



SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

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Product identifier	Novvi Renewable Isoalkanes
Synonyms	Proprietary
Trade names	Not applicable
Chemical family	Branched and linear saturated hydrocarbons

Relevant identified uses of the substance or mixture and uses advised against	Not for human or animal consumption.
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Issue Date	12 February 2021
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SECTION 2 - HAZARDS IDENTIFICATION

GHS Classification of the substance or mixture Regulation (EC) 1272/2008 [GHS] and 2012 OSHA Hazard Communication Standard, 29 CFR 1910.1200	Aspiration hazard - Category 1- H304
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Label elements

CLP/GHS hazard
pictogram



CLP/GHS signal word None

CLP/GHS hazard statements

H304 May be fatal if swallowed and enters airways.

CLP/GHS precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P331 Do NOT induce vomiting.
P370+P378 In case of fire: Use foam, carbon dioxide or dry powder to extinguish.
Risk of soil and ground water contamination.

Other hazards

None

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

<u>Ingredient</u>	<u>CAS #</u>	<u>Percent</u>	<u>Classification</u>
C4-C10 branched and linear hydrocarbons (light)	848301-65-5	0-1%	H225, H315, H361, H336, H373, H304
Alkanes, C10-C20 branched and linear	928771-01-1	10-35%	H227, H304
Hydrocarbons, C17-30, hydrotreated distillates, distn. Lights	97862-82-3	65-85%	None
Octadecene, reaction products with hexadecene, hydrogenated	2241366-04-9	1-10%	None

SECTION 4 - FIRST AID MEASURES

Description of first aid measures

Immediate Medical Attention Needed

Yes

Eye Contact

If easy to do, remove contact lenses, if worn. Immediately flush eyes with copious quantities of water for at least 15 minutes. If irritation occurs or persists, notify medical personnel and supervisor.

Skin Contact

Wash exposed area with soap and water and remove contaminated clothing/shoes. If irritation occurs or persists, notify medical personnel and supervisor.

Inhalation

Immediately move exposed subject to fresh air. If not breathing, give artificial respiration. If breathing is labored, administer oxygen. Immediately notify medical personnel and supervisor.

Ingestion

If swallowed, call a physician immediately. Do not induce vomiting unless directed by medical personnel. Do not give anything to drink unless directed by medical personnel. Never give anything by mouth to an unconscious person. Notify medical personnel and supervisor.

Protection of first aid responders

See Section 8 for Exposure Controls/Personal Protection recommendations.

Most important symptoms and effects, both acute and delayed	Repeated exposure may cause skin dryness or cracking. Spray/mists may cause respiratory tract irritation. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.
Indication of immediate medical attention and special treatment needed, if necessary	Treat symptomatically and supportively. If accidental exposure occurs to an individual who is also taking one or more concomitant medications, consult the respective package or prescribing information for potential drug interactions.

SECTION 5 - FIREFIGHTING MEASURES

Extinguishing media	Use water spray (fog), foam, dry powder, or carbon dioxide, as appropriate for surrounding fire and materials.
Specific hazards arising from the substance or mixture	Combustible liquid. Containers can burst violently or explode when heated, due to excessive pressure build-up.
Advice for firefighters	Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Prevent fire extinguishing water from contaminating surface water or the ground water system. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	If product is released or spilled, take proper precautions to minimize exposure by using appropriate personal protective equipment (see Section 8). Area should be adequately ventilated.
Environmental precautions	Do not empty into drains. Avoid release to the environment.
For emergency responders	Prevent unauthorized access. Vapors are heavier than air and may travel a considerable distance to a source of ignition and flash back. Use only in well-ventilated areas. Eliminate all ignition sources if safe to do so. Take precautionary measures against static discharge.
Methods and material for containment and cleaning up	For small spills (such as in a laboratory), soak up material with absorbent, e.g., damp paper towel, and wash spill area thoroughly with soap and water. Pay attention to the fire and health hazards caused by the product. Dispose of material in a manner that is compliant with federal, state and local laws.
Reference to other sections	See Sections 8 and 13 for more information.

