SAFETY DATA SHEET

Product Name: Isobutyl Acetate

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Edit institution: Ningbo Yongshun Fine Chemical Co.,LTD.

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Ningbo Yongshun Fine Chemical Co., Ltd.

1. Identification

| Product Name | Isobutyl acetate |
|-------------------------------|--|
| Chemical Name | Isobutyl acetate |
| Product use | Solvent |
| Supplier Name: | NINGBO YONGSHUN FINE CHEMICAL CO.,LTD. |
| Address | NO.879 NANPU ROAD, XIEPU TOWN, ZHENHAI DISTRICT, |
| | NINGBO CITY, ZHEJIANG PROVINCE, CHINA/315204 |
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| WEB | http://www.chinaorganicchem.com |
| Emergency Phone Number | +86-574-86501227 |

2. Hazards Identification

GHS Label



| Signal words | Danger |
|--------------------------------|--|
| Hazard statements | H225 Highly flammable liquid and vapour |
| | |
| Precautionary Statement | P210 Keep away from heat/sparks/open flames/hot surfaces. |
| | No smoking |
| | P233 Keep container tightly closed. |
| | P240 Ground/bond container and receiving equipment. |
| | P241Use explosion-proof electrical/ventilating/lighting/equipment. |
| | P242 Use only non-sparking tools. |
| | P243 Take precautionary measures against static discharge. |
| | P280 Wear protective gloves/protective clothing/eye protection/face protection. |
| | P303+P361+P353 IF ON SKIN (or hair):Remove/Take off. Immediately all |
| | contaminated clothing. Rinse skin with water/shower. |
| | P370+P378 In case of fire: Use foam, dry chemical, carbon dioxide(CO ₂), |
| | water spray for extinction. |
| | P403+P235 Store in a well-ventilated place, keep cool. |
| | P501 Dispose of contents/container in according with local regulation. |
| | |

3. Composition/Information on Ingredients

| Component | CAS number | EINECS number | Mass(%) |
|------------------|------------|---------------|---------|
| Isobutyl acetate | 110-19-0 | 203-745-1 | 99.2% |

| NOTE TO PHYSICIAN | In case of shortness of breath, give oxygen. Keep victim warm. |
|-----------------------------------|---|
| | Keep victim under observation. |
| After inhalation | Move to fresh air. Oxygen or artificial respiration if needed. Get immediate |
| medical attention. | |
| After skin contact | Immediately flush skin with plenty of water. Remove and isolate contaminated |
| clothing and shoes. If irritation | persists, get medical attention immediately. For minor skin contact, avoid spreading |
| material on unaffected skin. Wa | sh clothing separately before use. |
| After eye contact | Immediately flush eyes with plenty of water for at least 15minutes. Assure |
| adequate flushing of eyes by se | parating the eyelids with fingers. Get medical attention immediately. |
| After ingestion | Do not induce vomiting without medical advice. If vomiting occurs naturally, have |
| victim lean forward to reduce a | risk of aspiration Loosen tight clothing such as a collar, tie, belt or waistband. Do |
| not use mouth-to-mouth metho | d if victim ingested the substance. Seek immediate medical attention. |
| | |

5. Fire-fighting measures

Suitable extinguishing agentsFoam, dry chemical, carbon dioxide(CO2), water spray.Special hazards caused by the material, its products of combustion or flue gasesCan be released in case of
fire: Carbon monoxide (CO), carbon dioxide(CO2).Protective equipmentWear full protective clothing, including helmet, self-contained positive pressure
or pressure demand breathing apparatus, protective clothing and face mask.

6. Accidental release measures

Person-related safety precautions Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering. Keep unnecessary personnel away.

Measures for environmental protection material to be released to the environment without proper governmental permits.

Measures for cleaning/collecting Pick up and arrange disposal in suitable container. Clean contaminated surface thoroughly.

Additional information See Section 7 for information on safe handling.

See section8 for information on personal protection equipment. See section13 for information on disposal.

7. Handling and storage

Handling

Information for safe handling Avoid contact with skin, eyes, mucous membranes and clothing. In case of insufficient ventilation, wear suitable respiratory equipment if ingested.

Information about protection against explosion and fires Keep away from heat, sources of ignition, sparks

or open flame.

STORAGE

Requirements to be met by storerooms and containers tightly closed until used. Information about storage in one common storage facility strong acids and strong bases, strong oxidizing agents. Further information about storage conditions No data Keep in a cool, dry, well-ventilated place. Keep

Store away from incompatible substances such as

8. Exposure controls/ personal protection

| Limited Values for Exposure | CAS number AC | GIH TLV-TWA AC | GIH TLV-STEL | ACGIH TLV-TWA NIOS | SH PEL-STEL | |
|-----------------------------|----------------|-----------------|----------------|---------------------|---------------|----------------------|
| COMPONENTS | | | | | | |
| Isobutyl acetate | 110-19-0 | 150ppm | N.E. | 150ppm | N.E. | |
| General protective and hy | gienic measur | es D | o not use th | is material in cor | ntact with sk | tin. Do not get this |
| material on clothing. Avoid | d contact with | eyes. Handle i | in according | with good industr | rial hygiene | and safety practice. |
| Wash hands before breaks | and at the end | of workday. | | | | |
| Personal protective equipn | nent | | | | | |
| Breathing equipment | When w | orkers are fac | ing high con | ncentrations they | must use aj | ppropriate certified |
| respirators. | | | | | | |
| Protection of hands | Wear ap | propriate cher | nical resistar | nt gloves. | | |
| Eye/Face protection | Use saf | ety glasses wi | th side shield | ls or safety goggle | es as | |
| Body protection | Use c | lean protective | e body-cover | ing as needed to | minimize co | ontact with clothing |
| and skin. | | | | | | |
| Note:1.N.E. means not esta | ablished. | | | | | |

