Material Safety Data Sheet

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Version 1.3
According to 91/155/EEC

Classified as Hazardous according to the criteria of EU Annex 1 and NOHSC.

1 - Product and Company Information

Product Name	ACETYLSALICYLIC ACID, 99+%
Product Number	239631
Company	Sigma-Aldrich Pty, Ltd Unit 2, 14 Anella Avenue Castle Hill NSW 1765 Australia
Technical Phone #	+61 2 9841 0555
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2 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
ACETYLSALICYLIC ACID	50-78-2	200-064-1	None

Formula	C9H8O4
Molecular Weight	180.16 AMU
Synonyms	Acenterine * Acesal * Aceticyl * Acetilsalicilico * Acetilum acidulatum * Acetisal * Acetol * Acetonyl * Acetophen * Acetosal * Acetosalic acid * Acetosalin * o-Acetoxybenzoic acid * 2-Acetoxybenzoic acid * Acetylin * 2-(Acetyloxy)benzoic acid * Acetylsal * Acetylsalicylic acid (ACGIH) * Acetylsalicylsaure (German) * Acido acetilsalicilico (Italian) * Acimetten * Acide acetylsalicylique (French) * Acido O-acetil-benzoico (Italian) * Acidum acetylsalicylicum * Acisal * Acylpyrin * A.S.A. empirin * Asagran * Aspergum * Aspirdrops * Aspirin * Aspirina 03 * Aspro Clear * Asteric * AC 5230 * Benaspir * Benzoic acid, 2-(acetyloxy)- (9CI) * Bialpirinia * Caprin * o-Carboxyphenyl acetate * Colfarit * Contrheuma retard * Delgesic * Dolean pH 8 * Duramax * ECM * Ecotrin * Empirin * Endydol * Entericin * Enterosarine * Entrophen * Globoid * Helicon * Idragin * Istopirin * Kapsazal * Kyselina 2-acetoxybenzoova (Czech) * Kyselina acetylsalicylova (Czech) * Measurin * Medisyl *

3 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT
Irritating to eyes, respiratory system and skin. Harmful if swallowed.

4 - First Aid Measures

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

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

AFTER EYE CONTACT
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.

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

5 - Fire Fighting Measures

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

SPECIAL RISKS
Specific Hazard(s): Emits toxic fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PERSONAL PRECAUTION PROCEDURES 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.

7 - Handling and Storage

HANDLING
Directions for Safe Handling: Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE
Conditions of Storage: Keep tightly closed.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

GENERAL HYGIENE MEASURES
Wash thoroughly after handling.

EXPOSURE LIMITS - DENMARK

Source	Type	Value
OEL	TWA	5 mg/m3

EXPOSURE LIMITS - GERMANY

Source	Type	Value
TRGS 900	OEL	5 mg/m3, E

Remarks: NL

EXPOSURE LIMITS - NORWAY

Source	Type	Value
	OEL	5 mg/m3

EXPOSURE LIMITS - SWITZERLAND

Source	Type	Value
OEL	OEL	5 mg/m3

Remarks: E

EXPOSURE LIMITS - UNITED KINGDOM

Source	Type	Value
OEL	OEL	5 mg/m3

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

9 - Physical and Chemical Properties

Appearance: Physical State: Solid
Color: White
Form: Powder

Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	N/A	
MP/MP Range	138 - 140 °C	
Flash Point	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	N/A	
Vapor Pressure	N/A	
SG/Density	N/A	
Partition Coefficient	N/A	
Viscosity	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	N/A	
Decomposition Temp.	N/A	
Solvent Content	N/A	
Water Content	N/A	
Surface Tension	N/A	
Conductivity	N/A	

Miscellaneous Data	N/A
Solubility	N/A

10 - Stability and Reactivity

STABILITY
Stable: Stable.
Materials to Avoid: Strong oxidizing agents, Strong acids, Strong bases.

HAZARDOUS DECOMPOSITION PRODUCTS
Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

HAZARDOUS POLYMERIZATION
Hazardous Polymerization: Will not occur

11 - Toxicological Information

RTECS NUMBER: VO0700000

ACUTE TOXICITY
LD50
Oral
Rat
*
LD50
Oral
Rat
1,700 mg/kg
LD50
Oral
Rat
1,500 mg/kg
LD50
Oral
Mouse
*

LDLO
Oral
Child
104 mg/kg
Remarks: Lungs, Thorax, or Respiration:Acute pulmonary edema. Gastrointestinal:Nausea or vomiting. Blood: Hemorrhage.

LD50
Oral
Rat
200 mg/kg

LD50
Intraperitoneal
Rat
340 MG/KG

LD50
Rectal
Rat
790 MG/KG

LD50
Oral

Mouse
250 mg/kg

LD50
Intraperitoneal
Mouse
167 MG/KG

LD50
Subcutaneous
Mouse
1020 MG/KG

LD50
Oral
Dog
700 mg/kg
Remarks: Behavioral:Altered sleep time (including change in righting reflex). Lungs, Thorax, or Respiration:Respiratory depression.

