

## MATERIAL SAFETY DATA SHEET

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Version 1.8

## Section 1 - Product and Company Information

Product Name SALICYLIC ACID, 99+%, A.C.S. REAGENT  
Product Number 247588  
Brand SIAL

Company Sigma-Aldrich  
Address 3050 Spruce Street  
SAINT LOUIS MO 63103 US

Technical Phone: 800-325-5832  
Fax: 800-325-5052  
Emergency Phone: 314-776-6555

## Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
SALICYLIC ACID	69-72-7	No

Formula C7H6O3  
Synonyms Acido o-idrossibenzoico (Italian) \* Acido salicilico (Italian) \* Benzoic acid, 2-hydroxy- \* o-Hydroxybenzoic acid \* 2-Hydroxybenzoic acid \* Keralyt \* Kyselina 2-hydroxybenzoova (Czech) \* Kyselina salicylova (Czech) \* Orthohydroxybenzoic acid \* Retarder W \* SA \* SAX \* Verrugon

RTECS Number: VO0525000

## Section 3 - Hazards Identification

## EMERGENCY OVERVIEW

Harmful.

Harmful if swallowed. Risk of serious damage to eyes.

Target organ(s): Central nervous system. Blood.

## HMIS RATING

HEALTH: 2\*

FLAMMABILITY: 1

REACTIVITY: 1

## NFPA RATING

HEALTH: 2

FLAMMABILITY: 1

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 skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

#### EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

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#### Section 5 - Fire Fighting Measures

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##### FLASH POINT

314.6 °F    157 °C    Method: closed cup

##### EXPLOSION LIMITS

Lower: 1.1 %

##### AUTOIGNITION TEMP

570 °C

##### 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.

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#### Section 6 - Accidental Release Measures

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##### PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area.

##### 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.

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#### Section 7 - Handling and Storage

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##### 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

Light sensitive.

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## Section 8 - Exposure Controls / PPE

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### ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

### PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

### GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

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## Section 9 - Physical/Chemical Properties

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Appearance	Physical State: Solid Color: White Form: Fine crystals	
Property	Value	At Temperature or Pressure
Molecular Weight	138.12 AMU	
pH	2.4	20 °C
BP/BP Range	211 °C	20 mmHg
MP/MP Range	158 °C	
Freezing Point	N/A	
Vapor Pressure	1 mmHg	114 °C
Vapor Density	4.8 g/l	
Saturated Vapor Conc.	N/A	
SG/Density	1.44 g/cm <sup>3</sup>	
Bulk Density	800 kg/l	
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	Log Kow: 2.21	
Decomposition Temp.	N/A	
Flash Point	314.6 °F 157 °C	Method: closed cup
Explosion Limits	Lower: 1.1 %	
Flammability	N/A	
Autoignition Temp	570 °C	
Refractive Index	1.565	
Optical Rotation	N/A	
Miscellaneous Data	N/A	
Solubility	Solvent: Clear 0.1 g/ml EtOH 96%	

N/A = not available

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## Section 10 - Stability and Reactivity

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### STABILITY

Stable: Stable.

Conditions to Avoid: Light.

Materials to Avoid: Strong oxidizing agents, Strong bases, Iodine  
Iron and iron salts.

#### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

#### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

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### Section 11 - Toxicological Information

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#### ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.

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

Eye Contact: Causes severe eye irritation.

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

Ingestion: Harmful if swallowed.

#### TARGET ORGAN(S) OR SYSTEM(S)

Central nervous system. Blood.

#### TOXICITY DATA

Oral

Rat

891 mg/kg

LD50

Remarks: Behavioral:Muscle weakness. Behavioral:Somnolence  
(general depressed activity).

Inhalation

Rat

> 900 mg/m3

LC50

Skin

Rat

> 2000 mg/kg

LD50

Remarks: Skin and Appendages: Other: Hair. Liver:Other changes.