9. PHYSICAL AND CHEMICAL PROPERTIES

| Appearance(physical state, color etc) | Colorless and clear liquid |
|---------------------------------------|----------------------------|
| Odour | fruity odour |
| РН | Not applicable |
| Melting point | <-90°C |
| Boiling point | 117°C(1013hpa) |
| Flash point | 22°C(1013hpa)-closed cup |
| Evaporation rate | Not applicable |
| Flammability | Flammable |
| Upper/lower flammability or explosive | e limits Not applicable |
| Vapor pressure | 21hpa(20°C) |
| Vapor density (air=1) | >4(vs air) |
| Relative density | 871kg/m³(20°C) |
| Solubility(water) | 5.6g/L(20°C) |
| Partition coefficient | Not applicable |
| n-octanol/water | |
| Auto-ignition | 430°C(1019hpa) |
| Temperature | |
| Decomposition | Not applicable |
| Temperature | |
| | |

62.5mN/m(20°C) 0.8mm²/s(20°C)

10. Stability and reactivity

Chemical stabilityThis is a stable chemical under recommended storage conditions.Possibility of hazardous reactionsVapors may form explosive mixture with air.Condition to avoid(e.g. static discharge, shock or vibration)In compatible materials. Avoid contact with heat,sparks, open flame, and static discharge. Avoid any sources of ignition.Incompatible materialsAvoid contact with strong acids and strong bases, strong oxidizing agents.Hazardous decomposition productsCarbon monoxide(CO),carbon dioxide(CO2).

11. Toxicological information

| Acute Toxicity | |
|---------------------------|--------------------------------------|
| Isobutyl acetate: | LD50(Oral, rat):13413 mg/kg bw |
| (CAS 110-19-0) | LD50(Dermal, rabbit): >17400mg/kg bw |
| Skin corrosion/Irritation | Not classified |
| Serious eye | Not classified |
| Damage/irritation | |
| Respiratory or skin | Not classified |
| sensitization | |
| Germ cell mutagenicity | Not classified |
| Carcinogenicity | Not classified |
| Reproductive toxicity | Not classified |
| STOT-single exposure | Not classified |
| STOT-repeated exposure | Not classified |
| Aspiration hazard | Not classified |
| Chronic Effects | Not classified |
| Further Information | Not classified |

12.Ecological Information

| Ecotoxicity | |
|------------------------|-------------------------------|
| Aquatic Toxicity | Isobutyl acetate(CAS110-19-0) |
| | Test & Species |
| | 96Hr LC50 fish: N/A |
| | 48Hr EC50 Daphnia:N/A |
| | 72 HrEC50 algae:N/A |
| Additional Information | Not available |

WASTE DISPOSAL INSTRUCTIONS

Contact a licensed professional waste disposal service to dispose of this material.

Dispose of in accordance with local environmental regulations or local authority requirements.

14. Disposal considerations

| The Recommendation of Transport of Dangerous Goods(TDG) | | |
|---|---------------------------|--|
| UN Number | UN 1213 | |
| Proper Shipping Name | ISOBUTYL ACETATE | |
| Class/Division | Class 3 Flammable Liquids | |
| Package Group | PG II | |
| Subsidiary risk | None | |
| Marine Pollutant | No | |
| Maretime transport IMDG | Being same with TDG | |
| Air transport ICAO-TI and | Being same with TDG | |
| IATA-DGR | | |

15. Regulatory information

| EUROPEAN/INTERNATIONAL REGULATIONS | | |
|--|--|--|
| OSHA: | Hazardous by definition of Hazard Communication | |
| | Standard(29CFR1910.1200) | |
| EINECS Status: | This chemical is included in EINECE inventory. | |
| EPA TSCA Status: | This chemical is included in TSCA inventory. | |
| CANADIAN | This chemical is included in DSL | |
| DSL(DOMESTIC SUBSTANCE LIST): | | |
| HMIS(HAZARDOUS MATERIAL IDENTIFACATION SYSTEM RATINGS): Health:0 | | |
| Flamm | hability:3 physical hazard:0 personal hazard :H(4.Severe Hazard;3.Serious Hazard; 2. | |
| Moderate hazard; 1. Slight hazard; 0. Minimal hazard) | | |
| WHMIS(CANADIAN WORKPLACE HAZARDOUS MATERIAL IDENTIFICATION SYSTEM RATING): GB | | |
| 12268-2005 LIST OF DANGEROUS GOODS: This chemical is a dangerous goods on the GB12268-2005 list of | | |
| | | |

dangerous goods.

16. OTHER INFORMATION

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Abbreviations and acronymsADR: European Agreement concerning the International Carriage of DangerousGoods by Road

RID: Regulations Concerning the International Transport of Dangerous

Goods by Rail.

| | IMDG: International Maritime Codes for Dangerous Goods. | | |
|--------------------------------------|--|--|--|
| | IATA-DGR: Dangerous Goods Regulations by the "International Air | | |
| Transport Association"(IATA) | | | |
| | ICAO-TT: Technical instructions by the :International Civil Aviation | | |
| Organization"(ICAO) | | | |
| | EINECS: European Inventory of Existing Commercial Chemical Substances | | |
| CAS: Chemical Abstracts Service | | | |
| LC50: Lethal concentration,50percent | | | |
| | LC50: Lethal dose,50 percent | | |
| Edit Date | 01/01/2020 | | |
| UPDATE AND RECEIVE | Original edition | | |
| EDIT STANDARD | Globally Harmonized System of Classification and Labeling for Chemical part1.5 | | |
| REVISED INSTITUTION | NINGBO YONGSHUN FINE CHEMICAL CO.,LTD. | | |