



# SAFETY DATA SHEET

## 1. Identification

**Product identifier** ALKERAN INJECTION

**Other means of identification**

**Synonyms**

ALKERAN INJECTION 50 MG \* ALKERAN IV INJECTION 50 MG \* ALKERAN INJECTION 50 MG/10 ML \* NDC NO. 0173-0130-93 \* MELPHALAN HYDROCHLORIDE, FORMULATED PRODUCT

**Recommended use** Medicinal Product.

This safety data sheet is written to provide health, safety and environmental information for people handling this formulated product in the workplace. It is not intended to provide information relevant to medicinal use of the product. In this instance patients should consult prescribing information/package insert/product label or consult their pharmacist or physician. For health and safety information for individual ingredients used during manufacturing, refer to the appropriate safety data sheet for each ingredient.

**Recommended restrictions** No other uses are advised.

**Manufacturer/Importer/Supplier/Distributor information**

**Manufacturer**

GlaxoSmithKline US  
5 Moore Drive  
Research Triangle Park, NC 27709 USA  
US General Information (normal business hours): +1-888-825-5249

Email Address: [msds@gsk.com](mailto:msds@gsk.com)

Website: [www.gsk.com](http://www.gsk.com)

EMERGENCY PHONE NUMBERS -  
TRANSPORT EMERGENCIES:  
US / International toll call +1 703 527 3887  
available 24 hrs/7 days; multi-language response

## 2. Hazard(s) identification

**Classified hazards**

Exempt from requirements - product regulated as a medicinal product, cosmetic product or medical device.

**Label elements**

Exempt from requirements - product regulated as a medicinal product, cosmetic product or medical device.

**Hazard(s) not otherwise classified (HNOC)**

Exempt from requirements - product regulated as a medicinal product, cosmetic product or medical device.

## 3. Composition/information on ingredients

**Mixtures**

Chemical name	Common name and synonyms	CAS number	%
MELPHALAN HYDROCHLORIDE	GR 64466A 4-(BIS(2-CHLOROETHYL)AMINO)-L-PHENYLALANINE HYDROCHLORIDE	3223-07-2	71.27
POLYVINYLPIRROLIDONE	1-ETHENYL-2-PYRROLIDINONE HOMOPOLYMER POLY(N-VINYLPYRROLIDONE) POVIDONE PLASDONE PLASDONE K29/32	9003-39-8	< 30

Chemical name	Common name and synonyms	CAS number	%
HYDROCHLORIC ACID	HYDROCHLORIC ACID SOLUTIONS RTECS MW4025000 MURIATIC ACID AQUEOUS HYDROGEN CHLORIDE CHLOROHYDRIC ACID HCL	7647-01-0	< 0.25

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

#### 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. If breathing is difficult, trained personnel should give oxygen. Call a physician if symptoms develop or persist. Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
<b>Skin contact</b>	Immediately flush skin with plenty of water. Take off contaminated clothing and wash before reuse. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
<b>Ingestion</b>	If swallowed, rinse mouth with water (only if the person is conscious). If ingestion of a large amount does occur, call a poison control center immediately. Do not induce vomiting without advice from poison control center.
<b>Most important symptoms/effects, acute and delayed</b>	Accidental exposure or contact might produce: Nausea, vomiting., symptoms of hypersensitivity (such as skin rash, hives, itching), anaemia, diarrhoea.
<b>Indication of immediate medical attention and special treatment needed</b>	No specific antidotes are recommended. Treat according to locally accepted protocols. For additional guidance, refer to the current prescribing information or to the local poison control information center.
<b>General information</b>	In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Following assessment, if the risk of exposure is considered significant then a health record should be maintained for exposed individuals to document periods of exposure. This record should be retained for at least 30 years after exposure ceases (or according local regulatory requirements if more stringent).

#### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Alcohol resistant foam. Water. Foam. Dry chemical powder. Carbon dioxide (CO2).
<b>Unsuitable extinguishing media</b>	None known.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

#### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.
<b>Environmental precautions</b>	Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

## 7. Handling and storage

### Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

### Conditions for safe storage, including any incompatibilities

Store locked up. To maintain product quality, do not store in heat or direct sunlight. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### GSK

##### Components

MELPHALAN  
HYDROCHLORIDE (CAS  
3223-07-2)

##### Type

8 HR TWA

##### Value

1 mcg/m<sup>3</sup>

##### Note

OHC

5

REPRODUCTIVE  
HAZARD  
SKIN SENSITISER  
CARCINOGEN

5

5

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

##### Components

HYDROCHLORIC ACID  
(CAS 7647-01-0)

##### Type

Ceiling

##### Value

7 mg/m<sup>3</sup>

5 ppm

#### US. ACGIH Threshold Limit Values

##### Components

HYDROCHLORIC ACID  
(CAS 7647-01-0)

##### Type

Ceiling

##### Value

2 ppm

#### US. NIOSH: Pocket Guide to Chemical Hazards

##### Components

HYDROCHLORIC ACID  
(CAS 7647-01-0)

##### Type

Ceiling

##### Value

7 mg/m<sup>3</sup>

5 ppm

### Biological limit values

No biological exposure limits noted for the ingredient(s).

