

MATERIAL SAFETY DATA SHEET
INCB018424 Phosphate

FILE NO.: 018424 Phosphate
MSDS DATE: 08/26/2010

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: INCB018424 Phosphate
SYNONYMS: Pharmaceutical Research Compound
PRODUCT CODES: INCB018424

MANUFACTURER: Incyte Corporation
ADDRESS: Experimental Station
Rt.141 & Henry Clay Road
Wilmington, DE 19880

PHONE: 302-498-6700
FAX PHONE: 302-425-2750
EMERGENCY PHONE: In case of an emergency call 800-424-9300 (CHEMTREC)

CHEMICAL NAME: INCB018424 Phosphate
CHEMICAL FAMILY: Active Pharmaceutical Ingredient
CHEMICAL FORMULA: See Section 9

PRODUCT USE: Pharmaceutical Research & Development. This material is the active pharmaceutical ingredient (API) in a drug product. It is used to treat Myelofibrosis.

SECTION 1 NOTES: For research & development use only, under the supervision of a technically qualified individual.

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

* Quantitative formulation is proprietary

<u>INGREDIENT:</u>	<u>CAS NO.</u>	<u>% WT</u>
INCB018424 Phosphate		> 98.0

Components not listed are not hazardous or are below reportable limits

SECTION 2 NOTES: Investigational drug; for research & development use only, under the supervision of a technically qualified individual.

SECTION 3: HAZARDS IDENTIFICATION

Pictogram, signal word: Self assessment according REGULATION (EC) No 1272/2008



Danger

Hazard statements H301: Toxic if swallowed.
H361f: Suspected of damaging fertility.
H373: May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements P308/313: IF exposed or concerned: Get medical advice/attention.
P260: Do not breathe dust/fume/gas/mist/vapors/spray.

GHS Hazard category

Acute Toxicity (oral): Cat.3;
Acute Toxicity (dermal): not classifiable;
Skin Corrosion /Irritation: Not classified;
Eye Corrosion /Irritation: Not classified;
Skin sensitizer: Not classified;
Germ cell mutation: Not classified;
Carcinogenicity: not classifiable;
Reproductive toxicity: Cat.2 fert.;
Specific organ toxicity (single dose), not lethal: not classifiable;
Specific organ toxicity (repeated exposure): Cat.2;

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Flammable liquid: not applicable;
Flammable solid: not classifiable;
Acute aquatic toxicity: not classifiable;
Chronic aquatic toxicity: not classifiable;
Classification according EU Directive 67/548/EEC or 1999/45/EC see section 15

SECTION 3 NOTES:

SECTION 4: FIRST AID MEASURES

EYES: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Assure adequate flushing by separating the eyelids with fingers. Get medical attention.

SKIN: Should skin irritation, allergic reaction, or rash occur, remove contaminated clothing, physically remove as much of the product as possible. Wash affected area with soap and water, then thoroughly flush the area with water. If irritation persists, seek medical advice.

INGESTION: If swallowed, do not induce vomiting as aspiration of the product might occur, wash out mouth with water provided person is conscious. Get medical attention.

INHALATION: Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.

Notes to Physician: General measures to eliminate the substance and to reduce absorption. Apply general supportive and symptomatic treatment.

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER: No data available
(% BY VOLUME) LOWER: No data available

FLASH POINT:
F: Not applicable
C:

METHOD USED:

AUTOIGNITION TEMPERATURE:
F: No data available
C: No data available

NFPA HAZARD CLASSIFICATION
HEALTH: 2 FLAMMABILITY: 1 REACTIVITY: 1

HMIS HAZARD CLASSIFICATION
HEALTH: 2 FLAMMABILITY: 1 REACTIVITY: 1

EXTINGUISHING MEDIA: All media are acceptable. Choose as appropriate for material surrounding fire.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus and protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None known, avoid creating dust and keep away from ignition sources.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide.

SECTION 5 NOTES:

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Avoid contact with eyes, skin and clothing. Do not breathe dust/particulates or aerosols. Wash thoroughly after handling. Small spill: Wear personal protective clothing (see section 8). Wipe up and place into container for disposal. Avoid creating airborne material. Large spill: Prevent from entry into waterways, sewers, basements or confined areas.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Avoid contact with eyes, skin and clothing. Do not breathe dust/particulates or aerosols. Hand washing facilities with eyewash and safety shower should be provided. Wash thoroughly after handling. Do not eat or drink near this product. Keep container tightly closed. Store away from excess heat and moisture to preserve product integrity. Store away from foodstuff.

