Aripiprazole

sc-207300

Material Safety Data Sheet

Hazard Alert Code Key:	EXTREME	HIGH	MODERATE	LOW

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
Aripiprazole

STATEMENT OF HAZARDOUS NATURE
CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

NFPA

SUPPLIER
Santa Cruz Biotechnology, Inc.
2145 Delaware Avenue
Santa Cruz, California 95060
800.457.3801 or 831.457.3800
EMERGENCY:
ChemWatch
Within the US & Canada: 877-715-9305
Outside the US & Canada: +800 2436 2255
(1-800-CHEMCALL) or call +613 9573 3112

SYNONYMS
C23-H27-Cl2-N3-O2, "7-4-[4-(2, 3-dichlorophenyl)-1-piperazinyl]butoxy-3, 4-dihydro-", 2(1H)-quinolinone, "ariprazole (sic)", Abilify, Abilitat, OPC-14597, BMS-337039-01, "tranquilliser/ antipsychotic/ neuroleptic/ ataractic/", "schizophrenia treatment"

Section 2 - HAZARDS IDENTIFICATION

CHEMWATCH HAZARD RATINGS

		Min	Max
Flammability:	1		
Toxicity:	2		
Body Contact:	2		
Reactivity:	1		
Chronic:	2		

Min/Nil=0
Low=1
Moderate=2
High=3
Extreme=4

CANADIAN WHMIS SYMBOLS

EMERGENCY OVERVIEW

RISK

Harmful if swallowed.

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

■ Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.

■ Antipsychotics (also known as neuroleptics) are a group of psychoactive drugs commonly but not exclusively used to treat psychosis, which is typified by schizophrenia. Both first generation drugs (typical antipsychotics) and second generation drugs (atypical antipsychotics) tend to block receptors in the brain's dopamine pathways, but antipsychotic drugs encompass a wide range of receptor targets. A number of side effects have been observed in relation to specific medications, including weight gain, agranulocytosis (a potentially dangerous reduction in the number of white blood cells in the body), tardive dyskinesia (involving involuntary, repetitive movements), tardive akathisia (characterised by unpleasant sensations of "inner" restlessness that manifests itself with an inability to sit still or remain motionless), tardive psychoses and tardive dysphrenia (worsening of psychiatric symptoms)

Detrimental effects on short term memory, which affect the way one figures and calculates (although this also may be purely subjective), may also be observed on high enough dosages.

All antipsychotic drugs tend to block D2 receptors in the dopamine pathways of the brain. This means that dopamine released in these pathways has less effect. Excess release of dopamine in the mesolimbic pathway has been linked to psychotic experiences. It is the blockade of dopamine receptors in this pathway that is thought to control psychotic experiences. Antipsychotic agents do not induce psychological addiction

A dopamine antagonist is a drug which blocks dopamine receptors (dopaminergics) by receptor antagonism. They are used, typically as antipsychotics, antiemetics and antidepressants. As peripheral and central dopaminergic receptors are similar, the specificity of action of an antagonist on peripheral or central receptors depends primarily on its pharmacokinetic features. If the drug does not cross the blood-brain barrier to a substantial degree, the peripheral effects will prevail (dopamine antagonists of this type are known as "prokinetic" agents); the opposite is true in the case of good penetration in the brain (the antipsychotics or neuroleptics).

The central effects of antipsychotics prevail over their peripheral effects which, nevertheless, remain present.

Psychoses, schizophrenia in particular, are very complex diseases involving negative symptoms (poverty of speech and expression, indifference, carelessness etc.) and productive symptoms (hallucinations, delusion, unsuited behavior, , aggressiveness). Antipsychotics, improve most of these symptoms, (especially the productive ones).

In animal experiments, antipsychotics agents elicit:

· sedation, reduced motility

· in high doses, catalepsy, i.e. maintenance of unusual positions given to animals by the experimenter

· inhibition of conditioned reflexes with maintenance of primary reflexes

· inhibition of agitation, stereotypes, and vomiting induced by apomorphine or amphetamine.

