



Safety Data Sheet (SDS)

Revision / Review Date: 5/30/15

1. Chemical Product and Company Identification

Product Name:	SKI-3
Distributed By:	HB Chemical 1665 Enterprise Parkway Twinsburg Oh 44087 Phone - 330-920-8023
SDS Prepared By (w Suppliers Input):	HB Chemical
Chemical Name / Family:	cis - 1,4 Polyisoprene / Hydrocarbon Polymer
Technical Name:	Polyisoprene
Molecular Formula:	[C ₅ H ₈] _n
Molecular Weight via GPC, Mn:	Not available
Product Use:	Synthetic Polymers
OSHA Status:	Non Hazardous
CAS No:	9003-31-0, 78-79-5
EC No:	201-143-3
REACH registration number Isoprene (monomer):	0142119457891 – 29 4 0013

For emergency health, safety, and environmental information, calls 330-920-8023

For emergency transportation information, in the United States: call CHEMTREC at 800-424-9300

2. Hazard(s) Identification

<u>Hazard description:</u>	The substance is nonhazardous, nontoxic. No adverse health effects at room temperature.
<u>Classification:</u>	This product is not hazardous as defined in Regulations 67/548/Ec, 1999/45/EC and resolutions (EC) n° 1272/2008 (CLP).
<u>Information on special hazards for humans and environment:</u>	No physical and chemical impact: None.
<u>Safety phrases:</u>	S61 – avoid entry into the environment.
<u>Information source:</u>	ESIS – European Chemical Substances Information System (European Chemicals Bureau). Hazardous Substance Data Bank (HSDB) – U.S. National Library of Medicine, 200141.
<u>ANNEX I OF DIRECTIVE 67/548/EEC:</u>	
<u>Physical/Chemical Hazards:</u>	None.
<u>Health Hazards:</u>	None.

<u>Environmental hazards:</u>	None.
<u>EU CLP 2008:</u>	Physical / Chemical Hazards: None.
<u>Health Hazards:</u>	None.
<u>Environmental hazards:</u>	None.
<u>SPECIFIC HAZARD:</u>	No significant health hazard in normal industrial use conditions. Contact with melted/heated product may cause thermal burns. Processing vapors, which can irritate eyes and respiratory tract, may form when product is heated to high temperatures. Combustible solid. Products of thermal decomposition – toxic.
<u>Negative environment impact:</u>	Poses no hazard for environment provided handling, transportation and storage rules are complied with.
<u>Other hazards:</u>	Transforms in the environments at long weather impact (atmospheric precipitation, solar radiation, cold, high temperatures).
<u>Warning:</u>	None.
<u>Emergency Overview:</u>	If the material is exposed to open heat (excessive) or flame it will burn. There is no applicable odor.
<u>Signs and Symptoms of Exposure:</u>	Not available.
<u>Primary Routes of Entry:</u>	Skin (Dermal), No other exposure risks except with inhalation of burning material. No long term exposure risks.
<u>Health Hazard- Acute and Chronic:</u>	Not available.
<u>Medical Conditions Generally Aggravated by Exposure:</u>	None Known.
<u>Eye Contact:</u>	For open systems where the contact is most probable the particulates may scratch eye surfaces / cause mechanical irritation.
<u>Skin Contact:</u>	Exposure to hot materials may cause thermal burns.
<u>Ingestion:</u>	Entry inside is unlikely. No hazard when swallowed.
<u>Inhalation:</u>	Rubber does not contain highly volatile fractions and there's no pollutant emissions during storage.
<u>HMIS Hazard Ratings:</u>	Health- 0, Flammability - 1, Reactivity - 0
<u>HMIS limitation statement:</u>	The HMIS hazard ratings numbers are meant to give a quick indication of the relative hazards associated with the product. All of the information contained in the SDS should be consulted to assist with the safe handling of this material.
<u>Principal Hazardous Components:</u>	Not available.

