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### 1. Identification of the substance/preparation and the company/undertaking

#### GHS product identifier

Product name: Haloperidol Oral Solution USP (Concentrate)

#### Other mean of identification

Product code(s):	0121-0581-04, 0121-0581-05
UN-Number:	NA
Synonyms:	Compare to Haldol®

#### Recommended use of the chemical and restrictions on use

Recommended use:	Pharmaceutical product used as antipsychotic
Uses advised against:	Do not use except as prescribed.

#### Supplier address/information

Pharmaceutical Associates, Inc. 201 Delaware Street Greenville, SC 29605 (864) 277 -7282

Emergency telephone number: CHEMTREC 800.424.9300

### 2. Hazards Identification

Classification	This product is a mixture and is a pharmaceutical product. It is considered non-Hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200).
Chemical family:	Mixture
Statement of Hazard:	May be harmful if swallowed. May damage the unborn child. May cause nervous system, cardiovascular system and reproductive effects.
Additional Hazard Information Short term: Long term:	Overdose: Seizure and/or coma may occur. Animal studies have shown a potential to cause adverse effects of the fetus. Repeat-dose studies in animals have shown a potential to cause adverse effects on reproductive system. Can cause effects on central nervous system, gastrointestinal, cardiovascular system and respiratory system.
Known Clinical Effects:	Therapeutic use of this substance has resulted in weakness, dizziness, drowsiness, ataxia, confusion, tremors, headache, and gastrointestinal disturbances. As with all antipsychotic agents, tardive dyskinesia may appear. This syndrome is characterized by rhythmical involuntary movements of the tongue, face, mouth or jaw. Higher doses may cause CNS stimulation and/or depression, and impairment of motor and cognitive skills.
EU Indication of danger:	Not classified.



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#### **Emergency overview**

Seek medical attention in case of accidental exposure or overdose. The product is generally safe when used as prescribed.

Note: This document has been prepared in accordance with standards for workplace safety, which require the inclusion of all known hazards of the active substance or its intermediates regardless of the potential risk. The precautionary statements and warnings included may not apply in all cases. Your needs may vary depending upon the potential of exposure in your workplace.

#### **Precautionary statements**

General advice:	Seek medical attention in case of accidental exposure or overdose.
Eyes:	Avoid contact with eyes.
Skin Contact:	Avoid skin contact.
Inhalation:	Not intended for inhalation.
Ingestion:	Generally safe at recommended doses. In case of overdose, seek medical attention immediately.
Storage:	There are no special storage conditions for safety. For product integrity, store under conditions specified on the label.
Disposal:	Dispose of in accordance with applicable laws and regulations.

### 3. Composition/Information on ingredients

Chemical name	CAS-No	mg/mL	Trade Secret
Haloperidol	52-86-8	2 mg/mL	
Propylene Glycol	57-55-6		X
Methylparaben	99-76-3		X
Propylparaben	94-13-3		X
Lactic Acid	50-21-5		X



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### 4. First aid measures

#### Description of necessary first-aid measures

Eye contact:

Flush with running water for 15 minutes holding eyelids open. Contact medical personnel.

Skin contact: Wash contaminated area thoroughly. If irritation persists, contact medical personnel.

Inhalation: Remove to fresh air and contact medical personnel.

Ingestion:

Overdosage or accidental ingestion – Do not induce vomiting. Contact medical personnel or poison control center.

#### Most important symptoms/effects, acute and delayed

Therapeutic use of this substance has resulted in weakness, dizziness, drowsiness, ataxia, confusion, tremors, headache, and gastrointestinal disturbances. As with all antipsychotic agents, tardive dyskinesia may appear. This syndrome is characterized by rhythmical involuntary movements of the tongue, face, mouth or jaw. Higher doses may cause CNS stimulation and /or depression, and impairment of motor and cognitive skills.

## Indication of immediate medical attention and special treatment needed, if necessary NA

Notes to Physician: NA

### 5. Fire-fighting measures

Suitable extinguishing media:	Use carbon dioxide, dry chemical or water spray.
Specific hazards arising from the chemical	May burn emitting oxides of chlorine and nitrogen.
Explosion data:	Not applicable
Protective equipment and precautions for firefighters	During all firefighting activities, wear appropriate protective equipment, including self-contained breathing apparatus.

