

## Section 1 – Identification

Product identifier	REG RDB20
Other means of identification	
Synonyms	Biomass-Based Diesel, B20/R80, biodiesel/renewable diesel blend, REG Ultra Clean™, Ultra Clean, RDB20, RDB15, RDB10, B15/R85, B10/R90
Recommended use	Fuel for use in compression ignition engines, in other combustion applications, a solvent, or an industrial blendstock, fuel, solvent, cleaning agent
Restrictions on use	Not intended for direct human consumption
Supplier information	REG Marketing & Logistics Group, LLC 416 S. Bell Ave Ames, IA 50010 (888) 734-8686
Emergency phone number	For Hazardous Materials [or Dangerous Goods] Incident, Spill, Leak, Fire, Exposure, or Accident call CHEMTREC Day or Night: Domestic: 1-800-424-9300 International: +1 703-741-5970

## Section 2 – Hazard(s) Identification

### Classification (in accordance with 29 CFR 1910.1200)

Hazard Class	Hazard Category	Route of Exposure
Skin Irritation	Category 2	Absorption / Dermal Contact
Eye Irritation	Category 2A	Absorption / Eye Contact
Aspiration Hazard	Category 1	Ingestion then aspiration
Flammable Liquid	Category 4	Physical Hazard

Signal word **DANGER**

Pictograms



Hazard Statements

H315 Causes skin irritation  
 EUH 066 Repeated exposure may cause skin dryness or cracking  
 H319 Causes serious eye irritation  
 H304 May be fatal if swallowed and enters airways  
 H227 Combustible liquid

Precautionary statements

Prevention

Wear appropriate protective gloves, protective garments, and eye protection. Avoid breathing mists and sprays. Wash all affected skin thoroughly after handling.

Keep container tightly closed. Keep away from heat, sparks, open flames, hot surfaces, and other potential ignition sources. Ground / bond container and receiving equipment and take precautionary measures against static discharge – including the use of non-sparking tools and explosion-proof equipment.

Response	<p>Do NOT induce vomiting. If swallowed: Immediately call a poison control center or physician.</p> <p>Take off contaminated clothing immediately and wash it before reuse. If on skin, wash thoroughly with soap and water. If skin irritation or rash occurs, get medical advice.</p> <p>If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists: Get medical attention.</p> <p>In case of fire, use dry chemical or foam extinguisher – NOT water stream</p>
Storage	Store in a tightly closed container in a cool well-ventilated area.
Disposal	Dispose of contents/container in accordance with local, state, and federal regulations.
Hazards not otherwise specified	Static Accumulator (50 picosiemens or less). This product can accumulate static charge by flow or agitation, and a static discharge could cause this product to ignite.

## Section 3 – Composition / Information on Ingredients

**Basic components:** This product is a complex combination of hydrocarbons obtained by the hydrodeoxygenation and catalytic hydroisomerization of animal fats and vegetable oils followed by distillative fractionation. It consists mostly of branched and linear paraffins having carbon numbers ranging from C<sub>9</sub> to C<sub>18</sub>.

Chemical Name	Common Name & Synonyms	CAS number	% of product
Fuels, diesel, C9-18-alkane branched & linear	Renewable Hydrocarbon Diesel, RHD, Renewable Diesel	1159170-26-9	79 – 95%
Fatty acids, C14-18 and C16-18-unsatd., Me esters	Methyl esters, biodiesel	67762-26-9	5 – 20%
Petroleum fuel oil	Diesel fuel	68476-30-2	<1%

## Section 4 – First-Aid Measures

### First-aid measures for exposure

Inhalation	If breathing difficulties develop, move victim away from source of exposure and into fresh air. Seek medical attention.
Skin	Take off contaminated clothing immediately and wash it before reuse. If on skin, wash thoroughly with soap and water. If skin irritation or rash occurs, get medical advice.
Eyes	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists: Get medical attention.
Ingestion	Aspiration Hazard: Do NOT induce vomiting. If swallowed: Immediately call a poison control center or physician.

### Most important symptoms / effects

Acute	Aspiration into the lungs can cause fatal chemical pneumonitis. If ingestion has occurred, assume there is a risk of aspiration into the lungs – especially if nausea or irritation occurs.
Delayed / Chronic	Repeated exposure may cause dryness and cracking of the skin.



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Indication of immediate medical attention

Aspiration into the lungs can cause fatal chemical pneumonitis. Treat symptomatically and supportively.

Special treatment needed, if necessary

No information available

## Section 5 – Fire-Fighting Measures

Suitable extinguishing media

Firefighting foam, dry chemical, carbon dioxide, or other clean extinguishing agents (such as Halon or Halotron). Water mist may be effective for extinguishing soaked oily materials if applied by experienced fire-fighting personnel.