3. Composition / Information on Ingredients

Chemical name / Synonyms	n° EC	n° REACH	n° Index	n° CAS	Content (%)	Classification according to Directive (EC) n° 1272/2008 (CLP)		Classification according to 67/548/EEC
						Hazard class / Hazard Category	Hazard Designations	
Polymer 2- methylbutadi-1,3-ene	None	Not subject to registration	None	9003- 31-0	99,6	Not classified		
Stabilizer								
N-1,3-dimethylbutyl- N'-phenyl-p- phenylenediamine	212- 344-0	Not subject to registration	None	793- 24-8	0,35	Not classified		
Other admixtures								
Calcium Sterate	216- 472-8	Not subject to registration	None	1592- 23-0	<0,06	Not classified		

4. First Aid Measures

General:

Low hazard material. Intoxication through entry into human body has not been defined and is unlikely.

Inhalation:

No hazard at ambient temperature. Only an issue with handling hot polymer, remove to fresh air. If there is respiratory distress give oxygen. If respiration stops or shows signs of failing, apply artificial respiration. Get medical attention.

Eyes:

Rinse immediately eye with plenty of low pressure water for at least 15 minutes. Remove contact lenses. Get medical attention.

Skin:

No hazard temperature at room temperature. Wash with water and soap. In case of contact with hot product, immediately wash with plenty of water. Apply a dressing of clean cheesecloth or cotton cloth. Remove contaminated clothing and wash skin with plenty of running water, under a shower if affected area is large enough to warrant this. Get medical attention.

Ingestion:

No hazard. When small amount of rubber crumb is swallowed, first air is not normally required. Wash out mouth with water and give plenty of water to drink, provided person is conscious. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have the exposed person lean forward. Get medical aid.

5. Fire-Fighting Measures

Suitable Extinguishing Media:

Dry chemical foam, fine sprayed water or mist, carbon dioxide, sand or earth could be used only in case of small fire. Fire extinguishers of any type, water, water vapor, fire extinguishing foams, inert gases, sand, asbestos cloth.

Prohibited fire- extinguishing means:

Prohibited fire extinguishing means are not established.

Special Fire Fighting Procedures:

Use self-contained breathing apparatus. Use a fire-resistant suit and a self-contained breathing apparatus. Remove personnel not participating in firefighting from the site of the fire.

Hazardous Combustion Products:

Oxides of Carbon.

Unusual fire and explosion hazards:

None.

Special hazards of the product exposure, hazardous products of combustion and thermal decomposition:

Carbon oxides and carbon dioxides. Heated product decomposes and emits carbon oxide (CAS No. 1244 3849), isoprene emission is possible as well (CAS No. 7847945). Carbon oxides reduce oxygen (O₂) content in the air; they may have a toxic effect on the cells causing the cell respiration disturbance. Isoprene – is toxic in high concentrations, causes mucous membrane irritation in low concentrations, causes functional deviance in the central nervous system (F+, TR: 45412463452/53).

6. Accidental Release Measures

Steps to be taken in case material is spilled:

Use a fire resistant suit and a self-contained breathing apparatus. Collect the product and put in the appropriate containers for disposal or reuse.

Environmental Disposal Information:

Contamination of water bodies and soil should be avoided.

Waste Disposal:

Landfill. Reclaim or dispose of in accordance with local, state, and federal regulations.

Supplementary recommendation:

None.

7. Handling and Storage:

Empty Containers:

Not available.

Precautions to be taken in handling:

No special precautions required. Normal handling procedure. Wash thoroughly after handling. Avoid contact with eyes and skin. Do not ingest or inhale. Minimize dust generation and accumulation. Remove all sources of ignition. All equipment must be grounded.

