



## SAFETY DATA SHEET

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

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<b>Product identifier</b>	NovaSpec™ 2050
<b>Synonyms</b>	Proprietary
<b>Trade names</b>	Not applicable
<b>Chemical family</b>	Branched paraffinic hydrocarbons
<b>Relevant identified uses of the substance or mixture and uses advised against</b>	Intended for use in automotive and industrial lubricants. Not for human or animal consumption.
<b>Issue Date</b>	08 August 2016

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### SECTION 2 - HAZARDS IDENTIFICATION

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<b>US Signal word</b>	None
<b>US Hazard overview</b>	Not classified as a hazard.
<b>TSCA Label Text</b>	Use in compliance with TSCA Regulation 40 CFR 720.36. The sample label and this safety data sheet contain the required health and safety information under 40 CFR 720.36.
<b>OSHA Label Text</b>	If swallowed: Immediately call a poison control center or a doctor. Do NOT induce vomiting Store locked up Dispose of contents/container in accordance with local/national/international regulations.

### GHS classification of the substance or mixture

**Regulation (EC) 1272/2008 [GHS]** Not classified

<b>CLP/GHS hazard pictogram</b>	None
<b>CLP/GHS signal word</b>	None
<b>CLP/GHS hazard statements</b>	None
<b>CLP/GHS precautionary statements</b>	P301+P310: IF SWALLOWED: Immediately call a Poison Center or doctor/ 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.
<b>Other hazards</b>	No information identified.

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### SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

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<u>Ingredient</u>	<u>CAS #</u>	<u>Percent</u>	<u>Classification</u>
Alkenes, C10-16 a-, mixed with (6E)-7,11-dimethyl-3-methylene-1,6,10-dodecatriene, tetramers and trimers, hydrogenated	1472005-88-1	100%	Not classified

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### SECTION 4 - FIRST AID MEASURES

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#### Description of first aid measures

<b>Immediate Medical Attention Needed</b>	Yes
<b>Eye Contact</b>	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.
<b>Skin Contact</b>	Wash exposed area with soap and water and remove contaminated clothing/shoes. If irritation occurs or persists, notify medical personnel and supervisor.
<b>Inhalation</b>	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.
<b>Ingestion</b>	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.
<b>Protection of first aid responders</b>	See Section 8 for Exposure Controls/Personal Protection recommendations.

**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.

**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.

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## SECTION 5 - FIREFIGHTING MEASURES

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**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.

**Flammability/Explosivity** No explosivity or flammability data identified. High airborne concentrations of finely divided organic particles can potentially explode if ignited.

**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.

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## SECTION 6 - ACCIDENTAL RELEASE MEASURES

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**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 pads and wash spill area thoroughly with soap and water. For large spills in manufacturing, absorb liquid with an appropriate adsorbent. Do not raise dust. Eliminate ignition sources. Use only equipment suitable for use with combustible liquids. Place spill materials into a leak-proof container suitable for disposal. 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.

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## SECTION 7 - HANDLING AND STORAGE

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**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 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. Do not cut or weld empty containers as they may contain a residue.

**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.

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## SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

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<b>Exposure/Engineering controls</b>	Provide ventilation. 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. Remove ignition sources.  Do not ingest. If swallowed then seek immediate medical assistance. Keep away from children.
<b>Respiratory protection</b>	If adequate ventilation is unavailable, use a NIOSH approved N95 or P95 dust mask or an approved and properly fitted air-purifying respirator with organic vapor cartridge based on an assessment of risk and exposure level. Choice of respiratory protection should be appropriate to the task and the level of existing engineering controls.
<b>Hand protection</b>	Wear nitrile or impervious gloves if skin contact is possible.
<b>Skin protection</b>	Wear appropriate 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.
<b>Eye/face protection</b>	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.
<b>Environmental Exposure Controls</b>	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.
<b>Other protective measures</b>	Wash hands in the event of contact with this substance, 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.