### Exposure guidelines

#### Appropriate engineering controls

General ventilation normally adequate.

### Individual protection measures, such as personal protective equipment

#### Eye/face protection

Not normally needed. If contact is likely, safety glasses with side shields are recommended.

#### Skin protection

##### Hand protection

Not normally needed. For prolonged or repeated skin contact use suitable protective gloves.

##### Other

Not normally needed. Wear suitable protective clothing as protection against splashing or contamination.

#### Respiratory protection

No personal respiratory protective equipment normally required. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

#### Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

### General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. For advice on suitable monitoring methods, seek guidance from a qualified environment, health and safety professional.

## 9. Physical and chemical properties

### Appearance

#### Physical state

Solid.

<b>Form</b>	Vial. Freeze dried powder. and Vial. Diluent.
<b>Color</b>	Not available.
<b>Odor</b>	Not available.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not available.
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Contact with incompatible materials.
<b>Incompatible materials</b>	Peroxides. Phenols.
<b>Hazardous decomposition products</b>	None known. Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
<b>Skin contact</b>	Health injuries are not known or expected under normal use.
<b>Eye contact</b>	Health injuries are not known or expected under normal use.
<b>Ingestion</b>	Health injuries are not known or expected under normal use. Very toxic if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.

**Symptoms related to the physical, chemical and toxicological characteristics** Nausea, vomiting., Accidental exposure or contact might produce: symptoms of hypersensitivity (such as skin rash, hives, itching), anaemia, diarrhoea.

### Information on toxicological effects

**Acute toxicity** Health injuries are not known or expected under normal use.

Components	Species	Test Results
HYDROCHLORIC ACID (CAS 7647-01-0)		
<b>Acute</b>		
<b>Inhalation</b>		
LC50	Mouse	1108 ppm, 1 Hours
	Rat	3124 ppm, 1 Hours
LCL0	Guinea pig	4416 ppm, 30 minutes
	Human	3000 ppb, 5 minutes
		1300 ppm, 30 minutes
	Rabbit	4416 ppm, 30 minutes
NOEL	Human	<= 1.8 ppm, 45 minutes No effect on respiratory function in asthmatics.
<b>Oral</b>		
LD50	Rabbit	900 mg/kg
	Rat	700 mg/kg
<b>Chronic</b>		
<b>Inhalation</b>		
LOAEL	Rat	10 ppm, 128 weeks
<b>Subacute</b>		
<b>Oral</b>		
LD	Rat	34.1 mg/kg/day, 9 weeks
LOEL	Rat	10.2 mg/kg/day, 9 weeks
<b>Subchronic</b>		
<b>Inhalation</b>		
LOEC	Rat	10 ppm, 3 months Inflammation of lips and nasal cavity.
NOAEC	Rat	20 ppm, 3 months
MELPHALAN HYDROCHLORIDE (CAS 3223-07-2)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	4.7 mg/kg
POLYVINYLPIRROLIDONE (CAS 9003-39-8)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	> 5000 mg/kg

\* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation** Health injuries are not known or expected under normal use.

**Corrosivity**

MELPHALAN HYDROCHLORIDE

Literature search  
Result: Mild irritant

HYDROCHLORIC ACID

OECD 404  
Result: Corrosive  
Species: Rabbit  
Test Duration: 1 Hours

**Serious eye damage/eye irritation** Health injuries are not known or expected under normal use.

**Eye**

HYDROCHLORIC ACID

OECD 405  
Result: Corrosive effects/irritation  
Species: Rabbit

MELPHALAN HYDROCHLORIDE

Read across  
Result: Mild irritant

**Respiratory or skin sensitization****Respiratory sensitization** Under normal conditions of intended use, this material is not expected to be an inhalation hazard.**Skin sensitization** Health injuries are not known or expected under normal use.**Sensitization**

MELPHALAN HYDROCHLORIDE

Read across  
Result: Positive**Germ cell mutagenicity**

Not expected to be genotoxic under occupational exposure conditions. Contains components that produced genotoxicity in laboratory tests.