LD50
Intravenous
Dog
681 MG/KG
Remarks: Behavioral:Analgesia.

LD50
Oral
Rabbit
1010 mg/kg
Remarks: Behavioral:Change in motor activity (specific assay).

LD50
Oral
Guinea pig
1075 mg/kg
Remarks: Behavioral:Altered sleep time (including change in righting reflex). Behavioral:Somnolence (general depressed activity). Behavioral:Tremor.

LD50
Oral
Hamster
3500 mg/kg

LD50
Oral
Mammal
1750 mg/kg

SENSITIZATION
Sensitization: Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

SIGNS AND SYMPTOMS OF EXPOSURE
The chemical, physical, and toxicological properties of this product have not been thoroughly investigated.

ROUTE OF EXPOSURE
Skin Contact: Causes skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: Causes eye irritation.
Inhalation: Material is irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.
Ingestion: Harmful if swallowed.

TARGET ORGAN INFORMATION
Blood.

CHRONIC EXPOSURE - MUTAGEN

Human
100 UMOL/L
Cell Type: lymphocyte
DNA inhibition

Human
75 MG/L
Cell Type: lymphocyte
Other mutation test systems

Human
100 MG/L
Cell Type: fibroblast
Cytogenetic analysis

Human
100 UG/L
Cell Type: leukocyte
Cytogenetic analysis

Human
10 MG/L
Cell Type: lymphocyte
Cytogenetic analysis

Rat
108 UG/PLATE
Cell Type: Embryo
Morphological transformation.

Mouse
100 MG/KG
Intraperitoneal
Sister chromatid exchange

Hamster
1660 MG/L
Cell Type: lung
Cytogenetic analysis

CHRONIC EXPOSURE - TERATOGEN

Species: Woman
Dose: 700 MG/KG
Route of Application: Oral
Exposure Time: (35-36W PREG)
Result: Specific Developmental Abnormalities: Central nervous system. Specific Developmental Abnormalities: Cardiovascular (circulatory) system. Effects on Newborn: Biochemical and metabolic.

Species: Woman

Dose: 546 MG/KG
Route of Application: Oral
Exposure Time: (37-39W PREG)
Result: Specific Developmental Abnormalities: Central nervous system. Specific Developmental Abnormalities: Craniofacial (including nose and tongue). Specific Developmental Abnormalities: Other developmental abnormalities.

Species: Woman
Dose: 17280 MG/KG
Route of Application: Oral
Exposure Time: (1-39W PREG)
Result: Specific Developmental Abnormalities: Cardiovascular (circulatory) system. Specific Developmental Abnormalities: Respiratory system. Effects on Newborn: Apgar score (human only).

Species: Rat
Dose: 500 MG/KG
Route of Application: Oral
Exposure Time: (9D PREG)
Result: Effects on Embryo or Fetus: Fetal death.

Species: Rat
Dose: 200 MG/KG
Route of Application: Oral
Exposure Time: (9D PREG)
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Species: Rat
Dose: 500 MG/KG
Route of Application: Oral
Exposure Time: (9D PREG)
Result: Specific Developmental Abnormalities: Central nervous system. Specific Developmental Abnormalities: Eye, ear. Specific Developmental Abnormalities: Musculoskeletal system.

Species: Rat
Dose: 125 MG/KG
Route of Application: Oral
Exposure Time: (12D PREG)
Result: Specific Developmental Abnormalities: Musculoskeletal system.

Species: Rat
Dose: 500 MG/KG
Route of Application: Subcutaneous
Exposure Time: (11D PREG)
Result: Specific Developmental Abnormalities: Musculoskeletal system.

Species: Rat
Dose: 500 MG/KG
Route of Application: Subcutaneous
Exposure Time: (11D PREG)
Result: Effects on Embryo or Fetus: Extra embryonic structures (e.g., placenta, umbilical cord). Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Craniofacial (including nose and tongue).

Species: Rat

Dose: 3500 MG/KG
Route of Application: Unreported
Exposure Time: (6-15D PREG)
Result: Specific Developmental Abnormalities: Musculoskeletal system. Specific Developmental Abnormalities: Other developmental abnormalities.

Species: Mouse
Dose: 800 MG/KG
Route of Application: Oral
Exposure Time: (17D PREG)
Result: Effects on Embryo or Fetus: Fetal death. Effects on Embryo or Fetus: Other effects to embryo. Specific Developmental Abnormalities: Other developmental abnormalities.

Species: Mouse
Dose: 2500 MG/KG
Route of Application: Oral
Exposure Time: (6-15D PREG)
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Musculoskeletal system.

Species: Dog
Dose: 3200 MG/KG
Route of Application: Oral
Exposure Time: (23-30D PREG)
Result: Specific Developmental Abnormalities: Musculoskeletal system. Specific Developmental Abnormalities: Cardiovascular (circulatory) system. Specific Developmental Abnormalities: Respiratory system.