<u>Safety precautions :</u>	Arrangement of supply and exhaust ventilation system and local ventilation. Use of pressure tight equipment for production. Equipment grounding is mandatory. Use of personal protection equipment. Prevention of mist and dust formation: no mist or dust formation during handling.
<u>Storage:</u>	Keep container closed. Suitable for general storage areas. Isolate from incompatible materials. The product is to be stored at the ambient temperature in the indoor area away from open fire sources, direct sunlight and atmospheric precipitation, away from heat sources. Store rubber packaged in woven polypropylene bags in stacks max. 1.2 m Store rubber packaged in box pallets in stacks with max. 4 box pallets in height.
<u>Measures to be taken for environmental protection:</u>	Reduction of rubber loss during transportation and storage, prevention from discharge of water bodies, sewage system.
<u>special requirements and handling rules:</u>	None.
<u>Prevention from ignition and explosion:</u>	Elimination of fire sources.
<u>Packaging material :</u>	Polyethylene film EVA film (heat shrinking) Polypropylene woven bags; Multipurpose plastic container Wooden box pallet
<u>Requirements to storage premises and containers:</u>	The inside temperature should not exceed 30°C.
<u>Other information on storage conditions:</u>	Storage together with oxidizers, acids and caustics is prohibited. Storage life – max 1 year.

8. Exposure Controls / Personal Protection

<u>Exposure Controls:</u>	Ensuring that the content of harmful substances is within permissible concentration limits by using supply and exhaust ventilation system in of the most contaminant locations.
<u>Engineering Controls:</u>	When material is heated observe Occupational Exposure limits of 3 mg/M3.
<u>Exposure limits MACw.a. /TSEL w.a.:</u>	Due the physical and chemical properties and low toxicity there is no hygienic regulations for the air exposure limits.
<u>Respiratory Protection:</u>	If heated provide adequate protection. Not required under normal operating conditions. In case of emergency use filter gas – mask, breathing masks. Wear positive pressure self-contained breathing apparatus if warranted by workplace conditions
<u>Ventilation:</u>	Provide adequate ventilation.

<u>Hand Protection:</u>	Gloves made of cotton fabric.
<u>Eye Protection:</u>	Wear safety glasses or chemical goggles. Only in case of crushing of material in the open systems.
<u>Skin and Body Protection:</u>	Use protective clothing under normal operating conditions. Protective clothing made of cotton fabric.
<u>Hygiene measure:</u>	Wash at the end of each work shift and before eating, drinking, smoking or using the toilet.
<u>Decontamination Facilities:</u>	Eye bath, washing facilities (sinks / showers).
<u>Control of environmental impact:</u>	Concentration of pollutants should be measured in the process of thermal treatment.

9. Physical and Chemical Properties

<u>Physical Form:</u>	Solid (pellets or slabs)
<u>Appearance & Odor:</u>	White-Grey/ Odorless
<u>Specific Gravity:</u>	0.92 (water = 1.0)
<u>Glass transition temperature:</u>	Minus 71°C
<u>Softening Point, R&B:</u>	Not available.
<u>Solubility in Water:</u>	Insoluble
<u>Flash Point, TAG CC F:</u>	275°C
<u>Percent Volatiles (by weight):</u>	Not available.
<u>Evaporation Rate (Water ~ I):</u>	Not available.
<u>Vapor Pressure (mm Hg):</u>	Not available.
<u>Solubility in other solvents:</u>	Soluble in hexane, toluene, benzene, chloroform, tetrachloride
<u>Density:</u>	0.85 – 0.95 g/cm ³
<u>Melting Point:</u>	28-40 °C
<u>Vapor Density (Air ~ I):</u>	Not available.
<u>Boiling Point (°F) Initial:</u>	Not available.
<u>Decomposition Temperatures:</u>	290 °C
<u>Auto ignition Temperature, °C:</u>	575°C
<u>Ignition Temperature:</u>	300°C
<u>Flammable Limits, %(V):</u>	Not available.

10. Stability and Reactivity

<u>Stability:</u>	This product is stable under normal conditions.
<u>Incompatibility (Materials to Avoid):</u>	Strong oxidizers.
<u>Conditions to Avoid:</u>	Heating above 100 °C.
<u>Hazardous Polymerization:</u>	Hazardous polymerization will not occur.
<u>Hazardous Decomposition Products:</u>	Normally Carbon Composition Products. Carbon oxides, isoprene.

11. Toxicological Information

This material is not listed as a carcinogen or potential carcinogen by NTP, IARC, or OSHA.

