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Section 1: Product & Company Information

Product Identifier: Isobutyl Acetate

Other Means of Identification

Product Number: No data available.

Recommended Use and Restrictions on Use

Recommended Use: Solvent

Restrictions on Use: No data available.

Manufacturer / Importer / Supplier / Distributor Information

Company Name: CORECHEM Inc.

Address: 4320 Greenway Drive

Knoxville, TN 37918

USA

Information Telephone Number: 1-865-524-4239

Fax Number: 1-865-524-3375
Website: www.corecheminc.com

Website: www.corecneminc.cor
Contact Person: Regulatory Manager

E-mail: regulatory@corecheminc.com

Emergency Phone Number: Chemtrec® 1-800-424-9300 / Outside USA 1-703-527-3887 (monitored 24 hours/day)

Section 2: Hazards Identification

GHS Hazard Classification(s)

In accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

Physical Hazard(s)

Flammable, Liquids - 2

Health Hazard(s)

Specific Target Organ Toxicity (STOT)-Respiratory Irritation, Single exposure - 3

Environmental Hazard(s)

Not classified.

Label Elements Signal Word DANGER

Hazard Symbol(s)





Hazard Statement(s)

H225: Highly flammable liquid and vapor. H335: May cause respiratory Irritation.

Precautionary Statements

General

Not applicable.

Prevention

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P233: Keep container tightly closed.

P240: Ground/bond container and receiving equipment.

P241: Use explosion-proof electrical/ventilating/lighting/equipment.

P242: Use only non-sparking tools.

P243: Take precautionary measures against static discharge.

P261: Avoid breathing dust/fume/gas/mist/vapors/spray.

P271: Use only outdoors or in a well-ventilated area.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response

P303 + P361 + P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304 + P340: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

P312: Call a POISON CENTER or doctor/physician if you feel unwell.

P370 + P378: In case of fire: Use suitable extinguishing media for extinction.



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Storage

P403 + P233: Store in a well-ventilated place. Keep container tightly closed.

P403 + P235: Store in a well-ventilated place. Keep cool.

P405: Store locked up.

Disposal

P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC)

Prolonged or repeated skin contact may cause drying, cracking, or irritation.

Section 3: Composition/Information on Ingredients

Substance

Chemical Identity ²	Common Name/Synonym(s)	CAS#3	Weight %	Impurity or Stabilizing Additive
Isobutyl Acetate	-	110-19-0	100%	No

- 1. Information regarding the composition and the percent ranges of the mixtures ingredients are not presented as it Confidential Business Information (CBI). Where a medical emergency exists (as determined by medical professional), timely disclosure of CBI is assured. The information omitted pertains to only the names of the substances and the concentration in the mixture (product) and can only be requested by a doctor/physician or Local/State/Provincial or Federal Authority.
- 2. Non-hazardous ingredients are not presented as to protect the proprietary formula of the product.
- 3. "—"Indicates ingredient is a mixture and contains multiple ingredients or may have no identifying CAS number.

Section 4: First-Aid Measures

General Information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wash contaminated clothing before reuse.

Inhalation

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin Contact

Take off immediately all contaminated clothing. Wash off IMMEDIATELY with plenty of water for at least 15-20 minutes. Get medical attention immediately! Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes.

Eye Contact

Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately. In case of irritation from airborne exposure, move to fresh air. Get medical attention immediately.

Ingestion

Call a physician or poison control center immediately. Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed

Symptoms

Narcotic effect.

Indication of immediate medical attention and special treatment needed

Hazards

Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea.

Treatment

Treat symptomatically. Symptoms may be delayed.

Section 5: Fire-Fighting Measures

General Fire Hazards

Flammable liquid and vapor. USE WATER WITH CAUTION. Material will float and may ignite on surface of water.

Suitable (and Unsuitable) Extinguishing Media

Suitable Extinguishing Media

Extinguishing powder, alcohol resistant foam, carbon dioxide, water fog

Unsuitable Extinguishing Media

No data available.

Specific Hazards Arising from the Chemical

Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations.

Special Protective Equipment and Precautions for Firefighters

Special Fire-Fighting Equipment Procedures

Water may be ineffective in fighting the fire. Use water spray to keep fire-exposed containers cool.

Special Protective Equipment for Fire-Fighters

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



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Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

Use personal protective equipment. See Section 8 of the SDS for Personal Protective Equipment. Keep unauthorized personnel away. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Evacuate area.

Methods and Materials for Containment and Clean-Up

Eliminate all ignition sources if safe to do so. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.

Notification Procedures

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental Precautions

Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

Section 7: Handling and Storage

Precautions for Safe Handling

DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Ground/bond container and receiving equipment. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using the product. Use caution when adding this material to water. See Section 8 of the SDS for Personal Protective Equipment. Avoid contact with eyes. Avoid contact with skin.