**Mutagenicity**

HYDROCHLORIC ACID

<= 10 mmol/L Chromosomal Aberration Assay In Vitro, CHO cells, IUCLID  
Result: Positive

MELPHALAN HYDROCHLORIDE

Ames  
Result: Positive

HYDROCHLORIC ACID

Ames, IUCLID  
Result: Negative

MELPHALAN HYDROCHLORIDE

Cytogenetic Analysis In Vivo  
Result: Positive

HYDROCHLORIC ACID

E coli Pol-A repair assay, IUCLID  
Result: Negative

L5178Y mouse lymphoma thymidine kinase locus assay, IUCLID

Result: Negative

MELPHALAN HYDROCHLORIDE

Mouse Lymphoma Cell (L5178Y) Mutation Assay  
Result: Positive

HYDROCHLORIC ACID

Yeast Mutation Assay, IUCLID  
Result: Negative**Carcinogenicity**

Carcinogenic effects are not expected as a result of occupational exposure.

HYDROCHLORIC ACID

10 ppm Inhalation  
Result: Negative  
Species: Rat  
Observation Period: 128 months  
Notes: IUCLID

MELPHALAN HYDROCHLORIDE

Clinical observation  
Result: Positive  
Species: Human  
Clinical observation  
Result: Positive  
Species: Mouse**IARC Monographs. Overall Evaluation of Carcinogenicity**

HYDROCHLORIC ACID (CAS 7647-01-0)

3 Not classifiable as to carcinogenicity to humans.

POLYVINYLPIRROLIDONE (CAS 9003-39-8)

3 Not classifiable as to carcinogenicity to humans.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**US. National Toxicology Program (NTP) Report on Carcinogens**

Not available.

**Reproductive toxicity**

Components in this product have been shown to cause birth defects and reproductive disorders in laboratory animals. May damage fertility or the unborn child. Health injuries are not known or expected under normal use.

**Reproductivity**

HYDROCHLORIC ACID

302 ppm Embryo-foetal development, IUCLID  
Result: Maternal toxicity, resorptions, foetal malformations.  
Species: Rat

MELPHALAN HYDROCHLORIDE

Fertility/foetal development  
Result: Positive**Specific target organ toxicity - single exposure**

Not assigned.

HYDROCHLORIC ACID

Result: Respiratory irritation/corrosion.

**Specific target organ toxicity - repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

MELPHALAN HYDROCHLORIDE

Pharmacological effects.  
Organ: Blood cell formation and bone marrow, gastro-intestinal tract.

<b>Aspiration hazard</b>	Not likely, due to the form of the product.
<b>Chronic effects</b>	May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.
<b>Further information</b>	Caution - Potent pharmaceutical agent. Occupational exposure to the substance or mixture may cause adverse effects.

## 12. Ecological information

**Ecotoxicity** Contains a substance which causes risk of hazardous effects to the environment.

Components	Species	Test Results
MELPHALAN HYDROCHLORIDE (CAS 3223-07-2)		
<i>Acute</i>		
	IC50	Activated sludge > 112 mg/l, 3 hours
<b>Aquatic</b>		
<i>Acute</i>		
Crustacea	EC50	Water flea (Daphnia magna) > 11 mg/l, 48 hours
POLYVINYLPIRROLIDONE (CAS 9003-39-8)		
<i>Acute</i>		
	IC50	Activated sludge > 1000 mg/l, 3 hours Static test
<b>Aquatic</b>		
<i>Acute</i>		
Crustacea	EC50	Water flea (Daphnia magna) 84 mg/l, 48 hours Static test
	NOEC	Water flea (Daphnia magna) 32 mg/l, 48 hours Static test

\* Estimates for product may be based on additional component data not shown.

### Persistence and degradability

#### Hydrolysis

##### Half-life (Hydrolysis-acidic)

MELPHALAN HYDROCHLORIDE 4.9 Hours, pH 5 Buffer Solution

##### Half-life (Hydrolysis-basic)

MELPHALAN HYDROCHLORIDE 3.9 Hours

##### Half-life (Hydrolysis-neutral)

MELPHALAN HYDROCHLORIDE 4.9 Hours, pH 7 Buffer Solution

#### Biodegradability

##### Percent degradation (Aerobic biodegradation-inherent)

POLYVINYLPIRROLIDONE 0 %, 28 days Modified MITI test, Activated sludge

### Bioaccumulative potential

#### Bioconcentration factor (BCF)

MELPHALAN HYDROCHLORIDE 1 Estimated

**Mobility in soil** Not available.

### Mobility in general

#### Volatility

##### Henry's law

MELPHALAN HYDROCHLORIDE 0 atm m<sup>3</sup>/mol, 25 C Estimated

#### Distribution

##### Octanol/water distribution coefficient log DOW

MELPHALAN HYDROCHLORIDE -0.52, pH 7.4

**Other adverse effects** Not available.

## 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not discharge into drains, water courses or onto the ground. Dispose in accordance with all applicable regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products**

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Avoid discharge into water courses or onto the ground.

