

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: NanoDissolve® **Company Name:** OptiFrac Chemical Services
General Description: Reliquification Compound **Address:** 1000, 639 – 5th Ave SW.
 Calgary, AB, Canada
For General Information: 1-403-237-8900 T2P 0M9

For Chemical Emergency ONLY (spill, leak, fire, exposure or accident), call CANUTEC at 1-613-996-6666

SECTION 2: HAZARD IDENTIFICATION
GHS Classification of the Substance or Mixture

Aspiration Hazard Category 1
 Skin Irritation Category 2
 Eye Irritation Category 2B

GHS Label Elements
Signal Word:
Danger

Symbols:

Hazard Statements: H304 May be fatal if swallowed and enters airways.
 H315 + H320 Causes skin and eye irritation.

Prevention Statements: P264 Wash hands thoroughly after handling.
 P280 Wear protective gloves.

Response Statements: P301 + P310 IF SWALLOWED: Immediately call a doctor.
 P302 + P352 IF ON SKIN: Wash with plenty of water.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several
 minutes. Remove contact lenses, if present and easy to do. Continue
 rinsing.
 P321 Specific treatment; see section 4 for first aid measures.
 P331 Do NOT induce vomiting.
 P332 + P313 If skin irritation occurs, get medical attention.
 P337 + P313 If eye irritation persists, get medical attention.
 P362 + P364 Take off contaminated clothing and wash it before reuse.

Storage Statements: P405 Store locked up.

Disposal Statements: P501 Dispose of contents/container in accordance with
 local/provincial/federal regulations.

Hazards not otherwise classified (HNOC or not covered by GHS) – Not Applicable

Other Information: None.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Identity	CAS Number	% by Weight
Fatty Acid Ester	Proprietary*	Proprietary*
Unsaturated Hydrocarbon	Proprietary*	Proprietary*

* HMIRA Exemption #11991. Exemption Granted: March 7, 2018.

Substances

There are no additional ingredients present which, within the current knowledge of the manufacturer and in the concentrations applicable, are classified as hazardous to the health or environment thus do not require reporting in this section.

SECTION 4: FIRST AID MEASURES

EMERGENCY OVERVIEW

Potential Health Effects

- Inhalation:** Can enter to lungs and cause damage. Excessive or prolonged breathing of this material may cause central nervous system side effects. Central nervous system side effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness or confusion.
- Eye:** May cause eye irritation; not expected to cause prolonged or significant eye irritation.
- Skin:** May cause skin irritation. Prolonged skin contact may cause drying or de-fattening of skin. Not expected to be harmful to organs if absorbed through skin. Contact with skin is not expected to cause allergic response.
- Ingestion:** Harmful or fatal if swallowed. Because of its viscosity, this material can directly enter the lungs, if swallowed, or subsequently vomited. Once in the lungs, it is very difficult to remove and can cause injury and death.
- Chronic:** No information found.

FIRST AID MEASURES

- INHALATION:** Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
- EYES:** Flush with water for at least 15 minutes while holding eyelids open. Call a physician if irritation persists. If worn, remove contacts after first 5 minutes.
- SKIN:** Remove contaminated clothing. Wash exposed area with soap and water for at least 15 minutes. Call a physician if rash or other symptoms develop. Launder clothes before reuse.
- INGESTION:** If ingested, do not induce vomiting. Drink plenty (2-3 glasses) of water or milk and immediately get medical attention. Never give anything by mouth to an unconscious person.

SECTION 5: FIRE FIGHTING MEASURES

Extinguishing Media

Suitable extinguishing media – product does not support combustion, use extinguishing agent for type of surrounding fire.

Special Hazards Arising from the Substance or Mixture

No data available.

Advice for Firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further Information

No data available.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- Personal Precautions:** Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Methods for Containment:** Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.
- Methods for Cleaning Up:** Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labeled containers. Prevent large spills from entering sewers or waterways. Never return spills in original containers for re-use. Eliminate all sources of ignition from the affected areas.

SECTION 7: HANDLING AND STORAGE

- General Handling and Storage Precautions:** As with all chemical products and material, take care as to where and how you store them.
- Shelf Life:** No known limit. Recommended: Use within 1 year.
- Special Sensitivity:** None.
- Storage and Other Precautions:** Keep container closed. Do not store near heat, sparks, or open flames. Use or store in a well-ventilated area. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. Empty drums should be completely drained, properly bunged, and promptly returned to a drum re-conditioner, or properly disposed of.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