In human beings, the effects of antipsychotics are different in healthy subjects compared to patients with psychosis:

In healthy subjects they elicit

· drowsiness, indifference, and several adverse effects of the same type as those which are described further.

In psychotic patients, they have three principal effects:

· sedation which results in drowsiness, diminution of vigilance, agitation and excitement

· antideliriant and anti-hallucinogenic effects: decrease of delusion and hallucinations

· anti-autistic effect: patients become more communicative and have a better contact with reality

Antipsychotics have many adverse effects including.

· Sedation, drowsiness.

· Acute dyskinesia which occurs in first hours or first days after the initiation of the treatment by a neuroleptic. Acute dyskinesia is characterised by intermittent muscular spasms, affecting especially face and neck: torticollis, trismus, tongue protrusion, oculogyric attack, opistothonos. These symptoms, linked to inhibition of D2 dopaminergic receptors of the striatum, are distressing but may be controlled by anticholinergic antiparkinsonian drugs such as trihexyphenidyl The frequency of acute dyskinesias is lower with atypical neuroleptics like clozapine, olanzapine, risperidone that with conventional neuroleptics.

· Tardive dyskinesia, or lingual-facial-buccal dyskinesia, which occurs after a long treatment with high doses of antipsychotics. Sufferers may show repetitive, involuntary, purposeless movements often of the lips, face, legs, or torso. It is believed that there is a greater risk of developing tardive dyskinesia with the older, typical antipsychotic drugs, although the newer antipsychotics are now also known to cause this disorder. The development of this syndrome appears to be related to the duration of treatment and the total cumulative dose of antipsychotic drugs administered; the syndrome can, however, develop after relatively brief treatment periods at low doses These abnormal movements persist a long time after the discontinuation of neuroleptic agents, discontinuation which can worsen them. They are not improved by anticholinergic drugs such as trihexyphenidyl.

· Pseudo-parkinsonism with akinesia (slowness of movements), rest and postural tremor, rigidity, hypertonicity. The incidence of these effects is less frequent with atypical antipsychotics.

· Akathisia or impossibility of remaining motionless.

· Rare but severe hyperthermia accompanied by muscular rigidity, called neuroleptic malignant syndrome whose mechanisms are complex .

· Decrease of seizure threshold, for example with clozapine.

· Confusional syndrome: the antimuscarinic effect of most of antipsychotics contributes to appearance of confusional states.

· Passivity and perhaps a certain depressive state.