**Contaminated packaging**

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. Transport information**

**DOT**

<b>UN number</b>	UN3249
<b>UN proper shipping name</b>	Medicine, solid, toxic, n.o.s. (MELPHALAN HYDROCHLORIDE)
<b>Transport hazard class(es)</b>	
<b>Class</b>	6.1(PGI, II)
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	6.1
<b>Packing group</b>	II
<b>Special precautions for user</b>	Not available.
<b>Special provisions</b>	T3, TP33
<b>Packaging exceptions</b>	153
<b>Packaging non bulk</b>	212
<b>Packaging bulk</b>	242

**IATA**

<b>UN number</b>	UN3249
<b>UN proper shipping name</b>	Medicine, solid, toxic, n.o.s. (MELPHALAN HYDROCHLORIDE)
<b>Transport hazard class(es)</b>	6.1(PGI, II)
<b>Subsidiary class(es)</b>	-
<b>Packaging group</b>	II
<b>Environmental hazards</b>	No.
<b>Labels required</b>	6.1
<b>ERG Code</b>	6L
<b>Special precautions for user</b>	Not available.
<b>Other information</b>	
<b>Cargo aircraft only</b>	Allowed with restrictions.
<b>Passenger &amp; cargo</b>	Allowed with restrictions.

**IMDG**

<b>UN number</b>	UN3249
<b>UN proper shipping name</b>	MEDICINE, SOLID, TOXIC, N.O.S. (MELPHALAN HYDROCHLORIDE)
<b>Transport hazard class(es)</b>	
<b>Class</b>	6.1(PGI, II)
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	6.1
<b>Packing group</b>	II
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	No.
<b>EmS</b>	F-A, S-A
<b>Special precautions for user</b>	Not available.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

**DOT**





**General information**

Classifications are for the material when offered for transport as fully regulated. Depending on the specific transport details (Ship-From/Ship To locations, quantities being shipped, type of packaging and mode of transport) it may be possible to ship this material in a manner other than fully regulated. (One example is IATA Limited or Excepted Quantity. There are others.) Be sure to review all regulatory agency packaging instructions and special provisions, referenced in this section, to identify options applicable to the specifics of your shipment.

**15. Regulatory information****US federal regulations****TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

HYDROCHLORIC ACID (CAS 7647-01-0) Listed.

**SARA 304 Emergency release notification**

HYDROCHLORIC ACID (CAS 7647-01-0) 5000 LBS

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories**  
 Immediate Hazard - Yes  
 Delayed Hazard - Yes  
 Fire Hazard - Yes  
 Pressure Hazard - No  
 Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Chemical name	CAS number	Reportable quantity	Threshold planning quantity	Threshold planning quantity, lower value	Threshold planning quantity, upper value
HYDROCHLORIC ACID	7647-01-0	5000	500 lbs		

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**  
 Not regulated.

**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

HYDROCHLORIC ACID (CAS 7647-01-0)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

HYDROCHLORIC ACID (CAS 7647-01-0)

**Safe Drinking Water Act (SDWA)** Not regulated.

**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2))**

HYDROCHLORIC ACID (CAS 7647-01-0)

**DEA Essential Chemical Code Number**

HYDROCHLORIC ACID (CAS 7647-01-0) 6545

**Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))**

HYDROCHLORIC ACID (CAS 7647-01-0) 20 %WV

**DEA Exempt Chemical Mixtures Code Number**

HYDROCHLORIC ACID (CAS 7647-01-0) 6545

## US state regulations

### US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

### US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

HYDROCHLORIC ACID (CAS 7647-01-0)

### US. Massachusetts RTK - Substance List

HYDROCHLORIC ACID (CAS 7647-01-0)

### US. New Jersey Worker and Community Right-to-Know Act

HYDROCHLORIC ACID (CAS 7647-01-0)

### US. Pennsylvania Worker and Community Right-to-Know Law

HYDROCHLORIC ACID (CAS 7647-01-0)

### US. Rhode Island RTK

HYDROCHLORIC ACID (CAS 7647-01-0)

### US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

## International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

Issue date	10-16-2015
Revision date	10-16-2015
Version #	28
Further information	HMIS® is a registered trade and service mark of the NPCA.
HMIS® ratings	Health: 2* Flammability: 1 Physical hazard: 0
NFPA ratings	Health: 2 Flammability: 1 Instability: 0
References	GSK Hazard Determination
Disclaimer	The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create any warranty, express or implied. It is the responsibility of the user to determine the applicability of this information and the suitability of the material or product for any particular purpose.

**Revision information**

Product and Company Identification: Product and Company Identification  
Composition / Information on Ingredients: Ingredients  
Physical & Chemical Properties:  
Toxicological Information:  
Ecological Information: Ecotoxicity  
Transport Information: Proper Shipping Name/Packing Group  
Regulatory Information: Risk Phrases - Class.