SAFETY DATA SHEET

HCS-2012 APPENDIX D TO §1910.1200

Version 1 **Issue Date** 17-Jun-2015
Product Name: **Sorbic acid** **Revision date** 17-Jun-2019

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name	Sorbic acid
Chemical Name	Sorbic acid

Other means of identification

CAS No	110-44-1

Recommended use of the chemical and restrictions on use

Recommended Use	No information available
Uses advised against	No information available

Details of the supplier of the safety data sheet

Supplier	Across Biotech Jinan Co., Ltd.
Address	Shanda Rd 160, Lixia distric, Jinan, China
Postal Code	250000
Phone	+86-531-68652497
E-mail	sales@acrossbiotech.com

Emergency telephone number

+86-531-68652497

2. HAZARDS IDENTIFICATION

GHS Classification

Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 2
Specific target organ toxicity (single exposure) Category 3

Label elements

Symbols/Pictograms

Signal word	Warning
Hazard Statements	Causes skin irritation Causes serious eye irritation May cause respiratory irritation.

Precautionary Statements

Prevention	Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well ventilated area.
Response	If on skin: Wash with plenty of water If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.
Storage	Store in a well ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazards not otherwise classified (HNOC)

No information available

Unknown acute toxicity

1% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature Substance

Chemical Name	CAS No	Weight-%
Sorbic acid	110-44-1	≥99

4. FIRST AID MEASURES

Description of first aid measures

General advice	Remove contaminated clothing and shoes. If symptoms persist, call a physician.
Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. If skin irritation persists, call a physician.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Ingestion	Rinse mouth. Get medical attention. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media	Water (spray - not splash) Dry extinguishing powder Alcohol resistant foam Carbon dioxide

Unsuitable extinguishing media Do not use water jet.

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating and toxic gases and vapors

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas
Ensure adequate ventilation, especially in confined areas
ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area)
Avoid contact with skin, eyes or clothing
Contaminated work clothing should not be allowed out of the workplace
Avoid generation of dust
Do not breathe dust
Use personal protection recommended in Section 8
Wash thoroughly after handling

Methods and material for containment and cleaning up

Use protective equipment while cleaning if necessary.
Avoid dust formation. Dust formation that cannot be avoided must be collected regularly.
Use tested industrial vacuum cleaners or suction systems for areas with a high risk of explosion.
Do not raise dust while cleaning.
Use of a blower for cleaning is not permitted.

7. HANDLING AND STORAGE

Precautions for safe handling

Take care to maintain clean working place.
Do not leave container open.
Sufficient ventilation must be guaranteed for refilling, transfer, or open use.
Avoid spillage.
Fill only into labelled container.
Avoid rising dust.

Conditions for safe storage, including any incompatibilities

Do not use any food containers - risk of mistake.
Containers have to be labelled clearly and permanently.
Store in the original container as much as possible.
Keep container tightly closed.
Recommended storage at room temperature.
Store in a dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

No data available.

Appropriate engineering controls

Provision of good ventilation in the working area.
Washing facility at the workplace required.
Eye bath required. These locations must be signposted Clearly.

Individual protection measures, such as personal protective equipment

Eye/face protection	Sufficient eye protection must be worn. Wear glasses with side protection.
Hand Protection	Use protective gloves. The glove material must be sufficiently impermeable and resistant to the substance. Check the tightness before wear. Gloves should be well cleaned before being removed, then stored in a well ventilated location. Pay attention to skin care. Skin protection cremes do not protect sufficiently against the substance. The following materials are suitable for protective gloves: Nitrile rubber/Nitrile latex - NBR Layer strength 0,11 mm , break-through time > 480 min
Skin and body protection	Depending on the risk, wear a tight protective clothing or a suitable chemical protection suit.
Respiratory protection	In an emergency (e.g.: unintentional release of the substance) respiratory protection must be worn. Consider the maximum period for wear. Respiratory protection: Particle filter P2 or P3, colour code white. Use insulating device for concentrations above the usage limits for filter devices, for oxygen concentrations below 17% volume, or in circumstances which are unclear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Powder
Color	White
Odor	Faint
Odor Threshold	Not determined
pH	ca. 3.3(20 °C, 1.6 g/L)
Melting point/freezing point	134 °C
Boiling point /boiling range	The substance decomposes when heated
Flash point	125 °C
Evaporation rate	Not determined
Flammability (solid, gas)	Combustible solid
Flammability Limit in Air	Not determined
Vapor Pressure	Not determined
Vapor density	3.87
Density	1.2 g/cm³(20 °C)
Relative density	1.2 (20 °C)
Bulk density	Not determined
Specific gravity	1.6 g/L(20 °C)
Water solubility	Not determined
Partition coefficient (LogPow)	1.33
Autoignition temperature	415 °C
Decomposition temperature	190 °C
Kinematic viscosity	Not determined
Dynamic viscosity	Not determined
Explosive properties	Dust forms explosive mixtures with air
Oxidizing properties	Not determined