SECTION 7 - HANDLING AND STORAGE

Precautions for safe handling	Avoid heat, flames and other sources of ignition. Take precautionary measures against static discharges. Use explosion-proof electrical equipment. All handling should only take place in well-ventilated areas. Try to avoid product volatilization during handling and transferring. Avoid contact with eyes, skin and other mucous membranes. Wash thoroughly after handling. Use personal protective equipment. Avoid breathing vapor. Do not eat, drink or smoke while handling this product. Avoid prolonged or repeated exposure. Provide sufficient air exchange and/or exhaust in workrooms. Take precautionary measures against static discharges. Use normal preventative fire protection measures.
Conditions for safe storage including any incompatibilities	Combustible liquid storage. Store in accordance with local regulations. Protect from sunlight. Store in a demarcated bunded area to prevent release to drains and/or watercourses. Take precautions against leakage by constructing collecting pools and sewerage systems as well as by surfacing the loading and unloading stations. Only store in correctly labelled containers. Use containers made of the following materials: Stainless steel.
Specific end use(s)	No information identified.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits	The individual limit values can be applied for the hydrocarbons. ACGIH TLV®-TWA (8h) 100 mg/m ³ (IFV).
Exposure/Engineering controls	Selection and use of containment devices and personal protective equipment should be based on a risk assessment of exposure potential. Use local exhaust and/ or enclosure at mist/aerosol/spray-generating points. High-energy operations such as spraying should be done within an approved emission control or containment system. During tank operations follow special instructions (risk of oxygen displacement and hydrocarbons).
Respiratory protection	Filter device/half mask Gas filter, type AX. Filter device could be used maximum 2 hours at a time. Filter devices must not be used in conditions where the oxygen level is low (< 19 vol.-%). At high concentrations a breathing apparatus must be used (self-contained or fresh air hose breathing apparatus). Filter must be changed often enough. Respirator according to standard EN 140.
Hand protection	Wear nitrile or other impervious gloves if skin contact is possible. When the material is dissolved or suspended in an organic solvent, wear gloves that provide protection against the solvent.
Skin protection	Wear protective gloves. It is recommended that gloves are made of the following material: Nitrile rubber. The selected gloves should have a breakthrough time of at least 8 hours. Protection class 6. Protective gloves according to standards EN 420 and EN 374. Change protective gloves regularly.

Eye/face protection	Wear safety glasses with side shields, chemical splash goggles, or full face shield, if necessary. Base the choice of protection on the job activity and potential for contact with eyes or face. An emergency eye wash station should be available.
Environmental Exposure Controls	Avoid release to the environment and operate within closed systems wherever practicable. Air and liquid emissions should be directed to appropriate pollution control devices. In case of spill, do not release to drains. Implement appropriate and effective emergency response procedures to prevent release or spread of contamination and to prevent inadvertent contact by personnel.
Other protective measures	Wash hands in the event of contact with this mixture, especially before eating, drinking or smoking. Protective equipment is not to be worn outside the work area (e.g., in common areas or out-of-doors). Decontaminate all protective equipment following use.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Liquid
Color	Colorless to pale-yellow
Odor	Paraffinic
Odor threshold	No information identified.
pH	No information identified.
Melting point/freezing point	No information identified.
Initial boiling point and boiling range	180 °C to 430 °C
Flash point	138 °C Cleveland Open Cup
Evaporation rate	No information identified.
Flammability (solid, gas)	No information identified.
Upper/lower flammability or explosive limits	No information identified.
Vapor pressure	No information identified.
Vapor density	No information identified.
Relative density	0.80 g/mL @ 15°C.
Water solubility	Not soluble
Solvent solubility	Soluble in hydrocarbon solvents; insoluble in water.

Partition coefficient (<i>n</i>-octanol/water)	No information identified.
Auto-ignition temperature	No information identified.
Decomposition temperature	No information identified.
Viscosity	5.6 mm ² /s @ 40°C
Explosive properties	No information identified.
Oxidizing properties	No information identified.
Other information	
Molecular weight	Proprietary
Molecular formula	Proprietary

SECTION 10 - STABILITY AND REACTIVITY

Reactivity	No information identified.
Chemical stability	Stable under normal handling and storage conditions
Possibility of hazardous reactions	Not expected to occur.
Conditions to avoid	Keep away from heat and open flames.
Incompatible materials	Avoid strong oxidizers, strong acids and strong bases.
Hazardous decomposition products	Carbon oxides (CO, CO ₂)

SECTION 11 - TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute oral toxicity	LD ₅₀ >2000 mg/kg, Oral, Rat (EC B1 tris)
Acute inhalation toxicity	Based on available data the classification criteria are not met.
Acute dermal toxicity	LD ₅₀ > 2000 mg/kg, Dermal, Rat (EC B3)
Skin Irritation	Based on available data the classification criteria are not met.,(EC B4),Repeated exposure may cause skin dryness or cracking. The product irritates mucous membranes and may cause abdominal discomfort if swallowed. May cause respiratory system irritation.
Eye irritation	Based on available data the classification criteria are not met.
Sensitization	Does not cause sensitization.

STOT – single exposure	Based on available data the classification criteria are not met.
STOT-repeated Exposure	Based on available data the classification criteria are not met.
Developmental toxicity	Based on available data the classification criteria are not met.
Reproductive toxicity	Based on available data the classification criteria are not met.
Genotoxicity	This class of compounds is non-genotoxic
Carcinogenicity	No studies identified.
Aspiration hazard	May be fatal if swallowed and enters airways.
Other information	Solvents may degrease the skin.