Digestive

· Mouth dryness
· Hypersalivation, with clozapine for example
· Constipation,often linked to antimuscarinic effects.
Cardiovascular
· Postural hypotension
· Electrocardiographic disorders. A lengthening of QT space was observed during the use of neuroleptics such as droperidol which now is not available in many countries and sultopride by injectable route in the treatment of agitation
· possible implication of neuroleptics in sudden deaths has been evoked.
Endocrine
· Hyperprolactinaemia at the origin of galactorrhea, gynaecomastia, amenorrhea, decreased libido, erection and ejaculation disorders
· weight gain, in particular with atypical neuroleptics such as olanzapine.
Neuroleptics such as clozapine and olanzapine have been suspected to increase the risk of diabetes.
Allergic reactions
· Photosensitisation
· Blood disorders: thrombocytopenia, agranulocytosis particularly with clozapine.
Teratogenesis: The old neuroleptic agents such as chlorpromazine are not teratogenic.
· Antipsychotics, particularly atypicals, appear to cause diabetes mellitus and fatal diabetic ketoacidosis, especially (in US studies) in African Americans.
· Antipsychotics may cause pancreatitis
· The atypical antipsychotics (especially olanzapine) seem to cause weight gain more commonly than the typical antipsychotics. The well-documented metabolic side effects associated with weight gain include diabetes, which can be life-threatening.
· Clozapine also has a risk of inducing agranulocytosis, a potentially dangerous reduction in the number of white blood cells in the body.
· A potentially serious side effect of many antipsychotics is that they tend to lower an individual's seizure threshold. Another antipsychotic side effect is deterioration of teeth due to a lack of saliva.
· Another serious and potentially fatal side effect is sometimes referred to as Neuroleptic Malignant Syndrome, in which the drugs appear to cause the temperature regulation centers to fail, resulting in a medical emergency, as the patient's temperature suddenly increases to dangerous levels. Other signs include muscle rigidity altered mental status and evidence of autonomic instability (irregular pulse or blood pressure, tachycardia, diaphoresis, and cardiac dysrhythmia). Additional signs may include elevated creatinine phosphokinase, myoglobinuria, rhabdomyolysis, and acute renal failure. The diagnostic evaluation of patients with this syndrome is complicated.
· Other clinical manifestations include hyperpyrexia, muscle rigidity, altered mental state, and evidence of autonomic instability (irregular pulse or blood pressure, tachycardia, diaphoresis and cardiac dysrhythmia. Additional signs may include elevated creatine phosphokinase, myoglobinuria (rhabdomyolysis) and acute renal failure.
· Other side-effects of drug therapy may include a disruption to the body's ability to reduce body core temperature and dysphagia (oesophageal dysmotility and aspiration - aspiration pneumonia is a common cause of morbidity or mortality in elderly patients especially those with advanced Alzheimer's dementia).
A potentially fatal symptom complex, sometimes referred to as Neuroleptic Malignant Syndrome (NMS), has been reported in association with antipsychotic drugs. Clinical manifestations of NMS are hyperpyrexia, muscle rigidity, altered mental status and evidence of autonomic instability (irregular pulse or blood pressure, tachycardia, diaphoresis, and cardiac dysrhythmias).
Dopamine has an emetic effect and inhibits digestive motility; its antagonists have antiemetic and digestive motility stimulant effects. Dopaminergic receptors in the chemoreceptor trigger zone responsible for vomiting are accessible to dopaminergic antagonists which do not cross the blood-brain barrier. Drugs stimulating gastrointestinal motility are called prokinetic agents and are used specially in treating gastroesophageal reflux.

EYE

■ Although the material is not thought to be an irritant, direct contact with the eye may cause transient discomfort characterized by tearing or conjunctival redness (as with windburn). Slight abrasive damage may also result.
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SKIN

■ The material is not thought to be a skin irritant (as classified using animal models). Abrasive damage however, may result from prolonged exposures.
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■ Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.
■ Open cuts, abraded or irritated skin should not be exposed to this material.
■ Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

INHALED

■ The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified using animal models). Nevertheless, adverse effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
■ Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.

CHRONIC HEALTH EFFECTS

■ Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.
There is limited evidence that, skin contact with this product is more likely to cause a sensitization reaction in some persons compared to the general population.
Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung.
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Antipsychotic drugs have been shown to chronically elevate prolactin levels in rodents. Increases in mammary neoplasms have been found in rodents after chronic administration of antipsychotic drugs and are considered to be prolactin-mediated.
Increased prolactin levels in serum are a secondary consequence of chronic dopamine antagonism of pituitary lactotrophs.
The relevance of the increased incidence of prolactin-mediated mammary gland tumours in rats, to human risk, is unknown.
Reproductive and developmental toxicity may also result from exposure to dopamine antagonists; these may result from elevation of serum