Conditions for Safe Storage, including any Incompatibilities

Keep container tightly closed. Store in a cool, dry, well-ventilated place. Store away from incompatible materials (See Section 10). Ensure that all local regulations regarding handling and storage facilities are followed.

Section 8: Exposure Controls/Personal Protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Value	Source
Isobutyl Acetate	TWA	150 ppm	US. ACGIH Threshold Limit Values
	PEL	150 ppm 700 mg/m3	US OSHA Table Z-1

Biological Limit Values

The product does not contain any relevant quantities of hazardous materials with assigned biological limit values.

Appropriate Engineering Controls

No data available.

Individual protection measures, such as personal protective equipment (PPE)

General Information

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.

Eye/Face Protection

Wear safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, if needed.

Skin Protection

Hand Protection

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing.

Respiratory Protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information

Hygiene Measures

When using, do not eat, drink or smoke. 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. Discard contaminated footwear that cannot be cleaned. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Avoid contact with eyes, skin, and clothing.

Section 9: Physical and Chemical Properties

Appearance:

Physical State: Liquid
Color: Colorless
Odor: Fruity



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Odor Threshold:No data available.pH:6.7 (20 °C)

Melting Point/Freezing Point: $-90~^{\circ}{\rm C}$ Initial Boiling Point and Boiling Range: $117~^{\circ}{\rm C}$

Flash Point: 22 °C (Pensky-Martens closed cup)

Evaporation Rate (butyl acetate=1): No data available.
Flammability (solid, gas): No data available.
Upper/Lower Limit on Flammability or Explosive Limits
Flammability Limit – Upper: No data available.
Flammability Limit – Lower: No data available.
Explosive Limit – Upper: No data available.
Explosive Limit – Lower: No data available.
Vapor Pressure: 21 hPa (20 °C)

Vapor Density (air =1): 4.0

Relative Density (water=1):

No data available.

Solubility(ies):

Solubility in water: 5.6 g/l (20 °C)
Solubility (other): No data available.

Partition coefficient (n-octanol/water): log Pow: 2.3

Auto-Ignition Temperature: 430 °C

Decomposition Temperature: No data available.

Viscosity: No data available.

Other Information:

Molecular Weight: No data available. Formula: No data available.

Section 10: Stability and Reactivity

Reactivity

None known. Materials containing similar structural groups are normally stable.

Chemical Stability

Not fully evaluated.

Possibility of Hazardous Reactions

None known.

Conditions to Avoid

Heat, sparks, flames.

Incompatible Materials

Strong oxidizing agents.

Hazardous Decomposition Products

Carbon Dioxide. Carbon Monoxide.

Section 11: Toxicological Information

Information on routes of exposure

Ingestion: None known.

Inhalation: May cause drowsiness or dizziness.

Skin Contact: Prolonged or repeated skin contact may cause drying, cracking, or irritation.

Eye Contact: None known.

Information on Toxicological Effects

Acute Toxicity (List all possible routes of exposure)

Oral

Isobutyl Acetate: LD50 (Rat): 13,413 mg/kg

Dermal

Isobutyl Acetate: LD50 (Rabbit): 17,400 mg/kg

Inhalation

No data available.

Repeated Dose Toxicity

Isobutyl Acetate: NOEL (Rat, 92 d): 316 mg/kg (Oral Study)

Skin Corrosion/Irritation

None

Serious Eye Damage/Eye Irritation

None

Respiratory/Skin Sensitization

Non-sensitizing.



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Carcinogenicity

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

No data available

US. National Toxicology Program (NTP) Report on Carcinogens

No data available.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

No data available.

Germ Cell Mutagenicity

In Vitro

Salmonella typhimurium assay (Ames test), : negative +/- activation

In Vivo

Chromosomal aberration, oral: gavage (Mouse): Read-across from a similar material

Reproductive Toxicity

No data available.

Specific Target Organ Toxicity – Single Exposure

No data available.

Specific Target Organ Toxicity – Repeated Exposure

No data available.

Aspiration Hazard

No data available.

Other Effects

No data available.

Section 12: Ecological Information

Ecotoxicity

Acute Hazards to the Aquatic Environment

Fish

Isobutyl Acetate: LC50 (Oryzias latipes, 96 h): 17 mg/l

Aquatic Invertebrates

Isobutyl Acetate: EC50 (Daphnid, 48 h): 25 mg/l

Toxicity to Aquatic Plants

No data available.

Chronic Hazards to the Aquatic Environment

Fish

No data available.