SECTION 12 - ECOLOGICAL INFORMATION

Toxicity to fish	LL ₅₀ , 96 hours: > 1000 mg/l, Fish WAF (OECD 203)
Toxicity to daphnia and other aquatic invertebrates	EL ₅₀ , 48 hours: > 100 mg/l, WAF (OECD 202)
Toxicity to algae	EL ₅₀ , 72 hours: > 100 mg/l, Algae WAF (OECD 201)
Persistence and Degradability	Expected to be readily biodegradable.
Bioaccumulative potential	Possibly bioaccumulative. log Pow >6.5
Mobility in soil	Evaporates slowly. The product has poor water-solubility. The product contains substances which are bound to particulate matter and are retained in soil.
Results of PBT and vPvB assessment	Non-classified vPvB substance, Non-classified PBT substance
Other adverse effects	No information

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste treatment methods	Used product should be disposed of according to local, state, and federal regulations. Do not send down the drain or flush down the toilet. All wastes containing the material should be properly labeled. Dispose of wastes in accordance to prescribed federal, state, and local guidelines, e.g., appropriately permitted chemical waste incinerator. Rinse waters resulting from spill cleanups should be discharged in an environmentally safe manner, e.g., appropriately permitted municipal or on-site wastewater treatment facility.
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SECTION 14 - TRANSPORT INFORMATION

Land transport

USDOT

Not classified

Sea transport

IMDG

Not classified

Air transport

IATA/ICAO

Not classified

Special precautions for users Avoid exposure and releases to the environment.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Transported by ship as bulk: Product name: Alkanes, C10-C32 linear and branched,

SECTION 15 - REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture This SDS complies with the requirements under US, EU and GHS (EU CLP - Regulation EC No 1272/2008 and UN ST/SG/AC 10/30 rev 3) guidelines.

Chemical safety assessment Conducted.

OSHA Hazardous Yes. Harmful or fatal if swallowed. Can enter lungs and cause damage.

WHMIS classification Health: 3 Flammability: 1 Physical hazard: 0

SARA section 312/313 Acute health hazard (aspiration)

California proposition 65 Not listed.

Notification status This mixture contains only ingredients which have been registered according to Regulation (EU) No. 1907/2006 (REACH)

Europe REACH

USA TSCA On TSCA Inventory

SECTION 16 - OTHER INFORMATION

Full text of H phrases, P phrases and GHS classification AH1- Aspiration Hazard - Category 1 H304 - May be fatal if swallowed and enters airways

NFPA Classification:

Health Hazard: 1; Fire Hazard: 1; Reactivity Hazard; 0

**Sources of data
Abbreviations**

Information from published literature and internal company data.
ACGIH - American Conference of Governmental Industrial Hygienists
ADR/RID - European Agreement Concerning the International Carriage of Dangerous Goods by Road/Rail AIHA - American Industrial Hygiene Association CAS# - Chemical Abstract Services Number DNEL - Derived No Effect Level DOT - Department of Transportation EINECS - European Inventory of New and Existing Chemical Substances ELINCS - European List of Notified Chemical Substances EU - European Union GHS - Globally Harmonized System of Classification and Labelling of Chemicals IARC - International Agency for Research on Cancer IDLH - Immediately Dangerous to Life or Health IATA - International Air Transport Association IMDG - International Maritime Dangerous Goods LOEL - Lowest Observed Effect Level LOAEL - Lowest Observed Adverse Effect Level NIOSH - The National Institute for Occupational Safety and Health NOEL - No Observed Effect Level NOAEL - No Observed Adverse Effect Level NTP - National Toxicology Program OEL - Occupational Exposure Limit OSHA - Occupational Safety and Health Administration PBT - Persistent, Bioaccumulative and Toxic PNEC - Predicted No Effect Concentration SARA - Superfund Amendments and Reauthorization Act STEL - Short Term Exposure Limit

Abbreviations

TDG - Transport Dangerous Goods TSCA - Toxic Substances Control Act TWA - Time Weighted Average WHMIS - Workplace Hazardous Materials Information System

Revisions

Rev 1.0 Original

Disclaimer

The above information is based on data available to us and is believed to be correct. Since the information may be applied under conditions beyond our control and with which we may be unfamiliar, we do not assume any responsibility for the results of its use and all persons receiving it must make their own determination of the effects, properties and protections which pertain to their particular conditions. No representation, warranty, or guarantee, express or implied (including a warranty of fitness or merchantability for a particular purpose), is made with respect to the materials, the accuracy of this information, the results to be obtained from the use thereof, or the hazards connected with the use of the material. Caution should be used in the handling and use of the material because it is a pharmaceutical product. The above information is offered in good faith and with the belief that it is accurate. As of the date of issuance, we are providing all information relevant to the foreseeable handling of the material. However, in the event of an adverse incident associated with this product, this Safety Data Sheet is not, and is not intended to be, a substitute for consultation with appropriately trained personnel.