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OTHER PRECAUTIONS: Preferably handle in closed system. Provide exhaust ventilation system in case of open handling. Avoid formation of dust. Observe the usual precautionary measures required for chemicals with dust explosive properties.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES:

Chemical Name	Internal Exposure Limit (mg/m3)
INCB018424 Phosphate (>98.0%)	0.05

VENTILATION / ENGINEERING CONTROLS: Use process enclosures, containment technology, or other engineering controls to keep airborne levels below recommended exposure limit. When handling quantities up to 5 kilogram, work in a standard laboratory using a fume hood, biological safety cabinet, or approved vented balance safety enclosure. Quantities exceeding 5 kilogram should be handled in a designated laboratory using laminar flow/powder containment booth. For manufacturing and pilot plant operations, use semi to closed material transfer systems and containment of open operations. HEPA filtration for recirculation of exhaust is required.

RESPIRATORY PROTECTION: Use and selection of respiratory protection is based upon engineering controls in use and potential for aerosol generation. When engineering controls are not sufficient to control exposure, wear an approved respirator with NIOSH Class 100 or high efficiency particulate (HEPA) filters or cartridges when exposures are up to 10 times the exposure control guideline. Wear a loose-fitting (Tyvek or helmet type) HEPA powered-air purifying respirator (PAPR) when exposures are 10-25 times the exposure control guideline. Wear a full facepiece negative pressure respirator with Class 100 or HEPA filters when exposures are 25-50 times the exposure control guideline. Wear a tight-fitting, full facepiece HEPA PAPR when exposures are 50-100 times the exposure control guideline. Wear a hood-shroud HEPA PAPR or full facepiece supplied air respirator operated in a pressure demand or other positive pressure mode when exposures are 100-1000 times the exposure control guideline.

EYE PROTECTION: Safety glasses with side-shields are recommended. Face shields or chemical safety goggles may be required if splash potential exists or if corrosive materials are present. Note: Choice of eye protection may be influenced by the type of respirator which is selected.

SKIN PROTECTION: Wear a laboratory coat when handling quantities up to 5 kilograms. For quantities over 5 kilogram, wear laboratory coat or coverall of low permeability. For manufacturing operations, wear coverall of low permeability.

HAND PROTECTION: Impervious nitrile, rubber and latex gloves are recommended. If material is handled in solution, the solvent should also be considered when selecting protective clothing material. Please note that employees who are allergic to natural rubber latex should use nitrile gloves.

HYGIENIC PRACTICES: Wash hands and face before breaks and immediately after handling the product.

These values are derived from experiments, literature and information from the glove manufacturer. They can also be derived from similar materials. In daily work please be aware that the using time depends on several factors and can be shorter than the officially tested permeation time.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: White to off white

ODOR: None

PHYSICAL STATE: Solid

pH AS SUPPLIED: No data available

pH (Other):

BOILING POINT:

F: No data available

C:

MELTING POINT:

F: 385

C: 197.6

FREEZING POINT:

F: No data available

C:

VAPOR PRESSURE (mmHg):

@

F: No data available

C:

VAPOR DENSITY (AIR = 1): No data available

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@
F:
C:
SPECIFIC GRAVITY (H2O = 1): No data available
@
F:
C:

EVAPORATION RATE: No data available

BASIS (=1): No data available

SOLUBILITY (Aqueous Solvents): Water: 2.7 mg/ml (Temperature: 25 °C); Aqueous buffer pH = 7.4: 0.26 mg/ml (Temperature: 25 °C)

SOLUBILITY (Solvents): Dimethylformamide: > 50 mg/ml (Temperature: 25 °C)
Methanol: > 50 mg/ml (Temperature: 25 °C)
Toluene: 0.02 mg/ml (Temperature: 25 °C)
hexane fraction: 0 mg/ml (Temperature: 25 °C)
tert.Butyl-methyl-ether: 0 mg/ml (Temperature: 25 °C)
dimethyl sulfoxide: > 50 mg/ml (Temperature: 25 °C)
ethyl alcohol: 17.15 mg/ml (Temperature: 25 °C)
1-propanol: 7.72 mg/ml (Temperature: 25 °C)

pH: Not available
pKa: pKa1: 4.3
pKa2: 11.8

PERCENT SOLIDS BY WEIGHT: No data available

PERCENT VOLATILE: No data available
BY WT/ BY VOL @

F:
C:
VOLATILE ORGANIC COMPOUNDS (VOC): No data available

WITH WATER: LBS/GAL

WITHOUT WATER: LBS/GAL

MOLECULAR WEIGHT: Proprietary
MOLECULAR FORMULA: Proprietary

VISCOSITY: No data available
@

F:
C:

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID (STABILITY): Heat, open flame and moisture.