- Exposure Limits:** No data available.
- Eye Protection:** Safety glasses. If splashes are likely to occur, wear goggles or a face shield.
- Skin Protection:** Protective gloves. Depending on use, a selection of other protective clothing may include an apron, boots and facial protection depending on the operation being conducted.
- Ventilation:** Use product in a well-ventilated area. If operator generates airborne material, use protective enclosures, local exhaust ventilation, or engineering controls to control exposure.
- Respiratory Protection:** Under normal conditions a respirator is not required. In confined or poorly ventilated areas, wear a NIOSH approved respirator if exposure of harmful levels of airborne material may occur. Use the following elements for air purifying respirators: Organic Vapour.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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| Properties Evaluated at Ambient Temperature | Initial Boiling Point: >204°C (400°F) |
| Appearance: Clear yellowish liquid | Initial Freeze Point: -18°C (0°F) |

SAFETY DATA SHEET



Odor:	Faint hydrocarbon odor	Flash Point:	>95°C (203°F)
Specific Gravity:	0.78 ± 0.04	Solubility:	Not soluble

Other data: These physical properties are typical values for this product and not specifications. No other data available.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: This material is considered to be non-reactive under normal conditions of use.

Chemical Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: No data available.

Conditions to Avoid: No data available.

Incompatible Materials: Strong oxidizing agents.

Hazardous Decomposition Products: No data available.

SECTION 11: TOXICOLOGICAL INFORMATION

Likely routes of Exposure: Skin contact, eye contact, inhalation, ingestion.

Inhalation: Can enter to lungs and cause damage. Excessive or prolonged breathing of this material may cause central nervous system side effects. Central nervous system side effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness or confusion.

Eye Contact: May cause eye irritation; not expected to cause prolonged or significant eye irritation.

Skin Contact: May cause skin irritation. Prolonged skin contact may cause drying or de-fatting of skin. Not expected to be harmful to organs if absorbed through skin. Contact with skin is not expected to cause allergic response.

Ingestion: Harmful or fatal if swallowed. Because of its viscosity, this material can directly enter the lungs, if swallowed, or subsequently vomited. Once in the lungs, it is very difficult to remove and can cause injury and death.

LD50:

Oral, rat: LD50 = >10000 mg/kg

Carcinogenicity:

Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information available.

Teratogenicity: No information available.

Reproductive Effects: No information available.

Mutagenicity: No information available.

Neurotoxicity: No information available.

Other Studies: N/A

SECTION 12: ECOLOGICAL INFORMATION

Ecological Studies:

Please call the non-emergency telephone number if this information is required.

SECTION 13: DISPOSAL CONSIDERATIONS

Canada

Dispose of in accordance with federal, provincial and local regulations. Empty containers may retain product residue. Dispose of empty totes, drums or pails at an approved waste management facility.

United States

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed

SECTION 14: TRANSPORT INFORMATION

This material is not regulated for transport.

The proper shipping name and/or hazard class for this product may vary according to packaging, properties and mode of transportation. Customer is urged to consult 49 CFR 100-177, IMDG, IATA, EC, United Nations TDG, WHMIS (Canada), and Canadian TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods. Typical proper shipping names for this product are:

US Department of Transportation (DOT):	Not Regulated as a Hazardous Material.
Canadian TDG (Transportation of Dangerous Goods):	Not Regulated as a Hazardous Material.
IMO (Water Transportation):	Not Regulated as a Hazardous Material.
IATA (Air Transportation):	Not Regulated as a Hazardous Material.
Rail:	Not Evaluated.
Marine Pollutant:	This product is not a marine pollutant.
Special Precautions:	None.

SECTION 15: REGULATORY INFORMATION

United States of America Federal Regulations

TSCA

All components of this product are listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

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.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

SAFETY DATA SHEET



None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

United States of America State Regulations

This chemical is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

REACH Registration:

The component in this product has been registered according to Article 2 REACH Regulation (EC) No. 1907/2008.

European Economic Community

Classification per Directive 67/548/EEC or 1999/45/EC

Not Classified

Risk Phrases: None allocated.

Safety Phrases: S2 - Keep out of reach of children.

S24/25 - Avoid contact with skin and eyes.

WGK, Germany (Water danger/protection): No data available.

Canadian Regulations

Canadian DSL Inventory Status: All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.

Canada – WHMIS

WHMIS 1988: Not hazardous.

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations and the SDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List – NPRI

NanoDissolve® contains no reportable ingredients as per the National Pollutant Release Inventory substance lists.

SECTION 16: OTHER INFORMATION

The information accumulated herein is believed to be accurate based on the information provided, although no guarantee or warranty, either expressed or implied is made as to the accuracy or completeness of this information, whether originating with this company or not. Recipients are advised to confirm in advance of need that the information is correct, applicable and suitable to their circumstances. The conditions or methods of handling, storage, use and disposal of the product and container are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage or use of this information or product. If the product is used as a component in another product, this information may not be applicable.

Revision Date: March 7, 2018.