Intraperitoneal

Rat

157 MG/KG

LD50

Remarks: Behavioral:Somnolence (general depressed activity).  
Behavioral:Tremor. Nutritional and Gross Metabolic:Changes  
in:Body temperature decrease.

Oral

Mouse

480 mg/kg

LD50

Intraperitoneal

Mouse

300 MG/KG

LD50

Remarks: Behavioral:Somnolence (general depressed activity).  
Lungs, Thorax, or Respiration:Respiratory depression.

Intravenous

Mouse

184 MG/KG

LD50

Remarks: Behavioral:Convulsions or effect on seizure threshold.

Oral

Cat

400 mg/kg

LD50

Oral

Rabbit

1300 mg/kg

LD50

Skin

Rabbit

> 10000 mg/kg

LD50

Inhalation

Mammal

> 300 mg/m3

LC50

#### IRRITATION DATA

Skin

Rabbit

500 mg

24H

Remarks: Mild irritation effect

Eyes

Rabbit

100 mg

Remarks: Severe irritation effect

#### CHRONIC EXPOSURE - TERATOGEN

Species: Rat

Dose: 1050 MG/KG

Route of Application: Oral

Exposure Time: (8-14D PREG)

Result: Specific Developmental Abnormalities: Central nervous system. Specific Developmental Abnormalities: Craniofacial (including nose and tongue). Specific Developmental Abnormalities: Musculoskeletal system.

Species: Rat

Dose: 700 MG/KG

Route of Application: Oral

Exposure Time: (8-14D PREG)

Result: Specific Developmental Abnormalities: Musculoskeletal system. Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Species: Rat

Dose: 350 MG/KG

Route of Application: Oral

Exposure Time: (8-14D PREG)  
Result: Effects on Embryo or Fetus: Extra embryonic structures (e.g., placenta, umbilical cord).

Species: Mouse  
Dose: 500 MG/KG  
Route of Application: Oral  
Exposure Time: (9D PREG)  
Result: Specific Developmental Abnormalities: Musculoskeletal system.

#### CHRONIC EXPOSURE - MUTAGEN

Species: Mouse  
Route: Oral  
Dose: 100 MG/KG  
Mutation test: DNA inhibition

Mutation test: Histidine reversion (Ames)

#### CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Rat  
Dose: 40 MG/KG  
Route of Application: Oral  
Exposure Time: (20-21D PREG)  
Result: Maternal Effects: Parturition.

Species: Rat  
Dose: 1050 MG/KG  
Route of Application: Oral  
Exposure Time: (8-14D PREG)  
Result: Maternal Effects: Uterus, cervix, vagina. Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Effects on Fertility: Litter size (e.g.; # fetuses per litter; measured before birth).

Species: Rat  
Dose: 380 MG/KG  
Route of Application: Subcutaneous  
Exposure Time: (9D PREG)  
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Other developmental abnormalities.

Species: Mouse  
Dose: 1 GM/KG  
Route of Application: Oral  
Exposure Time: (17D PREG)  
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

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## Section 12 - Ecological Information

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### ACUTE ECOTOXICITY TESTS

Test Type: EC50 Daphnia

Species: Daphnia magna  
Time: 24 h  
Value: 105 mg/l

Test Type: LC50 Fish  
Species: Leuciscus idus  
Value: 90 mg/l

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### Section 13 - Disposal Considerations

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#### APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

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### Section 14 - Transport Information

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#### 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.

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### Section 15 - Regulatory Information

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#### EU ADDITIONAL CLASSIFICATION

Symbol of Danger: Xn  
Indication of Danger: Harmful.  
R: 22-41  
Risk Statements: Harmful if swallowed. Risk of serious damage to eyes.  
S: 26-39  
Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear eye/face protection.

#### US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Harmful.  
Risk Statements: Harmful if swallowed. Risk of serious damage to eyes.  
Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear eye/face protection.  
US Statements: Target organ(s): Central nervous system. Blood.

#### UNITED STATES REGULATORY INFORMATION

SARA LISTED: No  
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

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### Section 16 - Other Information

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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 2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.