SAFETY DATA SHEET

IBU ACETONE STREAM

ExxonMobil

Section 1. Identification

Product name : IBU ACETONE STREAM

Product description : Ketone

Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Chemical feedstock

Uses advised against : This product is not recommended for any industrial, professional or consumer use other than the identified uses above.

Supplier : ExxonMobil Product Solutions Company (a division of Exxon Mobil Corporation)
SDS – LOC. 106
22777 Springwoods Village Parkway
Spring, TX 77389-1425 USA

24-Hour emergency telephone number : 1-800-424-9300 / +1 703-741-5970 / +1-703-527-3887 (CHEMTREC)

Supplier General Contact : (832) 624-8500

SDS Internet Address : www.sds.exxonmobil.com

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 1
ACUTE TOXICITY (oral) - Category 4
SKIN IRRITATION - Category 2
SERIOUS EYE DAMAGE - Category 1
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H224 - Extremely flammable liquid and vapor.
H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H318 - Causes serious eye damage.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H371 - May cause damage to organs.

Precautionary statements

Section 2. Hazards identification

Prevention : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240 - Ground and bond container and receiving equipment.
P241 - Use explosion-proof electrical, ventilating or lighting equipment.
P242 - Use non-sparking tools.
P243 - Take action to prevent static discharges.
P260 - Do not breathe vapor.
P264 - Wash thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves, protective clothing and eye or face protection.

Response : P301 + P330, P312 - IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor if you feel unwell.
P302 + P352 - IF ON SKIN: Wash with plenty of water.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304 + P312, P340 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell. Remove person to fresh air and keep comfortable for breathing.
P305 + P310, P351, P338 - IF IN EYES: Immediately call a POISON CENTER or doctor. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P311 - IF exposed or concerned: Call a POISON CENTER or doctor.
P332 + P313 - If skin irritation occurs: Get medical advice/attention.
P362 + P364 - Take off contaminated clothing and wash it before reuse.
P370 + P378 - In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish.

Storage : P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 - Keep cool.
P405 - Store locked up.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Contains : acetone; tert-butyl alcohol; isobutyl alcohol and methyl alcohol

Hazards not otherwise classified : None known.

Note : This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	% by weight	Identifiers
acetone	≥30 - ≤40	CAS: 67-64-1
tert-butyl alcohol	≥15 - ≤25	CAS: 75-65-0
isobutyl alcohol	≥5 - ≤10	CAS: 78-83-1
methyl alcohol	≥1 - ≤5	CAS: 67-56-1
methyl ethyl ketone	≥1 - ≤5	CAS: 78-93-3
isopropyl alcohol	≥1 - ≤5	CAS: 67-63-0
sec-butyl alcohol	≥1 - ≤5	CAS: 78-92-2

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Section 3. Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention immediately. Chemical burns must be treated promptly by a physician.

Inhalation : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Continue to rinse for at least 10 minutes. Get medical attention immediately. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Chemical burns must be treated promptly by a physician. Call a poison center or physician.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : May cause damage to organs following a single exposure if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : May cause damage to organs following a single exposure in contact with skin. Causes skin irritation.

Ingestion : Harmful if swallowed. May cause damage to organs following a single exposure if swallowed. Can cause central nervous system (CNS) depression. May be harmful if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Section 4. First aid measures

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains
nausea or vomiting

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

Notes to physician : If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, alcohol-resistant foam or water spray (fog).

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Extremely flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Hazardous combustion products : Incomplete combustion products, Oxides of carbon, Smoke, Fume

Special protective actions for fire-fighters : Use standard firefighting procedures and consider the hazards of other involved materials. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. Assure an extended cooling down period to prevent re-ignition. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

Personal precautions, protective equipment and emergency procedures

Section 6. Accidental release measures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Put on appropriate personal protective equipment. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not breathe vapor or mist.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Eliminate all ignition sources. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Do not confine in area of spill. Allow liquid to evaporate from the surface. Seek the advice of a specialist before using dispersants. Advise occupants and shipping in downwind areas of fire and explosion hazard and warn them to stay clear. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

Static Accumulator : This material is a static accumulator. A liquid is typically considered a nonconductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semiconductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive or semiconductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid.

