Safety Data Sheet

Version: 1.1. Date Issued: 31.07.2020

According to "Preparation of Safety Data Sheets for Hazardous Chemicals" ACoP under section 274 of the Work Health and Safety Act and Regulation 330, Schedule 7

SECTION 1: IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

1.1	**Product identifier** **Product Name**	Octadecene, reaction products with hexadecene, hydrogenated
	CAS number	2241366-04-9
	Trade name	SynNova® 9 Base Oil
	Other names	9 cSt Base Oil
	Chemical Family	Branched paraffinic hydrocarbons
1.2	**Relevant identified uses of the substance or mixture and uses advised against** **Recommended use(s)**	Synthetic base oil for use in the formulation of lubricant products
	Restrictions on use	None, although recommended for the above use only.
1.3	**Details of the supplier of the safety data sheet**	
	Manufacturer	Novvi LLC 5885 Hollis Street, Emeryville, CA 94608 Tel: +1 (510) 450-0761 Fax: +1 (510) 225-2645 E-mail: SDS@novvi.com
	Australian Importer	ReOil Pty. Ltd Unit 4 #1 Shipley drv, Rutherford, NSW 2320 Tel. : +61(2)4052 8890
1.4	**Emergency telephone number (Chemtrec):**	1-(703) 527-3887 (Outside the US) Collect calls accepted

SECTION 2: HAZARD(S) IDENTIFICATION

2.1 Classification of the substance or mixture

According to GHS (Rev.5) (2013)	Not classified.

This product is not classified as hazardous, hence classification according to GHS V5.0 is not applicable. Safety Data Sheets do not have to be provided for non-hazardous products, however this information is provided as a courtesy to our customers in this format.

2.2 Label elements

Hazard pictogram(s)	None.
Signal word(s)	None.
Hazard statement(s)	None.
Precautionary statement(s)	None.

2.3 Other hazards None known.

SECTION 3: COMPOSITION AND INFORMATION ON INGREDIENTS

3.1 Substances

Chemical name	% Weight	CAS No.
Octadecene, reaction products with hexadecene, hydrogenated	100	2241366-04-9

3.2 Mixtures

Not applicable

SECTION 4: FIRST-AID MEASURES

4.1 Description of first aid measures

Inhalation IF INHALED: 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.

Skin Contact IF ON SKIN: Wash exposed area with soap and water and remove contaminated clothing/shoes. If irritation occurs or persists, notify medical personnel and supervisor.

Eye Contact IF IN EYES: 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.

Ingestion IF SWALLOWED: 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. Avoid further exposures.

4.2 Most important symptoms and effects, both acute and delayed The product is not an irritant to skin and eye. The main hazard is associated with aspiration. No specific symptoms are proposed.

4.3 Indication of any immediate medical attention and special treatment needed 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: FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media Use water spray (fog), foam, dry powder, or carbon dioxide, as appropriate for surrounding fire and materials.

Unsuitable Extinguishing Media Water jet

5.2	**Special hazards arising from the substance or mixture**	Do not breathe fumes. The product may produce carbon dioxide, carbon monoxide and such harmful gases by decomposition in combustion or by high temperature.
5.3	**Advice for fire-fighters**	Hazchem Code: None 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

6.1	**Personal precautions, protective equipment and emergency procedures and emergency procedures**	If indoors, ventilate thoroughly until the treatment is completed. Do not allow non-authorized personnel to access around the leakage area: mark the area using rope, etc. Work from the upwind position. Evacuate people from downwind. Prepare fire extinguisher in advance against fire. Beware of the slippery floor where the product is spilled. Wear protective equipment as specified in "Section 8. Exposure Controls/Personal Protection" (rubber gloves, protective glasses, protective clothing and such) when engaged in treatment of the leakage.
6.2	**Environmental precautions**	Do not empty into drains. Avoid release to the environment.
6.3	**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. 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.
6.4	**Reference to other sections**	For personal protection, see Section 8. For disposal of waste from clean up operations, see Section 13.

SECTION 7: HANDLING AND STORAGE

7.1	**Precautions for safe handling**	The substance is safe to handle under normal conditions of use. Avoid contact with eyes, skin and other mucous membranes. Wash hands thoroughly after handling. Tightly seal the container after every use. 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.