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## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

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### Information on basic physical and chemical properties

<b>Appearance</b>	Liquid
<b>Color</b>	Colorless to pale-yellow
<b>Odor</b>	No information identified.
<b>Odor threshold</b>	No information identified.
<b>pH</b>	No information identified.
<b>Melting point/freezing point</b>	No information identified
<b>Initial boiling point and boiling range</b>	425°C (initial) – 650°C (final)

<b>Flash point</b>	280 °C (536°F) Cleveland Open Cup
<b>Evaporation rate</b>	No information identified.
<b>Flammability (solid, gas)</b>	No information identified.
<b>Upper/lower flammability or explosive limits</b>	No information identified.
<b>Vapor pressure</b>	No information identified.
<b>Vapor density</b>	No information identified.
<b>Relative density</b>	0.84 g/mL @15 °C
<b>Water solubility</b>	Negligible
<b>Solvent solubility</b>	No information identified.
<b>Partition coefficient (<i>n-octanol/water</i>)</b>	Log Kow (Pow): 7.49 to 31.33 at 25 °C
<b>Auto-ignition temperature</b>	No information identified.
<b>Decomposition temperature</b>	No information identified.
<b>Viscosity</b>	(kinematic) 20 mm <sup>2</sup> /s at 100°C
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.

**Other information**

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**SECTION 10 - STABILITY AND REACTIVITY**

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<b>Reactivity</b>	None identified. The material is inert.
<b>Chemical stability</b>	Stable under normal handling and storage conditions.
<b>Possibility of hazardous reactions</b>	None identified. The material is inert.
<b>Conditions to avoid</b>	Keep away from heat, sparks, and open flame.
<b>Incompatible materials</b>	Strong oxidizers.
<b>Hazardous decomposition products</b>	Carbon monoxide, carbon dioxide, as identified above in Section 5

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**SECTION 11 - TOXICOLOGICAL INFORMATION**

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**Information on toxicological effects**

<b>Route of entry</b>	May be absorbed by inhalation, skin contact and ingestion.
<b>Acute toxicity</b>	This class of compounds is not acutely toxic by oral, dermal, or inhalation exposure.
<b>Irritation/Corrosion</b>	This class of compounds is not irritating to eyes.
<b>Sensitization</b>	This class of compounds is not associated with skin sensitization effects.
<b>STOT-single exposure</b>	No studies identified.
<b>STOT-repeated exposure/Repeat-dose toxicity</b>	NOEL 1000 mg/kg/day (F) NOEL 300 mg/kg/day (M) Administration of NovaSpec Base Oil in PEG 400 + Polysorbate 80 via oral gavage to Wistar rats at the dose levels of 100, 300 and 1000 mg/kg bw/day was not associated with any effect on reproduction in the parent males and females, or on development of offspring. Also, no adverse effects were noted in general toxicology parameters. At the dose level of 1000 mg/kg bw/day, elevation of adrenal absolute and relative weights was noted, however considered as not adverse in the lack of any corresponding clinical pathology or histopathology effect.
<b>Reproductive toxicity</b>	NOEL 1000 mg/kg/day (F) NOEL 300 mg/kg/day (M) Administration of NovaSpec Base Oil in PEG 400 + Polysorbate 80 via oral gavage to Wistar rats at the dose levels of 100, 300 and 1000 mg/kg bw/day was not associated with any effect on reproduction in the parent males and females, or on development of offspring. Also, no adverse effects were noted in general toxicology parameters. At the dose level of 1000 mg/kg bw/day, elevation of adrenal absolute and relative weights was noted, however considered as not adverse in the lack of any corresponding clinical pathology or histopathology effect.
<b>Developmental toxicity</b>	NOEL 1000 mg/kg/day (F) NOEL 300 mg/kg/day (M) Administration of NovaSpec Base Oil in PEG 400 + Polysorbate 80 via oral gavage to Wistar rats at the dose levels of 100, 300 and 1000 mg/kg bw/day was not associated with any effect on reproduction in the parent males and females, or on development of offspring. Also, no adverse effects were noted in general toxicology parameters. At the dose level of 1000 mg/kg bw/day, some minor effects were noted.
<b>Genotoxicity</b>	This class of compounds is non-genotoxic.
<b>Carcinogenicity</b>	No studies identified. This mixture is not listed by NTP, IARC, ACGIH or OSHA as a carcinogen.
<b>Aspiration hazard</b>	None
<b>Human health data</b>	No information identified