Aquatic Invertebrates

Isobutyl Acetate: NOEC (Daphnid, 21 d): 23 mg/l

Toxicity to Aquatic Plants

Isobutyl Acetate: EC50 (Alga, 72 h): 370 mg/l Isobutyl Acetate: NOEC (Alga, 72 h); 95 mg/l

Persistence and Degradability

Biodegradation

Expected to be readily biodegradable.

BOD/COD Ratio

0.52%

Bioaccumulative Potential

Bioconcentration Factor (BCF)

No data available on bioaccumulation.

Partition Coefficient n-octanol / water (log Kow)

No data available.

Mobility in Soil

1.193 - 1.844 (QSAR model)

Other Adverse Effects

No data available.

Section 13: Disposal Considerations

Disposal Instructions



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Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Contaminated Packaging

Handle contaminated packages in the same way as the substance itself. Emptied containers may retain hazardous residue and explosive vapors. Keep away from heat, sparks, and flames. Do not cut, puncture, or weld on or near this container. Follow label warnings until container is thoroughly cleaned or destroyed.

Section 14: Transportation Information

US Department of Transportation (DOT)

UN Number: UN1213 UN Proper Shipping Name: Isobutyl acetate

JN Proper Snipping Name: Isobut Technical Name: -

Hazard Class: 3

Subsidiary Hazard Risk: -

Packing Group: II

DOT Label/Placard Exemptions: Not determined

Special Provisions: IB2, T4, TP1
Packaging Exceptions: 49CFR 173.150

Packaging Non-Bulk: 49CFR 173.202

Packaging Bulk: 49CFR 173.242

Reportable Quantity (RQ): None

Marine Pollutant: No

Poison Inhalation Hazard: No

Special precautions for user: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons

transporting the product know what to do in the event of an accident or spillage.

Emergency Response Guidebook (ERG) #: 129

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

Section 15: Regulatory Information

US Federal Regulations

Toxic Substance Control Act (TSCA), Chemical Substance Inventory, Section 8(b)

This product or ingredient(s) are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance List (40 CFR 302.4)

The following chemical(s) in this material are subject to reporting levels established by CERCLA: Isobutyl Acetate (CAS# 110-19-0)

Clean Air Act (CAA), Section 112(r)

No chemical(s) in this material are subject to the reporting requirements of CAA.

Emergency Planning and Community Right-To-Know Act (EPCRA)

EPCRA 302 Extremely Hazardous Substance

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 302.

EPCRA 304 Emergency Response Notification

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 304.

EPCRA 311/312 Emergency and Hazardous Materials Reporting

Fire Hazard: Yes

Sudden Release of Pressure: No

Reactive: No

Acute (Immediate) Health Hazard: Yes

Chronic (Delayed) Health Hazard: No

EPCRA 313 Toxic Chemical Release Inventory (TRI) Reporting

This material does not contain any chemical(s) with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Important Note: Due to the changing nature of regulatory requirements, the information in this document should NOT be considered all-inclusive or authoritative. Users should make their own investigations to determine the suitability of the information for their particular purposes. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.

Section 16: Other Information

Hazardous Materials Identification System (HMIS®) Classification

Health Hazard: 1

Chronic Health Hazard: /

Flammability: 3



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Physical Hazard: 0

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

National Fire Protection Association (NFPA 704) Rating

Health Hazard: 1 Fire Hazard: 3

Reactivity Hazard: 0

Special: N/A

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

Prepared By: Regulatory Manager Version #: 001 Issue Date: August 18, 2015 Revision Date: -Revisions: -

Key to Abbreviations and Acronyms

ATE - Acute Toxicity Estimate **BCF - Bioconcentration Factor** EC50 - Effective concentration, 50%

IDHL – Immediately Dangerous to Life and Health

Kg – Kilogram I - Liter lb - Pound

LC50 - Lethal Concentration, 50% LD50 - Lethal Dose, 50%

mg - milligram ml - milliliter N/A - Not Applicable N/D – Not Determined

PEL – Permissible Exposure Limit REL – Recommended Exposure Limit

STEL – Short-term Exposure Limit TWA - Time weighted average

ACGIH - American Conference of Industrial Hygienists AIHA – American Industrial Hygiene Association

BEI - Biological Exposure Indices CAS – Chemical Abstracts Service DOT – US Department of Transportation EPA – US Environmental Protection Agency

GHS - Globally Harmonized System of Classification and Labelling of Chemicals

IARC - International Agency for Research on Cancer IATA - International Air Transport Association IBC - Intermediate Bulk Container

IMDG - International Maritime Dangerous Goods

NIOSH – National Institute for Occupational Safety and Health NTP – National Toxicology Program

OSHA – US Occupational Health and Safety Administration SARA – US EPA Superfund Amendments and Reauthorization Act

TSCA – US EPA Toxic Substances Control Act

UN - United Nations

References

HSDB® - Hazardous Substances Data Bank

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