Loading/Unloading Temperature : Ambient

Transport Temperature : Ambient

Transport Pressure : Ambient

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Storage Temperature : Ambient

Storage Pressure : Ambient

Suitable Containers/Packing : Pipelines, Tank Trucks

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
acetone	**NIOSH REL (United States, 10/2020)** TWA 10 hours: 250 ppm. TWA 10 hours: 590 mg/m³. **CAL OSHA PEL (United States, 5/2018)** STEL 15 minutes: 1780 mg/m³. STEL 15 minutes: 750 ppm. C: 3000 ppm. TWA 8 hours: 1200 mg/m³. TWA 8 hours: 500 ppm. **OSHA PEL (United States, 5/2018)** TWA 8 hours: 1000 ppm. TWA 8 hours: 2400 mg/m³. **OSHA PEL 1989 (United States, 3/1989)** TWA 8 hours: 750 ppm. TWA 8 hours: 1800 mg/m³. STEL 15 minutes: 1000 ppm. STEL 15 minutes: 2400 mg/m³. **ACGIH TLV (United States, 1/2024)** TWA 8 hours: 250 ppm. STEL 15 minutes: 500 ppm.
tert-butyl alcohol	**NIOSH REL (United States, 10/2020)** TWA 10 hours: 100 ppm. TWA 10 hours: 300 mg/m³. STEL 15 minutes: 150 ppm. STEL 15 minutes: 450 mg/m³. **CAL OSHA PEL (United States, 5/2018)** STEL 15 minutes: 450 mg/m³. STEL 15 minutes: 150 ppm.

Section 8. Exposure controls/personal protection

	TWA 8 hours: 300 mg/m³. TWA 8 hours: 100 ppm. **OSHA PEL (United States, 5/2018)** TWA 8 hours: 100 ppm. TWA 8 hours: 300 mg/m³. **OSHA PEL 1989 (United States, 3/1989)** TWA 8 hours: 100 ppm. TWA 8 hours: 300 mg/m³. STEL 15 minutes: 150 ppm. STEL 15 minutes: 450 mg/m³. **ACGIH TLV (United States, 1/2024)** TWA 8 hours: 100 ppm. TWA 8 hours: 303 mg/m³.
isobutyl alcohol	**NIOSH REL (United States, 10/2020)** TWA 10 hours: 50 ppm. TWA 10 hours: 150 mg/m³. **CAL OSHA PEL (United States, 5/2018)** TWA 8 hours: 150 mg/m³. TWA 8 hours: 50 ppm. **OSHA PEL (United States, 5/2018)** TWA 8 hours: 100 ppm. TWA 8 hours: 300 mg/m³. **OSHA PEL 1989 (United States, 3/1989)** TWA 8 hours: 50 ppm. TWA 8 hours: 150 mg/m³. **ACGIH TLV (United States, 1/2024)** TWA 8 hours: 50 ppm. TWA 8 hours: 152 mg/m³.
methyl alcohol	**NIOSH REL (United States, 10/2020)** Absorbed through skin. TWA 10 hours: 200 ppm. TWA 10 hours: 260 mg/m³. STEL 15 minutes: 250 ppm. STEL 15 minutes: 325 mg/m³. **CAL OSHA PEL (United States, 5/2018)** Absorbed through skin. STEL 15 minutes: 325 mg/m³. STEL 15 minutes: 250 ppm. C: 1000 ppm. TWA 8 hours: 260 mg/m³. TWA 8 hours: 200 ppm. **OSHA PEL (United States, 5/2018)** TWA 8 hours: 200 ppm. TWA 8 hours: 260 mg/m³. **OSHA PEL 1989 (United States, 3/1989)** Absorbed through skin. TWA 8 hours: 200 ppm. TWA 8 hours: 260 mg/m³. STEL 15 minutes: 250 ppm. STEL 15 minutes: 325 mg/m³. **ACGIH TLV (United States, 1/2024)** Absorbed through skin. TWA 8 hours: 200 ppm. TWA 8 hours: 262 mg/m³. STEL 15 minutes: 250 ppm. STEL 15 minutes: 328 mg/m³.
methyl ethyl ketone	**NIOSH REL (United States, 10/2020)** TWA 10 hours: 200 ppm. TWA 10 hours: 590 mg/m³. STEL 15 minutes: 300 ppm. STEL 15 minutes: 885 mg/m³. **CAL OSHA PEL (United States, 5/2018)** STEL 15 minutes: 885 mg/m³. STEL 15 minutes: 300 ppm. TWA 8 hours: 590 mg/m³.