prolactin. Effects may include prolonged oestrus, pre-implantation loss and alterations to the length of the gestational cycle.
Tissue culture experiments indicate that approximately one-third of human breast cancers are prolactin dependent in vitro, a factor of potential importance if the prescription of these drugs is contemplated in a patient with a previously detected breast cancer. Although disturbances such as galactorrhea, amenorrhea, gynaecomastia, and impotence have been reported, the clinical significance of elevated serum prolactin levels is unknown for most patients.
There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment.
In repeat dose toxicology studies, aripirazole was well tolerated by rats given up to 20 mg/kg/day for three months or 10 mg/kg/day. Oral administration at 10, 30 and 60 mg/kg/day for 25 weeks was well tolerated by rats given 10 mg/kg/day with no life-threatening toxicity at any dose level. All doses produced clinical and pathological changes and dose-related increases in pulmonary histiocytosis. Increased lipofucin pigment was noted in adrenal glands at 30 and 60 mg/kg/day and ovaries at 60 mg/kg/day.
Except for remnants of pigment in the ovary and adrenal gland, all aripirazole related effects were reversible or partially reversible 13 weeks post-exposure.
When administered to monkeys aripirazole produced a spectrum of CNS clinical signs but no direct organ toxicity at doses up to 25 mg/kg/day for one year.
In dietary carcinogenicity studies the drug produced increased incidences of mammary adenocarcinomas/ adenocanthomas and pituitary adenomas in female mice (3, 10 and 30 mg/kg/day) and mammary fibroadenomas in female rats (10 mg/kg/day). There was no significant increase in the incidence of mammary tumours in rats treated orally with aripiprazole for two years but rather a decreased incidence of pituitary and mammary neoplasms in female rats. This is believed to be due to the overriding dopamine partial agonist effect of aripiprazole following chronic administration at high doses.
In rats, there was a statistically significant increased incidence of adrenocortical adenomas and carcinomas in females at 60 mg/kg/day, a dose markedly exceeding the maximum tolerated dose. A low incidence of adrenocortical carcinomas noted at 4 mg/kg/day was not clearly drug related as the same incidence was observed in one control group of males from the study.
In vitro and in vivo tests (bacterial and mammalian assays) were negative for the induction of DNA damage (including an in vivo UDS assay in which rats received oral doses up to 500 mg/kg) and gene mutation. Chromosomal aberrations in vitro were observed in pulse treatment with and without rat liver S9 but not in continuous treatment without S9. The results of micronucleus tests in mice, at oral doses up to 100 mg/kg, indicated that aripiprazole failed to induce micronucleii suggesting a low level risk of chromosomal aberration in vivo.
Reproductive and developmental toxicity studies were performed in rats. Reproductive and development effects noted in rats included prolonged oestrus, increased incidence of pre-implantation loss, slight prolongation of gestational period (<1 day). Developmental and reproductive effects were noted in rabbits at doses that were maternally toxic.
A 4-week oral study of T-cell dependent antibody response in rats did not indicate any potentially drug-related effects on the immune system.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
aripiprazole	129722-12-9	>98

Section 4 - FIRST AID MEASURES

SWALLOWED
· IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY. · Where Medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:

EYE
■ If this product comes in contact with the eyes: · Wash out immediately with fresh running water. · Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.

SKIN
■ If skin contact occurs: · Immediately remove all contaminated clothing, including footwear · Flush skin and hair with running water (and soap if available).

INHALED
· If dust is inhaled, remove from contaminated area. · Encourage patient to blow nose to ensure clear passage of breathing. · If irritation or discomfort persists seek medical attention.

NOTES TO PHYSICIAN
■ The management of NMS (Neuroleptic Malignant syndrome) should include:
· immediate discontinuation of antipsychotic drugs and other drugs not essential to concurrent therapy;
· intensive symptomatic treatment and medical monitoring and
· treatment of any concomitant serious medical problems for which specific treatments are available.
· There is no general agreement about specific pharmacological regimes for NMS.

Section 5 - FIRE FIGHTING MEASURES

Vapour Pressure (mmHG):	Negligible
Upper Explosive Limit (%):	Not available
Specific Gravity (water=1):	Not available
Lower Explosive Limit (%):	Not available

EXTINGUISHING MEDIA

· Foam.
· Dry chemical powder.

FIRE FIGHTING

· Alert Emergency Responders and tell them location and nature of hazard.
· Wear breathing apparatus plus protective gloves.

GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS

· Combustible solid which burns but propagates flame with difficulty.
· Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust may burn rapidly and fiercely if ignited.
Combustion products include: carbon monoxide (CO), carbon dioxide (CO_2), hydrogen chloride, phosgene, nitrogen oxides (NOx), other pyrolysis products typical of burning organic material.
May emit poisonous fumes.
May emit corrosive fumes.
Dusts with Minimum Ignition Energies (MIEs) ranging between 10 and 20 mJ are highly sensitive to ignition. They require that:
· plant is grounded
· personal might also need to be grounded
· the use of high resistivity materials (such as plastics) should be restricted or avoided during handling or in packaging
· electrostatic hazards from bulk powders of high resistivity are considered.
Explosion Severity: Weak to moderate explosion energy
Minimum Ignition Energy: 10-25 mJ
Minimum Ignition Temperature (dust cloud): 580-600 C

FIRE INCOMPATIBILITY

■ Avoid contamination with oxidizing agents i.e. nitrates, oxidizing acids,chlorine bleaches, pool chlorine etc. as ignition may result.

PERSONAL PROTECTION

Glasses:
Chemical goggles.
Gloves:
Respirator:
Particulate

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS
· Clean up waste regularly and abnormal spills immediately.
· Avoid breathing dust and contact with skin and eyes.
· Wear protective clothing, gloves, safety glasses and dust respirator.
· Use dry clean up procedures and avoid generating dust.
· Vacuum up or sweep up. NOTE: Vacuum cleaner must be fitted with an exhaust micro filter (HEPA type) (consider explosion-proof machines designed to be grounded during storage and use).
· Dampen with water to prevent dusting before sweeping.
· Place in suitable containers for disposal.
MAJOR SPILLS
■ Moderate hazard.
· CAUTION: Advise personnel in area.
· Alert Emergency Responders and tell them location and nature of hazard.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

· Avoid all personal contact, including inhalation.
· Wear protective clothing when risk of exposure occurs.
Empty containers may contain residual dust which has the potential to accumulate following settling. Such dusts may explode in the presence of an appropriate ignition source.
· Do NOT cut, drill, grind or weld such containers.
· In addition ensure such activity is not performed near full, partially empty or empty containers without appropriate workplace safety authorisation or permit.

RECOMMENDED STORAGE METHODS

■ Glass container.
· Polyethylene or polypropylene container.
· Check all containers are clearly labelled and free from leaks.

STORAGE REQUIREMENTS

· Store in original containers.
· Keep containers securely sealed.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m³	STEL ppm	STEL mg/m³	Peak ppm	Peak mg/m³	TWA F/CC	Notes
Canada - British Columbia Occupational Exposure Limits	aripiprazole (Piperazine and its Salts, as Piperazine)		0.3		1				S

ENDOELTABLE

PERSONAL PROTECTION




RESPIRATOR

Particulate

Consult your EHS staff for recommendations

EYE

■ When handling very small quantities of the material eye protection may not be required.

For laboratory, larger scale or bulk handling or where regular exposure in an occupational setting occurs:

· Chemical goggles

· Face shield. Full face shield may be required for supplementary but never for primary protection of eyes

· Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

HANDS/FEET

■ NOTE: The material may produce skin sensitization in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:

· frequency and duration of contact,

· chemical resistance of glove material,

· glove thickness and

· dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739).

· When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended.

· When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended.

· Contaminated gloves should be replaced.

Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

· Rubber gloves (nitrile or low-protein, powder-free latex). Employees allergic to latex gloves should use nitrile gloves in preference.

· Double gloving should be considered.

· PVC gloves.

· Protective shoe covers.

· Head covering.

Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.

· polychloroprene

· nitrile rubber

· butyl rubber

· fluorocaoutchouc

· polyvinyl chloride

Gloves should be examined for wear and/ or degradation constantly.

OTHER

· For quantities up to 500 grams a laboratory coat may be suitable.

· For quantities up to 1 kilogram a disposable laboratory coat or coverall of low permeability is recommended. Coveralls should be buttoned at collar and cuffs.

· For quantities over 1 kilogram and manufacturing operations, wear disposable coverall of low permeability and disposable shoe covers.

· For manufacturing operations, air-supplied full body suits may be required for the provision of advanced respiratory protection.