### 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personnel involved in clean-up should wear appropriate personal protective equipment (See Section 8). Minimize exposure.



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Environm	ental precautions			iately labeled, sealed conta aken to avoid environment	
and clean • Me	and materials for conta ing up ethods for containment: ethods for cleaning up:	inment	Absorb the liquid with suit	s specified by site procedu able material. Dispose of sp able federal, state or local re	pill material
7. Han	dling and storag	е			
<b>Precautio</b> Handling:	ns for safe handling		No special handling requir of normal product use.	ed for hazard control unde	r conditions
	s for safe storage, incl npatibilities	uding		ed for hazard control. For pr recommendations on the ca insert.	

Incompatible products:

Not applicable.

## 8. Exposure controls/personal protection

#### **Control parameters**

Exposure guidelines: The exposure guidelines listed below are for the individual components and not the product itself.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Haloperidol	Not Available	1µg/m³ (OEL)	Not Available
Propylene Glycol	Not Available	Not Available	Not Available
Methylparaben	Not Available	Not Available	Not Available
Propylparaben	10 mg/m <sup>3</sup> TWA (WEEL)	Not Available	Not Available
Lactic Acid	Not Available	Not Available	Not Available

#### Appropriate engineering controls

Engineering measures:

Engineering controls should be used to limit exposure.



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Individual	protection measu	ires, such as personal pro	otective equipment		
Eye/face p	protection:	Not required unde eye contact is pos		use. Wear safety glasses or	goggles if
Skin and b	ody protection:		and protective clothin ssible and for bulk pro	ng are recommended if skin coccessing operations	contact with
Respirator	y protection:			oduct. If the applicable PEL ed use an appropriate respira	tor.
Hygiene m	easures:	Wash hands thore			

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

Physical state:	Solution
Odor:	Slight
Appearance:	Clear colorless
Odor threshold:	Not available

Property	Values	Remarks/Method
рН	2.75 – 3.75	Current USP
Melting point/range	Not applicable	
Boling point/boiling range	Not available	
Flash point	Not applicable	
Evaporation rate	Not applicable	
Flammability (solid, gas)	Not applicable	
Flammability limits in air	Not applicable	
-upper flammability limit	Not applicable	
-lower flammability limit	Not applicable	
Vapor pressure	Not applicable	
Vapor density	Not applicable	
Specific gravity	1.01	Current USP
Water solubility	Not applicable	
Solubility in other solvents	Not applicable	
Partition coefficient: n- octanol/water	Not applicable	
Autoignition temperature	Not applicable	
Decomposition temperature	Not applicable	
Viscosity	Not available	
Flammable properties	Not applicable	
Explosive properties	Not applicable	
Oxidizing properties	Not applicable	



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Other information VOC content (%):

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None

10. Stability and reactivity

Reactivity	Stable at normal conditions
Chemical stability	Stable at normal conditions
Possibility of hazardous reactions	Stable at normal conditions
Conditions to avoid	None known
Incompatible materials	As a precautionary measure, keep away from strong oxidizers.
Hazardous decomposition products	None known

## 11. Toxicological information

#### Information on likely routes of exposure

Product information:

•	Inhalation:	Not Available
•	Eye contact:	Not Available
•	Skin contact:	Not Available
٠	Ingestion:	Not Available

The information included in this section, below, describes the potential hazards of the individual ingredients.

Chemical name	LD50 oral	LD50 dermal	LC50 inhalation	
Haloperidol	128 mg/kg Rat	Not available	Not available	
Propylene Glycol	20000 mg/kg Rat	20800 mg/kg Rabbit	Not available	
Methylparaben	2100 mg/kg Rat	No skin irritation	Not available	
Propylparaben	> 5000 mg/kg	Not available	Not available	
Lactic Acid	3,543 mg/kg Rat	Rabbit > 2,000 mg/kg	Not available	

#### Symptoms related to the physical, chemical and toxicological characteristics

Therapeutic use of this substance has resulted in weakness, dizziness, drowsiness, ataxia, confusion, tremors, headache, and gastrointestinal disturbances. As with all antipsychotic agents, tardive dyskinesia may appear. This syndrome is characterized by rhythmical involuntary movements of the tongue, face, mouth or jaw. Higher doses may cause CNS stimulation and /or depression, and impairment of motor and cognitive skills.