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**SECTION 12 - ECOLOGICAL INFORMATION**

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<b>Toxicity</b>	<p><b>Acute Fish Toxicity:</b> (1) - 96h-LL50 &gt; 100mg/L nominal loading rate WAF (2) - 96h-LL50 &gt; 100mg/L nominal loading rate WAF <b>Chronic Fish Toxicity:</b> 14d NOEL &gt; 100mg/L nominal loading rate WAF. <b>Acute Daphnia Toxicity :</b> (1)- 48h-LL50 &gt; 100mg/L nominal loading rate WAF (2)- 48h-LL50 &gt; 100mg/L nominal loading rate WAF <b>Chronic Daphnia Toxicity:</b> 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 <b>Algal Toxicity:</b> 72h EbC50 value (biomass): &gt; 100 mg/L loading rate WAF 72h ErC50 value (growth rate): &gt; 100 mg/L loading rate WAF 72h EyC50 value (yield): &gt; 100 mg/L loading rate WAF NOEC: 100 mg/L loading rate WAF <b>Inhibition of Bacterial Respiration:</b> 3-Hour EC50 &gt; 1000 mg/L. <b>3-hour;</b> NOEC: 1000 mg/L. <b>Acute toxicity to Earthworms:</b> 14d-LC0 1000mg/kg dry soil; 14d-LC50 &gt; 1000mg/kg dry soil</p>
<b>Additional toxicity information</b>	Daphnia Magna 48-Hour EL50 > 100 mg/L loading rate WAF. NOEC Loading rate = 100 mg/L loading rate WAF.
<b>Persistence and Degradability</b>	Expected to be inherently biodegradable
<b>Bioaccumulative potential</b>	Not bioaccumulative on the basis of QSAR data. (BCF range of 3.162 to 1944 L/Kg wet-wt)
<b>Mobility in soil</b>	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.
<b>Results of PBT and vPvB assessment</b>	The substance is not considered to be a PBT or vPvB substance
<b>Other adverse effects</b>	No data available.
<b>Note</b>	Releases to the environment should be avoided.

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**SECTION 13 - DISPOSAL CONSIDERATIONS**

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<b>Waste treatment methods</b>	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**

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<b>Transport</b>	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.
<b>UN number</b>	None assigned.
<b>UN proper shipping name</b>	None assigned.
<b>Transport hazard classes and packing group</b>	None assigned.
<b>Environmental hazards</b>	Based on the available data, this product/mixture is not regulated as an environmental hazard or a marine pollutant.
<b>Special precautions for users</b>	Avoid exposure and releases to the environment.
<b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.

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**SECTION 15 - REGULATORY INFORMATION**

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<b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b>	This SDS complies with the requirements under US, EU and GHS (EU CLP - Regulation EC No 1272/2008) guidelines.
<b>Chemical safety assessment</b>	Conducted.
<b>OSHA Hazardous</b>	Not classified
<b>WHMIS classification</b>	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by those regulations.
<b>TSCA status</b>	This material is listed on the TSCA inventory.
<b>Other inventories</b>	REACH (EU) - registered 10-100 ton/year AICS (AUS) - listed
<b>SARA section 313</b>	Not listed.
<b>California proposition 65</b>	Not listed.

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**SECTION 16 - OTHER INFORMATION**

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<b>NFPA Classification:</b>	Health Hazard: 1; Fire Hazard: 1; Reactivity Hazard; 0
<b>Full text of H phrases, P phrases and GHS classification</b>	None.

**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 AICS – Australian Inventory Chemical Substances 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 3.2 Additional toxicity and ecotoxicity data added. Chemtrec international phone number added.

**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. 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.