INCOMPATIBILITY (MATERIAL TO AVOID): Strong oxidizing agents.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Carbon monoxide, carbon dioxide.

HAZARDOUS POLYMERIZATION: Not known to occur

CONDITIONS TO AVOID (POLYMERIZATION): None known

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: Handle with caution - Investigational drug; for research & development use only, under the supervision of a technically qualified individual.

Acute Oral, Rat:
Acute Oral, Mouse:

NOAEL 100 mg/kg (single dose). Mortality at 250 mg/kg in female rats (see notes).
Not Available

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Acute IP, Rat:	Not Available
Acute IP, Mouse:	Not Available
Acute Dermal Irritation, Rabbit:	No irritation up to 4%.
Primary Eye Irritation, Rabbit:	Mildly irritating up to 1.5% in vehicle. Vehicle alone was minimally irritating.
Ames Test:	Negative.
Listed as Carcinogen:	OSHA NA NTP NA IARC NA
Other Carcinogenicity/ Mutagenicity Data:	Negative in <i>In Vitro</i> Chromosome Aberration test (GLP) and in <i>In Vivo</i> Micronucleus Assay (GLP). No increase in tumors in 6 month TgRasH2 mouse carcinogenicity study (GLP).
Multiple Dose Toxicity Data: (No Toxicological Effect Dose/ Species/Study Length)	Rat 28 day GLP – NOAEL 50 mg/kg/day Rat 6 month GLP – NOAEL 30 mg/kg/day (males), NOAEL 60 mg/kg/day (females) Dog 28 day GLP – NOAEL 10 mg/kg/day Dog 6 month GLP – NOAEL 2.5 mg/kg/day Dog 12 month GLP – NOAEL 1.5 mg/kg/day
Other: Target Organs:	Bone marrow, lymphoid tissues
Reproduction Toxicity	Did not show teratogenic effects in animal experiments. This substance has been shown to have unwanted effects to the unborn/offspring. It is recommended that persons working with or around this substance are informed and their exposure evaluated according to local policies. When handling this substance, precautionary measures should be taken according to workplace health risk assessment.
SECTION 11 NOTES:	LD50 in rat is estimated to be ~250 mg/kg based on mortality observed in rat micronucleus assay using single doses of INCB018424.

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose in accordance with applicable federal, state, and local regulations. Local regulations may be more stringent than regional or national requirements. This information is presented only applies to the material as supplied.

OTHER INFORMATION: Disposal by incineration is recommended

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME: Toxic solid, organic, n.o.s. (pyrrolo-pyrimidinyl derivative)
HAZARD CLASS: 6.1
ID NUMBER: UN2811
PACKING GROUP: III
LABEL STATEMENT: Toxic

WATER TRANSPORTATION

PROPER SHIPPING NAME: Not Available
HAZARD CLASS:
ID NUMBER:
PACKING GROUP:
LABEL STATEMENTS:

AIR TRANSPORTATION

PROPER SHIPPING NAME: Toxic solid, organic, n.o.s. (pyrrolo-pyrimidinyl derivative)
HAZARD CLASS: 6.1
ID NUMBER: UN2811
PACKING GROUP: III
LABEL STATEMENT: Toxic

SECTION 14 NOTES: Class 6.1 PG III material < 1 grams per inner container may be shipped as De minimis exception material (49 CFR 173.4b).

Class 6.1 PG III material < 30 grams per inner container may be shipped as excepted quantity material (49 CFR 173.4a or IATA 2.7).

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT): Not listed on TSCA. Food, drug and cosmetic products are exempt from TSCA. For research & development use only, under the supervision of a technically qualified individual. Not for commercial purposes.

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): None

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): None

311/312 HAZARD CATEGORIES: Fire Hazard: No
Sudden Release of Pressure: No
Reactive: No
Immediate (Acute) Health Hazard: No
Delayed (Chronic) Health Hazard: Not fully determined

313 REPORTABLE INGREDIENTS: None

STATE REGULATIONS: None

INTERNATIONAL REGULATIONS:

EC Label assessment: internal according to EC Directives:



Xn harmful

Risk Phrases P: Caution! Substance not completely tested. Handle with care.
R22: Harmful if swallowed.
R48/22: Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R62: Possible risk of impaired fertility.

Safety Phrases S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S53: Avoid exposure - obtain special instructions before use.

SECTION 16: OTHER INFORMATION

OTHER INFORMATION:

PREPARATION INFORMATION: 08/26/2010

MSDS VERSION: 1.6

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