· Eye wash unit.

· Ensure there is ready access to an emergency shower.

· For Emergencies: Vinyl suit.

ENGINEERING CONTROLS

■ Unless written procedures, specific to the workplace are available, the following is intended as a guide:
· For Laboratory-scale handling of Substances assessed to be toxic by inhalation. Quantities of up to 25 grams may be handled in Class II biological safety cabinets *; Quantities of 25 grams to 1 kilogram may be handled in Class II biological safety cabinets* or equivalent containment systems Quantities exceeding 1 kg may be handled either using specific containment, a hood or Class II biological safety cabinet*,
· HEPA terminated local exhaust ventilation should be considered at point of generation of dust, fumes or vapors.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES

Solid.
Does not mix with water.

State	Divided solid	Molecular Weight	Not available
Melting Range (°F)	284	Viscosity	Not Applicable
Boiling Range (°F)	Not available	Solubility in water (g/L)	Partly miscible
Flash Point (°F)	Not available	pH (1% solution)	Not available
Decomposition Temp (°F)	Not available	pH (as supplied)	Not applicable
Autoignition Temp (°F)	1076	Vapour Pressure (mmHG)	Negligible
Upper Explosive Limit (%)	Not available	Specific Gravity (water=1)	Not available
Lower Explosive Limit (%)	Not available	Relative Vapor Density (air=1)	Not Applicable
Volatile Component (%vol)	Negligible	Evaporation Rate	Not Applicable

APPEARANCE

White to off-white crystalline solid; does not mix well with water. Slightly soluble in methanol.

log Kow 2.7 (pH 5); 2.86 (pH 7); 2.86 (pH 9).

Material	Value

Section 10 - CHEMICAL STABILITY

CONDITIONS CONTRIBUTING TO INSTABILITY

· Presence of incompatible materials.
· Product is considered stable.

STORAGE INCOMPATIBILITY

■ Avoid reaction with oxidizing agents.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

ARIPIPRAZOLE

TOXICITY AND IRRITATION

ARIPIPRAZOLE:
■ unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY	IRRITATION
Oral (rat) LD50: 953 mg/kg *	Skin: non-irritating *
Oral (rat) LD50: 705 mg/kg (female) *	Eye: non-irritating *

Negative in mouse Local Lymph Node Assay for concentrations of 0.25%, 0.5% and 1.0% (dimethylformamide was used as the vehicle) - therefore assessed to be non-sensitising. The antigenic potential was evaluated in a study in guinea pigs: at doses up to 10 mg/kg the animals showed no evidence of active systemic anaphylaxis.
Non-mutagenic in bacteria and in-vivo mammalian assays

Section 12 - ECOLOGICAL INFORMATION

No data

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Instructions
All waste must be handled in accordance with local, state and federal regulations.
¦ Puncture containers to prevent re-use and bury at an authorized landfill.
Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.
A Hierarchy of Controls seems to be common - the user should investigate:
· Reduction
· Reuse
· Recycling
· Disposal (if all else fails)
This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.
DO NOT allow wash water from cleaning equipment to enter drains. Collect all wash water for treatment before disposal.
· Recycle wherever possible.
· Consult manufacturer for recycling options or consult Waste Management Authority for disposal if no suitable treatment or disposal facility can be identified.

Section 14 - TRANSPORTATION INFORMATION

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: DOT, IATA, IMDG

Section 15 - REGULATORY INFORMATION

aripiprazole (CAS: 129722-12-9) is found on the following regulatory lists;
"Canada - British Columbia Occupational Exposure Limits"

Section 16 - OTHER INFORMATION

LIMITED EVIDENCE
■ Skin contact may produce health damage*.
■ Cumulative effects may result following exposure*.
■ Limited evidence of a carcinogenic effect*.
■ Possible skin sensitiser*.
* (limited evidence).

Reasonable care has been taken in the preparation of this information, but the author makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The author makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. For additional technical information please call our toxicology department on +800 CHEMCALL.

■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references.

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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