7.2	**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.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational exposure limits

AUS HSIS: None Listed.
US OSHA 29 CFR Part 1 910 Subpart Z: None listed
US ACGIH-TLV: None listed
US NIOSH REL: None listed
German MAK: None Listed
EU OEL: None Listed.

8.1.2 Biological Monitoring limits

None Listed.

8.1.3 Control Banding:

None Listed.

8.2 Exposure controls

8.2.1 Appropriate 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.

8.2.2 Personal protection equipment

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 and in accordance with AS/NZS 1336 guidance on selection of eye protection. An emergency eye wash station should be available.

Skin protection (Hand protection/ Other)

Wear impervious gloves if skin contact is possible, in accordance with the guidance AS/NZS 2161 on occupational protective gloves

Respiratory protection

Choice of respiratory protection should be appropriate to the task and the level of existing engineering controls and in accordance with the guidance AS/NZS 1716 on respiratory protective devices.. 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.

Skin and body protection

Wear appropriate lab coat or other protective over garment 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 and in accordance with the guidance AS/NZS 3765 on clothing.

Hygiene measures

Wash hands in the event of contact with this substance, especially before eating, drinking or smoking

8.2.3	**Environmental Exposure Controls**	Follow best practice for site management and disposal of waste. Avoid release to the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Liquid
Color	Colorless to pale-yellow
Odour	No data available
Odour threshold (ppm)	No data available
pH (Value)	No data available
Melting point / freezing point	- 39 °C
Initial boiling point and boiling range	400 °C (initial) - 650 °C (final)
Flash point (°C)	279 °C Cleveland Open Cup
Evaporation rate	No data available
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	No data available
Vapour pressure	5.49 x 10^{-7} Pa at 20 °C.
Vapour density (Air=1)	No data available
Relative Density	0.83 at 15°C
Solubility(ies)	Water: <0.21 mg/L at 20 ± 0.5°C (<LOQ)
Partition coefficient (n-Octanol/water)	Measured ≥ 4.7 Log Kow (Pow): 15.76 to 31.33 (calculated)
Auto ignition temperature	305 °C
Decomposition temperature (°C)	No data available
Viscosity (mPa. s) at 20°C	(kinematic) 58 mm²/s at 40 °C; 9 mm²/s at 100 °C
Explosive properties	Not explosive.
Oxidising properties	Not oxidising

9.2 Other information No other information.

SECTION 10: STABILITY AND REACTIVITY

10.1	**Reactivity**	None identified. The material is inert.
10.2	**Chemical stability**	Stable under normal handling conditions.
10.3	**Possibility of hazardous reactions**	None identified. The material is inert.
10.4	**Conditions to avoid**	None identified. The material is inert.
10.5	**Incompatible materials**	None identified. The material is inert.
10.6	**Hazardous Decomposition Product(s)**	Carbon monoxide, carbon dioxide, as identified above in Section 5

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Route of entry	May be absorbed by inhalation, skin contact and ingestion.
Acute toxicity	This class of compounds is not acutely toxic by oral or dermal exposure.
Irritation/Corrosion	This class of compounds is not irritating to eyes or skin.
Sensitization	This class of compounds is not associated with skin sensitization effects.
STOT-single exposure	This class of compounds is not associated with specific target organ toxicity via single exposure.
STOT-repeated exposure/Repeat-dose toxicity	This class of compounds is not associated with specific target organ toxicity via repeated exposure.
Reproductive toxicity	This class of compounds is not associated with reproductive toxicity.
Developmental toxicity	This class of compounds is not associated with developmental toxicity.
Genotoxicity	This class of compounds is non-genotoxic.
Carcinogenicity	No studies identified. This mixture is not listed by NTP, IARC, ACGIH or OSHA as a carcinogen.
Aspiration hazard	If this substance is accidentally ingested it may cause serious aspiration toxicity and lung damage.
Human health data	See "Section 2 - Other Hazards"
Early onset symptoms related to exposure	None identified. With the exception of the aspiration hazard, the substance is considered to be non-toxic.
Delayed health effects from exposure	None identified. With the exception of the aspiration hazard, the substance is considered to be non-toxic.
Exposure levels and health effects	None identified. With the exception of the aspiration hazard, the substance is considered to be non-toxic.
Interactive effects	None identified. With the exception of the aspiration hazard, the substance is considered to be non-toxic.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Acute Fish Toxicity:
(1) - 96h-LL50 > 100mg/L nominal loading rate WAF
(2) - 96h-LL50 > 100mg/L nominal loading rate WAF
Chronic Fish Toxicity:
14d NOEL > 100mg/L nominal loading rate WAF.
Acute Daphnia Toxicity:
(1)- 48h-LL50 > 100mg/L nominal loading rate WAF
(2)- 48h-LL50 > 100mg/L nominal loading rate WAF
Daphnia Magna 48-Hour EL50 > 100 mg/L loading rate WAF. NOEC Loading rate = 100 mg/L loading rate WAF.
Chronic Daphnia Toxicity:
21d No Observed Effect Loading rate (NOEL)
NOEL for effects on reproduction: 100mg/L WAF
NOEL for effects on body length: 100mg/L WAF
NOEL for mortality of parent animals: 100mg/L WAF
Algal Toxicity:
72h EbC50 value (biomass): > 100 mg/L loading rate WAF
72h ErC50 value (growth rate): > 100 mg/L loading rate WAF
72h EyC50 value (yield): > 100 mg/L loading rate WAF
NOEC: 100 mg/L loading rate WAF
Inhibition of Bacterial Respiration:
3-Hour EC50 > 1000 mg/L. 3-hour; NOEC: 1000 mg/L.
Acute toxicity to Earthworms:
14d-LC0 1000mg/kg dry soil;
14d-LC50 > 1000mg/kg dry soil
Toxicity to Plants:
EC50 >1000 mg/L

