

Safety Data Sheet
According to Regulation (EC) No 1907/2006, Annex II,
Amended by COMMISSION REGULATION (EU) 2020/878,
According to REGULATION (EC) No 1272/2008

Isobutylene

Version 1.0

Issue date: 12-12-2022

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CIRS SDS Record Number: CSSS-TCO-010-153552

Section 1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:

Identification on the label/Trade name: Isobutylene
Additional identification: Nanoform is NOT covered by this SDS.
Identification of the product: CAS#115-11-7 EC#204-066-3
Index Number: 601-012-00-4
REACH registration No.: 01-2119456616-32-0032

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

1.2.1 Identified uses:

Synthetic rubber, organic chemical raw materials.

1.2.2 Uses advised against:

No uses advised against are identified.

1.3 Details of the supplier of the safety data sheet:

Supplier(Only representative): -
Supplier(Manufacturer): Zhejiang Cenway Materials Co.,Ltd.
Address: Cofferdam Interior, Phase Three, Zhapu Economic Development Zone, Jiaxing Port Area, Jiaxing City, 314201, Zhejiang Province, P.R.China
Contact person(E-mail): YW@cenwaymaterials.com
Telephone: +86-573-85568666-1009
Fax: -

1.4 Emergency telephone Number:

+86-573-85568666-1009 Only available during office hours (9:00a.m.-17:30p.m.)

Available outside office hours? YES NO

Section 2 Hazards identification

2.1 Classification of the substance or mixture:

2.1.1 Classification of the substance:

The substance is classified as following according to REGULATION (EC) No 1272/2008:

REGULATION (EC) No 1272/2008	
Hazard classes/Hazard categories	Hazard statement
Flam. Gas 1	H220
Press. Gas (Liq.)	H280

For full text of H- phrases: see section 2.2.

2.2 Label elements:

Hazard pictogram(s):



Signal word:	Danger
Hazard statement(s):	H220: Extremely flammable gas. H280: Contains gas under pressure; may explode if heated.
Precautionary statement(s):	P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P377: Leaking gas fire: DO not extinguish, unless leak can be stopped safely. P381: In case of leakage, eliminate all ignition sources. P403: Store in a well-ventilated place. P410 + P403: Protect from sunlight. Store in a well-ventilated place.
Supplemental Hazard information (EU)	Not applicable.

2.3 Other hazards:

The substance is not PBT / vPvB.

The substance is not identified as having endocrine disrupting properties.

Section 3 Composition/information on ingredients

Substance/Mixture: Substance

Ingredient(s):

Chemical Name	Registration No.	CAS No.	EC No.	Concentration	Specific Concentration limits, M-Factors, Acute Toxicity Estimates (ATE)
Isobutylene	01-2119456616-32-0032	115-11-7	204-066-3	≥99.9%	N/A

Section 4 First aid measures

4.1 Description of first aid measures:

In all cases of doubt, or when symptoms persist, seek medical attention.

4.1.1 In case of inhalation:

Move victims into fresh air. Place person on side in stable position if unconscious. In case of difficulties in breathing, supply oxygen. Employ artificial respiration if breathing ceases. Call a physician immediately.

4.1.2 In case of skin contact:

In the event of frostbite, rinse copiously with water. Do not remove clothing that adheres due to freezing. Cover with sterile dressing and seek medical advice.

4.1.3 In case of eyes contact:

Immediately rinse the affected eye carefully with water of regular temperature. Following eye contact with liquefied gas: Do not force eyelids open. Consult an eye doctor (ophthalmologist).

4.1.4 In case of ingestion:

Ingestion by swallowing is not considered a possible mode of exposure.

4.2 Most important symptoms and effects, both acute and delayed:

Frostbite injuries Drowsiness. Oxygen-displacing gas. Liquefied gas may cause severe frostbite damage and eye damage.

4.3 Indication of any immediate medical attention and special treatment needed:

If skin irritation or rash occurs, get medical advice/attention.

Section 5 Firefighting measures

5.1 Extinguishing media:

Suitable extinguishing media: Water spray, foam, CO₂, dry powder.

Unsuitable extinguishing media: High volume water jet.

5.2 Special hazards arising from the

In case of fire cool endangered containers with water. Closed container may

substance or mixture

rupture if strongly heated. Heavier than air vapor. Formation of flammable or explosive vapor/air mixtures possible. Keep all ignition sources out of area
Flash back possible over considerable distance.

5.3 Advice for firefighters:

Self-contained breathing apparatus with full-face mask and full protective clothing (standard wear).