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#### Delayed and immediate effects and also chronic effects from short and long term exposure

Sensitization: •

- No data available
- Bacterial mutagenicity (Ames) Positive
- Mutagenic effects: Carcinogenicity: •
- Not carcinogenetic Reproductive toxicity: Developmental toxicity, Fetoxicity •
- STOT single exposure: •
- No data available
- STOT repeated exposure: No data available •
- Aspiration hazard: No data available

#### Numerical measures of toxicity – product

No data available

## 12. Ecological information

Ecotoxicity Environmental properties have not been thoroughly evaluated for the product. Releases to the environment should be avoided.

Persistence and Degradability No data available

Bioaccumulation No data available

#### Other adverse effects:

No data available

#### The following table includes data for the individual components.

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to micro- organisms	Daphnia Magna (water flea)
Haloperidol	Not Available	Not Available	Not Available	Not Available
Propylene Glycol	Not Available	52930 mg/L 96 hr.	Not Available	13020 mg/L 48 hr.
		Pimephales promelas		
Methylparaben	91 mg/L 72 hr.	59.5 mg/L 96 hr.	Not Available	41.1 mg/L 48 hr.
	Pseudokirchneriella	Oryzias latipes		
	subcapitata			
Propylparaben	7.6 mg/L 72 hr.	6.4 mg/L 96 hr.	Not Available	15.4 mg/L
	Pseudokirchneriella	Danio rerio		
	subcapitata			
Lactic Acid	.2.8 mg/L 72 hr.	130 mg/L 96 hr.	>100 mg/L 3 hr.	130 mg/L 48 hr.
	Pseudokirchneriella	Oncorhynchus	Sludge	
	subcapitata	mykiss	treatment	



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### **13. Disposal considerations**

#### Waste disposal methods

Dispose of waste in accordance with all federal, state and local regulations.

#### **Contaminated packaging**

Dispose of waste in accordance with all federal, state and local regulations.

## 14. Transport information

Notes: Not regulated for transport under USDOT, IATA, TDG, IMDG or other regulations.

### 15. Regulatory information

#### International inventories

Haloperidol Oral Solution USP (Concentrate) is not listed on TASC, EINECS or IECSC inventories, but the active pharmaceutical ingredient is listed on TASC inventories.

#### Legend

#### TSCA:

United States Toxic Substances Control Act 8(b) inventory not applicable to product. Haloperidol, Propylene Glycol, Methylparaben, Propylparaben and Lactic Acid are listed on the inventory.

#### EINECS:

Haloperidol, Propylene Glycol, Methylparaben, Propylparaben and Lactic Acid are listed on the inventory.

#### **U.S. Federal regulations**

OSHA Label for Haloperidol component May be harmful if swallowed. May cause nervous system, cardiovascular system and reproductive effects.

#### SARA 311/312 Hazard categories

Not Applicable

#### **Clean Water Act**

This product **does not** contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

#### CERCLA

No components are listed under CERCLA.

#### California Proposition 65:

This product does contain Haloperidol which is listed in Proposition 65 as a chemical developmental toxicity.



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#### U.S. state Right-to-Know regulations

"X" designates that the ingredients are listed on the state Right-to-Know list

Chemical name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Haloperidol					
Propylene Glycol	Х		Х		
Methylparaben	Х		Х		
Propyl Paraben	Х		Х		
Lactic Acid	Х		Х		

#### **U.S. EPA label information**

Not applicable

### 16. Other information

Prepared by: Pharmaceutical Associates Regulatory Affairs Issuing date: 02/17/2015 **Revision date:** NA **Revision note:** NA

<u>General Disclaimer</u> The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text. **End of Safety Data Sheet**