



SAFETY DATA SHEET

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

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Product identifier	PureNova™ 1351
Synonyms	Proprietary
Trade names	Not applicable
Chemical family	Branched and linear olefinic hydrocarbons
REACH Registration No.	01-2119486450-38-0006
Relevant identified uses of the substance or mixture and uses advised against	Not for human or animal consumption.
Issue Date	12 March 2020

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

Label elements

CLP/GHS hazard pictogram



CLP/GHS signal word Danger

CLP/GHS hazard statements H304 - May be fatal if swallowed and enters airways.

CLP/GHS precautionary statements P301+P310 - If swallowed: Immediately contact a poison control center or physician. P331- Do NOT induce vomiting. P405 - Store locked up. P501 - Dispose of contents/container to location in accordance with local/regional/national/international regulations.

Other hazards See Section 11.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

<u>Ingredient</u>	<u>CAS #</u>	<u>Percent</u>	<u>Classification</u>
Hexadecene	26952-14-7	95-99%	H304
Octadecene	27070-58-2	1-5%	H304

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	See Sections 2 and 11
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	No information identified. May emit toxic fumes of carbon monoxide and carbon dioxide. Vapors may form explosive mixtures with air.
Flammability/Explosivity	No explosivity or flammability data identified. High airborne concentrations of finely divided organic particles can potentially explode if ignited. In a fire or if heated, a pressure increase will occur and the container may burst.
Advice for firefighters	Wear full protective clothing and a self-contained breathing apparatus with a full facepiece operated in the pressure demand or other positive pressure mode. Decontaminate all equipment after use.

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.
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. For large spills in manufacturing, use an industrial vacuum cleaner equipped with a high efficiency particulate (HEPA) filter if available. Alternatively if in solid or dried form, do not raise dust. Surround spill or powder with absorbents and place a damp cloth or towel over the area to minimize powder from entering the air. Use care in the choice of absorbents as some may react and generate excess heat and create a risk of fire. Review safety data sheets of absorbents prior to use. Add excess liquid to allow for the material to enter solution. Capture remaining liquid onto spill absorbents. Place spill materials into a leak-proof container suitable for disposal. Decontaminate area a second time. 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 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.
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Conditions for safe storage including any incompatibilities Keep container tightly closed. Keep in a cool and well-ventilated area away from any ignition source. To maintain product quality, do not store in heat or direct sunlight.

Specific end use(s) No information identified.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

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.

Respiratory protection Choice of respiratory protection should be appropriate to the task and the level of existing engineering controls. An approved and properly fitted air-purifying respirator with HEPA filters should provide ancillary protection based on the known or foreseeable limitations of existing engineering controls. Use a powered air-purifying respirator equipped with HEPA filters or combination filters or a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, when exposure levels are not known, or in any other circumstances where a lower level of respiratory protection may not provide adequate protection.

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 appropriate gloves, lab coat, or other protective overgarment if skin contact is likely. Base the choice of skin protection on the job activity, potential for skin contact and solvents and reagents in use.

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	265 °C
Flash point	127 °C (261 °F) Cleveland Open Cup
Evaporation rate	No information identified.
Flammability (solid, gas)	No information identified.
Upper/lower flammability or explosive limits	Not flammable
Vapor pressure	5 Pa at 20°C
Vapor density	No information identified.
Relative density	0.78 g/mL @ 20°C.
Water solubility	0.001 mg/L at 25 °C
Solvent solubility	Soluble in hydrocarbon solvents; insoluble in water.
Partition coefficient (<i>n</i>-octanol/water)	Log Pow 7.98 at 20°C
Auto-ignition temperature	240 °C at 325 Pa
Decomposition temperature	No information identified.
Viscosity	2.6 mm ² /s at 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	LD50: > 5,000 mg/kg bw
Acute inhalation toxicity	Species: Rat Method: Acute oral toxicity – Fixed dose method LC50: 8050 ppm Exposure time: 4 h Test atmosphere: vapor
Acute dermal toxicity	Method: Acute inhalation toxicity LD50: > 5,000 mg/kg bw Species: Rabbit Method: Acute Dermal Toxicity
Skin Irritation	Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin resulting in desiccation of the skin.
Eye irritation	No eye irritation. Vapors may cause irritation to the eyes, respiratory system and the skin.
Sensitization	Does not cause sensitization.
STOT-repeated Exposure/Repeat-dose toxicity hexadecene	No studies identified.
Developmental toxicity	NOEL 1000 mg/kg bw /day
Reproductive toxicity	NOAEL 1000 mg/kg bw /day
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.

Neurotoxicity

NOAEL 1000 mg/kg bw/day

SECTION 12 - ECOLOGICAL INFORMATION

Toxicity to fish	LL50: 5.6 mg/L Exposure time : 96 h Species: Oncorhynchus mykiss Semi-static renewal, Test Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	EC50: 4.4 mg/l Exposure time: 48 h Species: Daphnia magna Static test, Test Method: OECD Test Guideline 202
Toxicity to algae	EC50: > 5.5 mg/L Exposure time: 96 h Species: Pseudokirchneriella subcapitata Static test, Test Method: OECD Test Guideline 201
Persistence and Degradability	Readily biodegradable.
Bioaccumulative potential	This material is not expected to bioaccumulate. Log Kow >10
Mobility in soil	Predicted Log Koc 3.630781 at 20°C
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

Transport	Based on the available data, this mixture is not regulated as a hazardous material/ dangerous good under EU ADR/RID, US DOT, Canada TDG, IATA, or IMDG.
UN number	None assigned.
UN proper shipping name	None assigned.
Environmental hazards	Based on the available data, this product/mixture is not regulated as an environmental hazard or a marine pollutant.

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 Not applicable.

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. Mixture not fully tested.

WHMIS classification This substance does not meet any of the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by those regulations.

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

Canada NDSL This product contains one or several components listed in the Canadian NDSL.

Australia AICS Not in compliance with the inventory

New Zealand NZIoC On the inventory, or in compliance with the inventory.

Japan ENCS On the inventory, or in compliance with the inventory.

Korea KECI On the inventory, or in compliance with the inventory.

Philippines PICCS On the inventory, or in compliance with the inventory.

China IECSC On the inventory, or in compliance with the inventory.

Switzerland CH INV On the inventory, or in compliance with the 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

Information from published literature and internal company data.

Abbreviations

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 ...continued

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

Revisions

Rev 1.0.

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.