Section 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

6.1.1 For non-emergency personnel:

Wear personal protective equipment; Avoid contact with skin and eyes. Do not inhale vapors / aerosols. Keep away from sources of ignition - No smoking.
Heavier than air vapor. Ensure adequate ventilation. Ensure that spaces including floor areas are well ventilated.

6.1.2 For emergency responders:

Wear an appropriate NIOSH/MSHA approved respirator if vapour is generated.

6.2 Environmental precautions:

Do not allow entrance in sewage water, drainage systems, stretches of water, soil. Avoid penetration into drainage system or in rooms situated at a lower level because of danger of explosion. Issue an immediate alarm report to the company environmental protection department if the product unintentionally leaves the production area.

6.3 Methods and material for containment and cleaning up:

Under the provision of special precautionary measures Confine and allow to evaporate.

6.4 Reference to other sections:

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

Section 7 Handling and storage

7.1 Precautions for safe handling:

7.1.1 Protective measures:

Wear personal protective equipment; If necessary, full body protection suit (coverall). Avoid contact with skin and eyes. Do not inhale vapors / aerosols. Provide good ventilation or extraction. Ensure that spaces including floor areas are well ventilated. Vapors are heavier than air and may spread along floors. Keep away from sources of ignition – No smoking. Do not empty into drains. If positive displacement pumps are used, these must be fitted with non-integral pressure relief valve. Observe special instructions applicable to compressed gases.

7.1.2 Advice on general occupational hygiene:

Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Explosion protection equipment required. Keep containers tightly closed in a cool, well-ventilated place. Keep away from direct sunlight. Do not store together with: highly inflammable substances Suitable materials are: Steel Polyvinyl chloride (PVC). Observe prohibition against storing together!

7.3 Specific end use(s):

Not applicable.

Section 8 Exposure controls/personal protection

8.1 Control parameters:

8.1.1 Occupational exposure limits:

Country	Substance	EINECS No.	CAS No.	Occupational Exposure Limit Value (8-hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		
				ppm	mg/m ³	ppm	mg/m ³	Note

Ireland	Isobutylene	204-066-3	115-11-7	250	-	-	-	-
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8.1.2 Additional exposure limits under the conditions of use: Not available.

8.1.3 DNEL/DMEL and PNEC-Values:

Workers - Hazard via inhalation route	Local effects-Long term exposure	DNEL=768.7 mg/m ³
General Population - Hazard via inhalation route	Local effects-Long term exposure	DNEL=229.4 mg/m ³

8.2 Exposure controls:

8.2.1 Appropriate engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.2.2 Individual protection measures, such as personal protective equipment:

Eye/face protection: Close-fitting protective goggles (e.g. closed goggles) or face protection.

Skin protection

Hand protection: Material: nitrile-butadiene rubber (NBR) gloves.

Material: leather gloves, heat insulating.

Body protection: Select materials and equipment for physical protection depending on the concentration and volume of hazardous substances and the workplace involved.

Respiratory protection: In case of dusts/vapors/aerosols being formed or if the limit values like TLV are exceeded: wear a self contained respiratory apparatus.

Thermal hazards: Wear suitable protective clothing to prevent heat.

8.2.3 Environmental exposure controls: Avoid discharge into the environment. According to local regulations, Federal and official regulations.

Section 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance:	liquefied gas
Colour:	Colorless
Odour:	Odorless
Odour threshold:	Not available
pH:	Not available
Melting point/range (°C):	-140.7 °C
Boiling point/range (°C):	-6.9 °C
Flash point (°C):	Not available
Evaporation rate:	Not available
Flammability limit - lower (%):	Not available
Flammability (solid, gas):	Extremely flammable gas.
Ignition temperature (°C):	Not available
Upper/lower explosive limits:	Not available
Vapour pressure (25°C):	1160 kPa
Vapour density:	Not available
Density:	0.589 g/cm ³ (25 °C)
Bulk density (kg/m³):	Not available
Water solubility (g/l):	263 mg/L (25 °C)
n-Octanol/Water (log Po/w):	2.34
Auto-ignition temperature:	465 °C
Decomposition temperature:	Not available
Viscosity, dynamic (mPa.s):	Not available

Explosive properties:	Not available
Oxidising properties:	Not available
Molecular Formula:	C4H8
Molecular Weight:	56.11
9.2. Other information:	
Fat solubility(solvent-oil to be specified)	Not available
etc:	
Surface tension:	Not available
Dissociation constant in water(pKa):	Not available
Oxidation-reduction Potential:	Not available

Section 10 Stability and Reactivity

10.1 Reactivity:	The substance is stable under normal storage and handling conditions.
10.2 Chemical stability:	Stable at room temperature in closed containers under normal storage and handling conditions.
10.3 Possibility of hazardous reactions:	Vapors may form explosive mixture with air. Formation of peroxides may occur (in the presence of atmospheric oxygen).
10.4 Conditions to avoid:	Incompatible materials. Keep away from heat and sources of ignition.
10.5 Incompatible materials:	Strong oxidizing agents. Chlorine. Hydrogen chloride. Fluorine. Oxygen.
10.6 Hazardous decomposition products:	Carbon Monoxide. Carbon Dioxide.