Section 8. Exposure controls/personal protection

	TWA 8 hours: 200 ppm. **OSHA PEL (United States, 5/2018)** TWA 8 hours: 200 ppm. TWA 8 hours: 590 mg/m³. **OSHA PEL 1989 (United States, 3/1989)** TWA 8 hours: 200 ppm. TWA 8 hours: 590 mg/m³. STEL 15 minutes: 300 ppm. STEL 15 minutes: 885 mg/m³. **ACGIH TLV (United States, 1/2024)** Absorbed through skin. TWA 8 hours: 75 ppm. STEL 15 minutes: 150 ppm.
isopropyl alcohol	**NIOSH REL (United States, 10/2020)** TWA 10 hours: 400 ppm. TWA 10 hours: 980 mg/m³. STEL 15 minutes: 500 ppm. STEL 15 minutes: 1225 mg/m³. **CAL OSHA PEL (United States, 5/2018)** STEL 15 minutes: 1225 mg/m³. STEL 15 minutes: 500 ppm. TWA 8 hours: 980 mg/m³. TWA 8 hours: 400 ppm. **OSHA PEL (United States, 5/2018)** TWA 8 hours: 400 ppm. TWA 8 hours: 980 mg/m³. **OSHA PEL 1989 (United States, 3/1989)** TWA 8 hours: 400 ppm. TWA 8 hours: 980 mg/m³. STEL 15 minutes: 500 ppm. STEL 15 minutes: 1225 mg/m³. **ACGIH TLV (United States, 1/2024)** TWA 8 hours: 200 ppm. STEL 15 minutes: 400 ppm.
isobutane	**NIOSH REL (United States, 10/2020)** TWA 10 hours: 800 ppm. TWA 10 hours: 1900 mg/m³. **ACGIH TLV (United States, 1/2024) [Butane]** Explosive potential. STEL 15 minutes: 1000 ppm.
sec-butyl alcohol	**NIOSH REL (United States, 10/2020)** TWA 10 hours: 100 ppm. TWA 10 hours: 305 mg/m³. STEL 15 minutes: 150 ppm. STEL 15 minutes: 455 mg/m³. **CAL OSHA PEL (United States, 5/2018)** TWA 8 hours: 305 mg/m³. TWA 8 hours: 100 ppm. **OSHA PEL (United States, 5/2018)** TWA 8 hours: 150 ppm. TWA 8 hours: 450 mg/m³. **OSHA PEL 1989 (United States, 3/1989)** TWA 8 hours: 100 ppm. TWA 8 hours: 305 mg/m³. **ACGIH TLV (United States, 1/2024)** TWA 8 hours: 100 ppm. TWA 8 hours: 303 mg/m³.

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

Biological exposure indices

Section 8. Exposure controls/personal protection

Ingredient name	Exposure indices
acetone	**ACGIH BEI (United States, 1/2024)** BEI: 25 mg/l, acetone [in urine]. Sampling time: end of shift.
methyl alcohol	**ACGIH BEI (United States, 1/2024)** BEI: 15 mg/l, methanol [in urine]. Sampling time: end of shift.
methyl ethyl ketone	**ACGIH BEI (United States, 1/2024)** BEI: 2 mg/l, methyl ethyl ketone [in urine]. Sampling time: end of shift.
isopropyl alcohol	**ACGIH BEI (United States, 1/2024)** BEI: 40 mg/l, acetone [in urine]. Sampling time: end of shift at end of workweek.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : Liquid. [Clear]

Color : Colorless

Odor : Alcohol

Odor threshold : Not available.

pH : Not applicable.

Melting point/freezing point : <-95°C (<-139°F)

Boiling point or initial boiling point and boiling range : -11.67 to 107.78°C (11 to 226°F)

Flash point : Open cup: -20°C (-4°F) [ASTM D-1310]

Evaporation rate : 5 to 10 (butyl acetate = 1)

Flammability : Flammable liquids - Category 1

Lower and upper explosion limit/flammability limit : Lower: 1.5%
Upper: 37%

Vapor pressure : 103 mm Hg [20 °C]

Relative vapor density : Not available.

Relative density : 0.81

Density : 0.7993 g/cm³ [20°C (68°F)]

Solubility in water : Complete

Partition coefficient: n-octanol/water : Not applicable.

Auto-ignition temperature : ≥398.89°C (≥750°F)

Decomposition temperature : Not available.

Viscosity : Not available.

Particle characteristics

Median particle size : Not applicable.

Hygroscopic : Yes

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Incompatible materials : Reactive or incompatible with the following materials:,oxidizing materials,Caustics, amines, Halogenated ammonia, Alkanolamines, Strong oxidizers, Organic acids, Inorganic acids, Aldehydes, Polymerizable esters, Acid Anhydrides

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Test	Species	Result	Duration
tert-butyl alcohol	LD50 Oral	Rat	3046 mg/kg	-
sec-butyl alcohol	LD50 Oral	Rat	2193 mg/kg	-

Conclusion/Summary

Inhalation : Minimally Toxic. No end point data for material. Based on assessment of the components.

