:Equivocal tumorigenic agent by RTECS
criteria. Tumorigenic:Tumors at site or application.

ACGIH CARCINOGEN LIST

Rating: A4

Section 12 - Ecological Information

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Bury in a landfill site approved for the disposal of chemical and hazardous wastes. Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: None
Non-Hazardous for Transport: This substance is
considered to be non-hazardous for transport.

IATA

Non-Hazardous for Air Transport: Non-hazardous for air
transport.

Section 15 - Regulatory Information

EU ADDITIONAL CLASSIFICATION

Symbol of Danger: Xi
Indication of Danger: Irritant.
R: 37
Risk Statements: Irritating to respiratory system.
S: 22 36
Safety Statements: Do not breathe dust. Wear suitable protective
clothing.

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Irritant.
Risk Statements: Irritating to respiratory system.
Safety Statements: Do not breathe dust. Wear suitable protective
clothing.
US Statements: Target organ(s): Lungs. Bones.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: Yes
DEMINIMIS: 0.1 %
NOTES: This product is subject to SARA section 313 reporting
requirements.

TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION

WHMIS Classification: 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.

DSL: Yes

NDSL: No

Section 16 - Other Information

DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.