Species: Dog
Dose: 3 GM/KG
Route of Application: Unreported
Exposure Time: (20-34D PREG)
Result: Effects on Embryo or Fetus: Fetal death.

Species: Cat
Dose: 300 MG/KG
Route of Application: Oral
Exposure Time: (10-15D PREG)
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Musculoskeletal system.

Species: Rabbit
Dose: 800 MG/KG
Route of Application: Oral
Exposure Time: (8-15D PREG)
Result: Specific Developmental Abnormalities: Body wall. Specific Developmental Abnormalities: Craniofacial (including nose and tongue). Specific Developmental Abnormalities: Musculoskeletal system.

Species: Rabbit
Dose: 1800 MG/KG
Route of Application: Oral
Exposure Time: (8-16D PREG)
Result: Specific Developmental Abnormalities: Musculoskeletal system. Specific Developmental Abnormalities: Cardiovascular (circulatory) system. Effects on Embryo or Fetus: Fetal death.

Species: Rabbit
Dose: 1750 MG/KG
Route of Application: Oral
Exposure Time: (6-12D PREG)
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Species: Rabbit
Dose: 11250 MG/KG
Route of Application: Unreported
Exposure Time: (16-30D PREG)
Result: Effects on Embryo or Fetus: Fetal death.

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD
Result: Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

Species: Woman
Dose: 7500 MG/KG
Route of Application: Oral
Exposure Time: (34-37W PREG)
Result: Maternal Effects: Other effects. Effects on Newborn: Stillbirth.

Species: Woman
Dose: 546 MG/KG
Route of Application: Oral
Exposure Time: (37-39W PREG)
Result: Effects on Newborn: Other postnatal measures or effects.

Species: Woman
Dose: 17550 MG/KG
Route of Application: Oral
Exposure Time: (12-39W PREG)
Result: Maternal Effects: Parturition.

Species: Woman
Dose: 100 MG/KG
Route of Application: Oral
Exposure Time: (37W PREG)
Result: Effects on Newborn: Other neonatal measures or effects.

Species: Woman
Dose: 189 MG/KG
Route of Application: Oral
Exposure Time: (12-39W PREG)
Result: Maternal Effects: Parturition. Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Blood and lymphatic system (including spleen and marrow).

Species: Woman
Dose: 1200 MG/KG
Route of Application: Unreported
Exposure Time: (20D PRE)
Result: Maternal Effects: Menstrual cycle changes or disorders.

Species: Rat
Dose: 1 GM/KG
Route of Application: Oral
Exposure Time: (12D 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: Fetal death.

Species: Rat
Dose: 2100 MG/KG
Route of Application: Oral
Exposure Time: (14D MALE)
Result: Paternal Effects: Testes, epididymis, sperm duct.

Species: Rat
Dose: 10 MG/KG
Route of Application: Oral
Exposure Time: (22D PREG)
Result: Maternal Effects: Parturition. Effects on Newborn: Stillbirth. Effects on Newborn: Live birth index (# fetuses per litter; measured after birth).

Species: Rat
Dose: 1 GM/KG
Route of Application: Oral
Exposure Time: (3D PREG)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

Species: Rat
Dose: 1800 MG/KG
Route of Application: Subcutaneous
Exposure Time: (12D MALE)
Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology,motility, and count). Paternal Effects: Testes, epididymis, sperm duct.

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: Rat
Dose: 500 MG/KG
Route of Application: Subcutaneous
Exposure Time: (11D 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: Fetal death. Specific Developmental Abnormalities: Craniofacial (including nose and tongue).

Species: Rat
Dose: 300 MG/KG
Route of Application: Subcutaneous
Exposure Time: (1D PRE)
Result: Effects on Fertility: Other measures of fertility

Species: Rat
Dose: 2 MG/KG
Route of Application: Intrauterine
Exposure Time: (4D PREG)

Result: Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea).

Species: Mouse
Dose: 1200 MG/KG
Route of Application: Oral
Exposure Time: (8-9D PREG)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).
Specific Developmental Abnormalities: Craniofacial (including nose and tongue).

Species: Mouse
Dose: 19200 MG/KG
Route of Application: Oral
Exposure Time: (6-21D PREG)
Result: Effects on Newborn: Stillbirth. Effects on Newborn: Other neonatal measures or effects.

Species: Mouse
Dose: 500 MG/KG
Route of Application: Subcutaneous
Exposure Time: (11D PREG)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

Species: Rabbit
Dose: 600 MG/KG
Route of Application: Oral
Exposure Time: (2D PRE)
Result: Effects on Fertility: Other measures of fertility

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL
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.

14 - Transport Information

RID/ADR
Non-hazardous for road transport.

IMDG
Non-hazardous for sea transport.

IATA
Non-hazardous for air transport.

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES
INDICATION OF DANGER: Xn
Harmful.

R-PHRASES: 22 36/37/38
Harmful if swallowed. Irritating to eyes, respiratory system and skin.
S-PHRASES: 26
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

SWITZERLAND
SWISS POISON CLASS: 3

16 - Other Information

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.

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