Dermal : Minimally Toxic. No end point data for material. Based on assessment of the components.

Oral : Slightly toxic. No end point data for material. Based on assessment of the components.

Irritation/Corrosion

Conclusion/Summary

Skin : Irritating to the skin. No end point data for material. Based on assessment of the components.

Eyes : Severely irritating, and may seriously damage eye tissue. No end point data for material. Based on assessment of the components.

Respiratory : May be irritating to the respiratory tract. The effects are reversible. No end point data for material. Elevated temperatures or mechanical action may form vapors, mist, or fumes which may be irritating to the eyes, nose, throat, or lungs.

Respiratory or skin sensitization

Conclusion/Summary

Skin : Not expected to be a skin sensitizer. No end point data for material. Based on assessment of the components.

Respiratory : Not expected to be a respiratory sensitizer. No end point data for material.

Mutagenicity

Conclusion/Summary : Not expected to be a germ cell mutagen. No end point data for material. Based on assessment of the components.

Carcinogenicity

Conclusion/Summary : Not expected to cause cancer. No end point data for material. Based on assessment of the components.

Classification

Product/ingredient name	OSHA	IARC	NTP
isopropyl alcohol	-	3	-

Reproductive toxicity

Conclusion/Summary : Not expected to be a reproductive toxicant. No end point data for material. Based on assessment of the components.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Target organs
IBU ACETONE STREAM	Category 2	-

Conclusion/Summary : May cause organ damage from a single exposure. May cause drowsiness or dizziness. May cause respiratory irritation. No end point data for material. Based on assessment of the components.

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Target organs
IBU ACETONE STREAM	Not applicable.	-

Conclusion/Summary : Not expected to cause organ damage from prolonged or repeated exposure. No end point data for material. Based on assessment of the components.

Aspiration hazard

Section 11. Toxicological information

Conclusion/Summary : May be harmful if swallowed and enters airways. Based on physico-chemical properties of the material. Data available.

Other information

Contains : METHYL ETHYL KETONE (MEK): Simultaneous exposure to Methyl Ethyl Ketone (MEK) or Methyl Isobutyl Ketone (MIBK) and n-Hexane can potentiate the risk of adverse effects from n-Hexane on the peripheral nervous system. METHANOL: Human exposure to methanol may result in illness, systemic poisoning, blindness, optic nerve damage and perhaps death, after being ingested, absorbed through the skin or inhaled. Death due to cardiac or respiratory failure has been reported in some cases from consumption of as little as 30 mls. Exposure to high concentrations of methanol has been shown to cause developmental effects in rodent offspring.

Product : Vapor concentrations above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anesthetic and may have other central nervous system effects. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

Section 12. Ecological information

The information given is based on data for the material, components of the material, or for similar materials, through the application of bridging principals.

Toxicity

Conclusion/Summary

Acute toxicity : Not expected to be harmful to aquatic organisms.

Chronic toxicity : Not expected to demonstrate chronic toxicity to aquatic organisms.

Persistence and degradability

Biodegradability : Material -- Expected to be readily biodegradable.

Atmospheric Oxidation : Material -- Transformation due to atmospheric oxidation not expected to be significant.

Bioaccumulative potential

Not determined.

Mobility in soil

Mobility : Material -- Expected to remain in water or migrate through soil.

Other ecological information

VOC (EPA Method 24) : 6.759 lbs/gal

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

Section 13. Disposal considerations

RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Acetone (I)	67-64-1	Listed	U002
Isobutyl alcohol (I,T)	78-83-1	Listed	U140
Methanol (I)	67-56-1	Listed	U154
Methyl ethyl ketone (MEK) (I,T)	78-93-3	Listed	U159

Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
UN number	UN1993	UN1993	UN1993	UN1993
UN proper shipping name	Flammable liquids, n.o.s. (acetone, tert-butyl alcohol)	FLAMMABLE LIQUID, N.O.S. (acetone, tert-butyl alcohol)	FLAMMABLE LIQUID, N.O.S. (acetone, tert-butyl alcohol)	Flammable liquid, n.o.s. (acetone, tert-butyl alcohol)
Transport hazard class(es)	3	3	3	3
Label(s) / Marks				
Packing group	I	I	I	I
Environmental hazards	No.	No.	No.	No.