Other information

No information available

10. STABILITY AND REACTIVITY

Reactivity

Stable under recommended storage and handling conditions (see SECTION 7, handling and storage).

Chemical stability

Stable under normal conditions

Possibility of Hazardous Reactions

Dust forms explosive mixtures with air.

Conditions to avoid

Light, air. Heat, flames and sparks

Incompatible materials

Bases.
Oxidizing agents.
Reducing agents.

Hazardous Decomposition Products

Carbon monoxide and carbon dioxide

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	Inhalation of vapors in high concentration may cause irritation of respiratory system.
Eye contact	Causes serious eye irritation.
Skin Contact	Causes skin irritation.
Ingestion	Ingestion may cause irritation to mucous membranes

Information on toxicological effects

Acute toxicity

1% of the mixture consists of ingredient(s) of unknown toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sorbic acid (CAS #: 110-44-1)	= 3200 mg/kg (Rat)	-	-

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Sensitization

Not sensitizing to skin.

Germ cell mutagenicity

Negative.

Carcinogenicity

Negative.

Reproductive toxicity

No information available

STOT - single exposure

May cause respiratory irritation.

STOT - repeated exposure

No information available

Aspiration hazard
No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity
1% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants EC50	Fish LC50	Crustacea EC50
Sorbic acid (CAS #: 110-44-1)	-	1000 - 1500: 48 h Leuciscus idus mg/L LC50 static	-

Persistence and degradability
After 7 days, 65.5 %, of the ThOD were removed.
Readily biodegradable

Bioaccumulative potential
No information available

Mobility in soil
No information available

Other adverse effects
No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations
Contaminated packaging	Dispose of in accordance with federal, state and local regulations

14. TRANSPORT INFORMATION

This product is not classified as dangerous material for transport according to the following regulations.
US Department of Transportation Classification: Not subject to DOT regulations under 49 CFR parts 171-180
International Air Transportation Association Classification: Not classified as hazardous under IATA regulations.
International Maritime Organization-IMDG: Not classified as hazardous under IMDG regulations.
UN, IMO, ADR/RID, ICAO Code: Not dangerous for conveyance under these codes.

DOT

UN/ID No.	Not regulated
Proper shipping name	Not regulated
Hazard Class	Not regulated
Packing Group	Not regulated
Special precautions	No information available
Marine pollutant	Non-marine pollutant

15. REGULATORY INFORMATION

International Inventories

Component	TSCA	DSL/NDSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Sorbic acid 110-44-1	X	X	X	X	X	X	X	X

"-" Not Listed
"X" Listed

US Federal Regulations

SARA 313
No information available

SARA 311/312 Hazard Categories
No information available
CWA (Clean Water Act)
No information available

CERCLA
No information available

US State Regulations

California Proposition 65
No information available

U.S. State Right-to-Know Regulations
No information available

16. OTHER INFORMATION

Revision Note

Issue Date	17-Jun-2015
Revision date	17-Jun-2015
Revision Note	Not applicable

Key or legend to abbreviations and acronyms used in the safety data sheet

TWA - TWA (time-weighted average)
STEL - STEL (Short Term Exposure Limit)
Ceiling - Maximum limit value
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

Disclaimer

The information provided in this Material Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

-------- End of Safety Data Sheet --------