<u>OSHA Permissible Exposure Limit:</u>	Not available.
<u>ACGIH Threshold Limit Value:</u>	Not available.
<u>Oral toxicity at single ingestion:</u>	Nontoxic.
<u>Skin toxicity at single exposure:</u>	Nontoxic.
<u>Toxicity at inhalation at single exposure:</u>	Nontoxic.
<u>Skin irritation:</u>	Causes no irritation.
<u>Eye irritation:</u>	Causes no irritation.
<u>Irritation of respiratory tract:</u>	Causes no irritation.
<u>Sensibilization:</u>	Absence.
<u>Toxicity at repeated dosage:</u>	Absence.
<u>Mutagenicity:</u>	Absence.
<u>Carcinogenicity:</u>	Not established.
<u>Toxicity for reproductive function and development:</u>	Absence.

12. Ecological Information

<u>Eco toxicity:</u>	Rubber bales do not pose a hazard for environment.
<u>Mobility:</u>	Solid product.

<u>Immunity and degradability:</u>	Transforms in the environment at long weather impact (atmospheric precipitation, solar radiation, cold, high temperatures).
<u>Bioaccumulation:</u>	Non-cumulative.
<u>Other negative effects:</u>	Not established.

13. Disposal Considerations

<u>Methods of disposal of wastes (remains):</u>	Solid wastes generated in the course of rubber processing are not toxic, they do not require neutralization and are subject to reprocessing. Non-treatable wastes are subject to incineration at the specialized landfill. Material is not a hazardous waste and can be disposed of according to 40CFR 21.24.
<u>Code of wastes:</u>	07 02 99 wastes from the MFSU of synthetic rubber (not otherwise specified). S61 – avoid entry into the environment.
<u>Methods of disposal of after-use package:</u>	Wooden packing is subject to incineration or is used as solid fuel after respective processing. Polymer packing is subject to subsequent reprocessing.

14. Transport Information

<u>D.O.T. Shipping Name:</u>	Not classified.
<u>Air - ICAO (international Civil Aviation Organization):</u>	Not classified.
<u>ADR/RID:</u>	Not classified.
<u>Sea - IMDG (International Maritime Dangerous Goods):</u>	Not classified.
<u>IATA:</u>	Not classified.
<u>Class:</u>	Not classified.
<u>Group of packing:</u>	None.
<u>Classification code:</u>	None.
<u>Hazard identification number:</u>	None.
<u>UNO number:</u>	Not classified.
<u>Precise name for transportation:</u>	Isoprene rubber SKI43
<u>Shipping Name:</u>	Rubber Synthetic Crude. NMFC 171800

15. Regulatory Information

All components of this material are on the TSCA Inventory.

All components of this material are on the Canadian DSL.

This material is not considered hazardous under OSHA hazard communication standard 29 CFR 1910.1200.

Governing Regulations (USA): This material does not contain SARA S-313 Chemicals

WHMIS (Canada): Not Hazardous.

Marking (Resolution (EC) №1272/2008): Not classified.

Marking (67/548/EEC or 1999/45/EC): Not classified.

National legislative documents: Regulation (EC) 1907/2006 of the European Parliament and the Council of 18.12.2006 concerning registration, evaluation and authorization of chemicals (REACH), establishing the European Chemical Agency and adding the Regulation 1999/45/EC and cancelling the Resolution (EEC) 793/93 and the Resolution of Commission (EC) 1488/94 as well as the Directive of the Council 76/769/EEC and the Directives of Commission 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

16. Other Information

The above information has been compiled from what we believe to be credible sources. To our knowledge the information is accurate and reliable, however, it is not guaranteed. Any recommendations issued by HB Chemical personnel or literature is derived from experience and by no means should be taken as fact or construed as a recommendation to violate of any law, regulation or patent. It is the user's responsibility to determine the suitability of any HB supplied material in their application. The individual conditions of each customer are well outside of our control and we cannot be held liable for its functionality and use. Please contact our office should you need specific information beyond what is supplied above. As with all Chemical usage safety precautions beyond the stated are highly recommended.