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**SECTION 1- IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

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**PRODUCT INFORMATION**

**Product name :** IVERMECTIN  
**Company :** North China Pharmaceutical Group Aino Co., LTD.  
Shijiazhuang Economic & Technical Development Zone,  
Hebei Province P.R. China

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**SECTION 2- HAZARDS IDENTIFICATION**

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**Classification system:**

**NFPA ratings (scale 0-4)**



Health =2  
Fire =1  
Reactivity =0

**HMIS – ratings (scale 0-4)**



**Label elements**

Pictogram



Signal word

Danger

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# **SAFETY DATA SHEET**

**OF**

# **IVERMECTIN**

**MANUFACTURER: North China Pharmaceutical Group Aino Co., LTD.**

**ADDRESS: 31 Xingye Street, Economic & Technical Development Zone, Shijiazhuang ,  
Hebei P.R. of China**

**DATE: May 2018**

**Hazard statements**

H300 Fatal if swallowed.  
H360D May damage the unborn child.

**Precautionary statements**

P201 Obtain special instructions before use.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
P302 IF ON SKIN: Wash with plenty of soap and water.  
P308 IF exposed or concerned: Get medical advice/ attention.

**SECTION 3- COMPOSITION/INFORMATION ON INGREDIENTS****Hazardous components**

| Chemical Name | CAS-No.    | EC-No.<br>(REACH Registration Number) | Symbol(s) | H-code(s) & R-phrases                    | Concentration                                                                                                                                                                |
|---------------|------------|---------------------------------------|-----------|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ivermectin    | 70288-86-7 | --                                    | N, T      | H301, H312, H332, H400, R20/21, R25, R50 | H <sub>2</sub> B <sub>1</sub> Assay:<br>95.0 ≤ H <sub>2</sub> B <sub>1</sub> ≤ 102.0<br>H <sub>2</sub> B <sub>1a</sub> /H <sub>2</sub> B <sub>1</sub> (Ratio by area) ≥ 90.0 |

For the full text of the H-code(s) and R-phrases mentioned in this Section, see Section 16.

**SECTION 4- FIRST AID MEASURES****FIRST AID MEASURES****General advice:**

Immediately remove any clothing soiled by the product.

In case of irregular breathing or respiratory arrest provide artificial respiration.

**If inhaled:**

Supply fresh air.

If required, provide artificial respiration.

Keep patient warm.

Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

**In case of skin contact:**

Immediately wash with water and soap and rinse thoroughly.

If skin irritation occurs, consult a doctor.

**In case of eye contact:**

Rinse opened eye for several minutes under running water. Then consult a doctor.

**If swallowed:**

Rinse out mouth and then drink plenty of water.

Induce vomiting, if person is conscious. Seek medical help.

**Information for doctor:**

Toxicity following ingestion can be minimized by inducing vomiting within one half hour of exposure. Ivermectin is believed to bind to glutamate-gated chloride ion channels; avoid drugs that also interact with other ligand-gated chloride channels, including those which enhance GABA activity in patients with potentially toxic Ivermectin exposure.

**The following symptoms may occur:**

Overexposure to ivermectin may cause drowsiness, depressed motor activity, slowed breathing, dilation of the pupils, tremors, vomiting, anorexia and incoordination.

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## SECTION 5 - FIRE-FIGHTING MEASURES

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**Suitable extinguishing media:**

Use water spray or all purpose dry chemical.

**For safety reasons unsuitable extinguishing media:** water with full jet

**Special hazards caused by the material, its products of combustion or resulting gases:**

This material, like most material in powder form, is capable of creating a dust explosion.

In case of fire, the following can be released:

Carbon monoxide (CO)

Carbon dioxide (CO<sub>2</sub>)

**Special protective equipment for fire-fighters:** mount respiratory protective device.

**Further information:**

Collect contaminated fire fighting water separately. It must not enter the sewage system.

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## SECTION 6 – ACCIDENTAL RELEASE MEASURES

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**Personal precautions:** Remove persons from danger area.

**Environmental precautions:**

Do not allow produce to reach sewage system or any water course.

Inform respective authorities in case of seepage into water source or sewage system.



# 华北制药集团爱诺有限公司

NORTH CHINA PHARMACEUTICAL GROUP AINO CO., LTD.

Economic and Technical Development Zone, Shijiazhuang, Hebei, P.R. China

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## **Methods and materials for containment and cleaning up:**

Vacuum, shovel, sweep-up all spilled materials and place in sealed container for proper disposal IAW Section 13.

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents.

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## **SECTION 7- HANDLING AND STORAGE**

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### **HANDLING**

#### **Information for safe handling:**

Avoid dust generation.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation/exhaustion at the workplace.

Handle with care. Avoid jolting and impact.

#### **Information about protection against explosions and fires:**

No special measures required.

### **STORAGE**

#### **Requirements to be met by storerooms and receptacles:**

Store only in the original container.

**Information about storage in one common storage facility:** Not required.

#### **Further information about storage conditions:**

Keep receptacle tightly sealed.

Store in a cool, dry, well ventilated place.