Additional information

DOT Classification : **Reportable quantity** 12500 lbs / 5675 kg [1875.6 gal / 7100 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
Limited quantity Yes.
Packaging instruction Exceptions: 150. Non-bulk: 201. Bulk: 243.
Quantity limitation Passenger aircraft/rail: 1 L. Cargo aircraft: 30 L.
Special provisions T11, TP1, TP27

TDG Classification : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).
Explosive Limit and Limited Quantity Index 0
Passenger Carrying Vessel Index Forbidden
Passenger Carrying Road or Rail Index 1
Special provisions 16, 150

IMDG : **Emergency schedules** F-E, _S-E_
Special provisions 274

IATA : **Quantity limitation** Passenger and Cargo Aircraft: 1 L. Packaging instructions: 351. Cargo Aircraft Only: 30 L. Packaging instructions: 361. Limited Quantities - Passenger Aircraft: Forbidden. Packaging instructions: Forbidden.
Special provisions A3

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.

Transport in bulk according to IMO instruments : Not applicable.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) PAIR**: tert-butyl alcohol; sec-butyl alcohol

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Air Act (CAA) 112 regulated flammable substances: isobutane

TSCA 12(b) - Chemical export notification

Not applicable.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : FLAMMABLE LIQUIDS - Category 1
ACUTE TOXICITY (oral) - Category 4
SKIN IRRITATION - Category 2
SERIOUS EYE DAMAGE - Category 1
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	tert-butyl alcohol methyl alcohol sec-butyl alcohol	75-65-0 67-56-1 78-92-2	≥15 - ≤25 ≥1 - ≤5 ≥1 - ≤5
Supplier notification	tert-butyl alcohol methyl alcohol sec-butyl alcohol	75-65-0 67-56-1 78-92-2	≥15 - ≤25 ≥1 - ≤5 ≥1 - ≤5

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: ACETONE; TERT-BUTYL ALCOHOL; ISOBUTYL ALCOHOL; METHANOL; METHYL ETHYL KETONE; ISOPROPYL ALCOHOL; ISOBUTANE; SEC-BUTYL ALCOHOL

New York : The following components are listed: Acetone; Isobutanol; Methanol; Methyl ethyl ketone

New Jersey : The following components are listed: ACETONE; tert-BUTYL ALCOHOL; ISOBUTYL ALCOHOL; METHYL ALCOHOL; METHYL ETHYL KETONE; ISOPROPYL ALCOHOL; Isobutane; sec-BUTYL ALCOHOL; ETHYL ALCOHOL

Pennsylvania : The following components are listed: 2-PROPANONE; 2-PROPANOL, 2-METHYL-; 1-PROPANOL, 2-METHYL-; METHANOL; 2-BUTANONE; 2-PROPANOL; PROPANE, 2-METHYL-; 2-BUTANOL

Illinois : None of the components are listed.

Section 15. Regulatory information

California Prop. 65

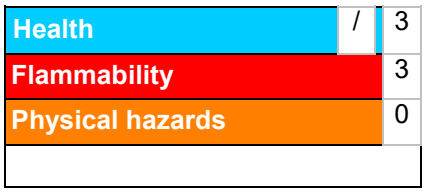
WARNING: Reproductive Harm - www.P65Warnings.ca.gov.

Inventory list

Australia inventory (AIIC)	:	All components are listed or exempted.
Canada inventory (DSL-NDSL)	:	All components are listed or exempted.
China inventory (IECSC)	:	All components are listed or exempted.
Japan inventory (CSCL)	:	All components are listed or exempted.
Japan inventory (Industrial Safety and Health Act)	:	All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC)	:	All components are listed or exempted.
Philippines inventory (PICCS)	:	All components are listed or exempted.
Korea inventory (KECI)	:	All components are listed or exempted.
Taiwan Chemical Substances Inventory (TCSI)	:	All components are listed or exempted.
United States inventory (TSCA 8b)	:	All components are active or exempted.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)

Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 1	Expert judgment
ACUTE TOXICITY (oral) - Category 4	Expert judgment
SKIN IRRITATION - Category 2	Expert judgment
SERIOUS EYE DAMAGE - Category 1	Expert judgment
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 2	Expert judgment
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Expert judgment
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Expert judgment

History

Section 16. Other information

Date of issue/Date of revision : 10 September 2024

Date of previous issue : 27 February 2024

Version : 1.01

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
UN = United Nations

References : Not available.

Indicates information that has changed from previously issued version.

Product code : 1163315

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