12.2 Persistence and degradability

Readily biodegradable but failing 10-day window
Can be considered to be primary inherent biodegradable.
Type of water: freshwater

12.3 Bioaccumulative potential

Predicted to be non-toxic based on equivalent products.

12.4 Mobility in soil

Will be maintained within the soil compartment in estimation based on the physical chemical properties. The substance is not proposed to be mobile due to the solubility.

12.5 Results of PBT and vPvB assessment

The substance is not considered to be a PBT of vPvB substance.

12.6 Other adverse effects

No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

13.1.1 Residual wastes

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.

13.1.2	**Contaminated containers and packaging**	Remove contents completely before the disposal of empty containers. Dispose of the containers and such according to the national and local relevant acts and regulations.

SECTION 14: TRANSPORT INFORMATION

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.

14.1	**UN number**	None assigned.
14.2	**UN Proper Shipping Name**	None assigned.
14.3	**Transport hazard class(es)**	None assigned.
14.4	**Packing Group**	None assigned.
14.5	**Environmental hazards**	None
14.6	**Special precautions for user**	Confirm that there is no damage, corrosion of the container or leakage before transportation. Load the product by enforcing preventive measures against load collapse, so as not to cause inversion, fall or damage. Cover the cargo with a cover sheet or such when transporting to prevent from being exposed to water and direct sunlight.
14.7	**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable
14.8	**Hazchem or Emergency Action Code**	None assigned.

SECTION 15: REGULATORY INFORMATION

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

OSHA Hazardous:	Not hazardous by comparison to similar chemicals within this class.
WHMIS classification	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations
TSCA status	This mixture is not yet listed on the TSCA inventory, but a PMN is in place.
EU REACH Status	The product is registered under the EU REACH Regulation.
SARA section 313	Not listed.
C**alifornia proposition 65**	Not listed.
Montreal Protocol (Ozone depleting substances) :	This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.
The Stockholm Convention (Persistent Organic Pollutants) :	None of the chemicals in this product are listed.

The Rotterdam Convention (Prior Informed Consent) :	None of the chemicals in this product are listed.
Basel Convention (Hazardous Waste):	None of the chemicals in this product are listed.
NFPA Classification:	Health Hazard: 1; Fire Hazard: 1; Reactivity Hazard; 0

SECTION 16: OTHER INFORMATION

Date of preparation of SDS: 31 July 2020

References:

In-house data

Hazard Communication Standard (HCS) (29 CFR 1910.1200(g))

Manufacturer's SDS

ECHA List of Registered Phase-in Substances in accordance with Regulation (EC) No. 1907/2006 of The European Parliament and of The Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Preparation of Safety Data Sheets for Hazardous Chemicals ACoP under section 274 of the Work Health and Safety Act

Work Health and Safety Act, Regulation 330, Schedule 7

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

Revisions Rev. 1.1

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.