**Recommended storage temperature:** Store not exceeding 25°C.

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## **SECTION 8- EXPOSURE CONTROLS/PERSONAL PROTECTION**

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### **PERSONAL PROTECTIVE EQUIPMENT**

#### **General protective and hygienic measures:**

Keep away from foodstuffs, beverages.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Do not eat, drink, smoke or inhale.

Do not store food in the working area.

#### **Breathing equipment:**

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Approved, properly fit tested, HEPA filtered cartridge respirator or a respirator of greater protection.

**Hand protection:**

Rubber gloves

**Eye protection:** Safety goggles.**Body protection:**

Full body garments, disposable Tyvek suits, head cover and shoe protectors.

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**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

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**Appearance:**

Form: Powder

Color: clear, moist off-white to yellow

Odor: Odorless

**Safety data:****Change in condition**

Melting point/Melting range:

**Value/Range Unit****Method**

150~157°C

Boiling point/Boiling range:

Undetermined.

Flash point:

Not applicable.

Flammability (solid, gaseous):

Product is not flammable.

Danger of explosion:

Product does not present an explosion hazard.

Specific gravity:

Not determined.

Solubility in / Miscibility with Water:

Insoluble in water.

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**SECTION 10- STABILITY AND REACTIVITY**

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**Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

Dangerous reactions can be hydrolyzed by strong caustic reaction.

**Dangerous products of decomposition:** Carbon monoxide and carbon dioxide.



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## SECTION 11 - TOXICOLOGICAL INFORMATION

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### Acute toxicity:

LD/LC50 values that are relevant for classification:

70288-86-7 Ivermectin Comp. B<sub>1a</sub> (C<sub>48</sub>H<sub>74</sub>O<sub>14</sub>)

Comp. B<sub>1b</sub> (C<sub>47</sub>H<sub>72</sub>O<sub>14</sub>)

Oral: LD50: ~80 mg/kg (dog)  
LD50: 25 mg/kg (mouse)  
LD50: 50 mg/kg (rat)

Dermal: LD50: 406 mg/kg (rabbit)  
LD50: >660 mg/kg (rat)

Inhalative: LC50/4h: 5.11 mg/l (rat)

### Primary irritant effect:

**On the skin:** No irritating effect known.

**On the eye:** No irritating effect known.

**Sensitization:** No Sensitizing effects known.

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## SECTION 12 - ECOLOGICAL INFORMATION

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### ELIMINATION INFORMATION (PERSISTENCE AND DEGRADABILITY)

Ivermectin photodegrades rapidly in the environment and is metabolized in the soil. Water solubility is limited and it binds to soil very tightly. It does not bio-concentrate in fish and is not taken up from soil into plants.

### ECOTOXICITY EFFECTS

#### Aquatic toxicity:

70288-86-7 Ivermectin Comp. B<sub>1a</sub> (C<sub>48</sub>H<sub>74</sub>O<sub>14</sub>)

Comp. B<sub>1b</sub> (C<sub>47</sub>H<sub>72</sub>O<sub>14</sub>)

LC 50 / 48hrs: 0.025ppb (daphnia magna)

LC50/96 hours: .3 ug/l (Rainbow Trout)

LC50/96 hours: ug/l

#### General notes:

Water danger class 3 (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small

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quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

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### SECTION 13 - DISPOSAL CONSIDERATIONS

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**Product:**

Incinerate at an EPA approved incinerator facility.

**Contaminated packaging:**

Disposal must be made according to official regulations.

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### SECTION 14 - TRANSPORT INFORMATION

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## DOT regulations:

Hazard class: 6.1

Identification number: UN 2811

Packing group: II

Proper shipping name (technical name):

Toxic solid, organic, n. o. s., ivermectin

## Land transport ADR/RID (cross-border):

ADR/RID class: 6.1 Toxic substances

UN-Number: 2811

Description of goods: 2811 Toxic solid, organic, n. o. s., ivermectin

## Maritime transport IMDG:

IMDG class: 6.1

UN-Number: 2811

Packing group: II

Marine pollutant: No

Proper shipping name: Toxic solid, organic, n. o. s., ivermectin

## Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: 6.1

UN/ID Number: 2811

Packaging group: II

Proper shipping name: Toxic solid, organic, n. o. s., ivermectin

## SECTION 15 - REGULATORY INFORMATION

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Sara

**Section 355 (extremely hazardous substances):**

Substance is not listed.

**Section 313 (specific toxic chemical listings):**

Substance is not listed.

**TSCA (Toxic Substances Control Act):**

Substance is not listed.

CA Proposition 65

**Chemicals known to cause cancer:**

Substance is not listed.

**Chemicals known to cause reproductive toxicity:**

Substance is not listed.

**Product related hazard information:**

The product has been classified and marked in accordance with directives on hazardous materials.

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## SECTION 16 – OTHER INFORMATION

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Text of H-code(s) & R-phrases mentioned in Section 3:

|        |                                                 |
|--------|-------------------------------------------------|
| H301   | Toxic if swallowed.                             |
| H312   | Harmful in contact with skin.                   |
| H332   | Harmful if inhaled.                             |
| H400   | Very toxic to aquatic life.                     |
| R20/21 | Harmful by inhalation and in contact with skin. |
| R25    | Toxic if swallowed.                             |
| R50    | Very toxic to aquatic organisms.                |

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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