Section 11 Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:

Acute toxicity:	
LD50(Oral, Rat):	Not available
LD50(Dermal, Rabbit):	Not available
LC50(Inhalation, Rat):	> 23 mg/L,4h
Skin corrosion/irritation:	Not classified
Serious eye damage/irritation:	Not classified
Respiratory or skin sensitization:	Not classified
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

11.2 Information on other hazards

Endocrine disrupting properties	The substance is not identified as having endocrine disrupting properties.
Other information	Not applicable

Section 12 Ecological information

12.1 Toxicity:

Acute (short-term) toxicity:	
LC50(96h, Fish):	29.908 mg/L
LC50(48h, Crustacea):	16.76 mg/L
EC50(72h, Algae/aquatic plants):	Not available

Chronic (long-term) toxicity:	
NOEC(Fish):	2.048 mg/L
NOEC(Crustacea):	1.225 mg/L
EC50(Algae/aquatic plants):	Not available
12.2 Persistence and degradability:	Not available.
12.3 Bioaccumulative potential:	Not available.
12.4 Mobility in soil:	log Koc: 2.07
12.5 Results of PBT and vPvB assessment:	The substance is not PBT / vPvB.
12.6 Endocrine disrupting properties:	The substance is not identified as having endocrine disrupting properties.
12.7 Other adverse effects:	Not available.
12.8 Additional information	Not available.

Section 13 Disposal considerations

13.1 Waste treatment methods:	Dispose of in accordance with all applicable local and national regulations. Use recovery/recycling where feasible, otherwise incineration is the recommended method of disposal. Empty containers may contain hazardous residues. Do not cut, puncture or weld on or near to the container. Labels should not be removed from containers until they have been cleaned. Contaminated containers must not be treated as household waste. Containers should be cleaned by appropriate methods and then re-used or disposed of by landfill or incineration as appropriate. Do not incinerate closed containers.
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Section 14 Transport Information

	Land transport (ADR/RID)	Inland waterways (ADN)	Sea transport (IMDG)	Air transport (ICAO/IATA)
14.1 UN number or ID number	UN1055	UN1055	UN1055	UN1055
14.2 UN proper shipping name	ISOBUTYLENE	ISOBUTYLENE	ISOBUTYLENE	ISOBUTYLENE
14.3 Transport hazard class(es)	2.1	2.1	2.1	2.1
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No	No	No	No
14.6 Special precautions for user	See section 2.2	See section 2.2	See section 2.2	See section 2.2
14.7 Maritime transport in bulk according to IMO instruments	-	-	-	-

Section 15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

Relevant information regarding authorization: Not applicable.

Relevant information regarding restriction: Not applicable.

Other EU regulations: Employment restrictions concerning young person must be observed. For use only by technically qualified individuals.

Other National regulations: Not applicable

15.2 Chemical Safety Assessment

YES NO

Section 16 Other information

16.1 Indication of changes:

Version 1.0 Amended by (EU) 2020/878

16.2 Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation for rail International transportation of Dangerous goods

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG: Code international maritime dangerous goods code

ICAO: International Civil Aviation Organization

IATA: International Air Transport Association

LC50: median lethal concentration

EC50: The effective concentration of substance that causes 50% of the maximum response.

NOEC: No Observed Effect Concentration

DNEL: derived no-effect level

PNEC: predicted no-effect concentration

16.3 Key literature references and sources for data

ECHA Registered substances data

16.4 Classification and procedure used to derive the classification for mixtures according to Regulation (EC)

1272/2008 [CLP]

Classification according to Regulation (EC) No. 1272/2008		Classification procedure
Flam. Gas 1	H220	On basis of test data
Press. Gas (Liq.)	H280	On basis of test data

16.5 Relevant H-statements (number and full text):

H220: Extremely flammable gas.

H280: Contains gas under pressure; may explode if heated.

16.6 Training instructions:

Not applicable.

16.7 Further information:

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

16.8 Notice to reader:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment 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 Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

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