Unsuitable extinguishing media

Do not use a solid water stream, as it may scatter and spread the fire

Specific hazards arising from the chemical

Static accumulator (50 picosiemens or less), unless performance additive has been added to mitigate static accumulation. This product can accumulate static charge by flow or agitation, and a static discharge could cause this product to ignite. This product can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, or mechanical/electrical equipment). Heated liquid can release vapors that may readily form flammable mixtures at or above its flash point. If container is not properly cooled, it can rupture in the heat of a fire.

Hazardous combustion products include

Carbon monoxide, carbon dioxide, nitrogen oxides, and hydrocarbons

Protective equipment and precautions for firefighters

Incipient stage fires may be controlled with a portable fire extinguisher. For fires beyond the incipient stage, evacuate all unnecessary personnel. Emergency responders in the immediate area should wear standard firefighting protective equipment, including self-contained breathing apparatus (SCBA) and full bunker gear. In case of external fires in proximity to storage containers, use water spray to keep containers cool, if it can be done safely. Prevent runoff from entering streams, sewers, storm drains, or drinking water supply.

## Section 6 – Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures

Keep all sources of ignition away from spill / release. The use of explosion-proof equipment is recommended. Wear protective garments, impervious oil resistant boots, protective nitrile gloves, and safety glasses. If product has been heated, wear appropriate thermal and chemical protective equipment. If splash is a risk, wear splash resistant goggles and face shield. Shut off source of spill, if safe to do so. Contain spill to the smallest area possible. Isolate immediate hazard area and remove all nonessential personnel. Prevent spilled product from entering streams, sewers, storm drains, unauthorized treatment drainage systems, and natural waterways. Place dikes far ahead of the spill for later recovery and disposal. Immediate cleanup of any spill is recommended. **If material spills into or upon any navigable waters and causes a film or sheen on the surface of the water, immediately notify the National Response Center at 1-800-424-8802.**

Methods for containment and clean-up

Small spill / incidental release

Small spills can be cleaned up with absorbent inert media (oil dri, sand, or earth), or absorbent pads. Use soapy water or degreaser to remove oily residue from the affected area, then rinse area with water. Place saturated materials in an appropriate oily waste container (metal can with a metal lid or an enclosed oily waste dumpster), and dispose of according to local, state, and federal regulations.

Large spill / release

A spill remediation contractor with oil booms and skimmers may be needed for larger spills or spills that come into contact with a waterway or sensitive wetland. Recover as much product as possible by pumping it into totes or similar intermediate containers. Remove any remaining product with absorbent inert media (oil dri, sand, or earth), or absorbent pads. Use soapy water or degreaser to remove oily residue from the affected area, then rinse area with water. Place saturated materials in



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an appropriate oily waste container (metal can with a metal lid or an enclosed oily waste dumpster), and dispose of according to local, state, and federal regulations.

## Other information

Materials saturated with this product, such as oily rags, used oil dri, soaked insulation pads, etc., may spontaneously combust due to product decomposition in the presence of oxygen. Place all such materials into appropriate oily waste containers (such as metal cans with metal lids or oily waste dumpsters with lids), and dispose of according to local, state, and federal regulations.

## Section 7 – Handling and Storage

### Precautions for safe handling

Open container slowly to relieve any pressure. When transferring product, use pipes, hoses, and tanks that are electrically bonded and grounded to prevent the accumulation of static electricity. This product can accumulate static charge by flow or agitation, and a static discharge could cause ignition. Use explosion-proof electrical equipment (ventilation, lights, material handling, etc...). Wash thoroughly after handling and before eating, drinking or using toilet facilities. Do not wear contaminated clothing or shoes. Keep contaminated clothing away from sources of ignition such as sparks or open flames.

“Empty” containers can retain residue that may be ignitable. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks or other sources of ignition. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

### Conditions for safe storage, including incompatibilities

Use and store this material in cool, dry, well ventilated areas away from all sources of ignition. Storage tanks should have an appropriate ventilation and pressure relief system. Store only in approved containers, and keep them tightly closed. Keep away from strong oxidizing agents, strong reducing agents, strong acids, and strong bases. Open containers should be carefully resealed and kept upright to avoid leakage. Protect the container against physical damage.

## Section 8 – Exposure Controls / Personal Protection

### Precautions for safe handling

### Component exposure limits

Component	CAS #	OSHA PEL	ACGIH TLV	Form	Weight %
Fuels, diesel, C <sub>9-18</sub> alkane branched & linear	1159170-26-9	None	None	Liquid, Vapor or Aerosol	78 – 95%
Unsaturated methyl esters	67762-26-9	None	None	Liquid	5 – 20%
Ultra low sulfur diesel	68476-30-2	None	100 mg/m <sup>3</sup> TWA	Vapor & Aerosol	<2%

### Appropriate engineering controls

Keep product enclosed in primary containment (hoses, pipes, tanks, etc.) to avoid contact with skin. Handle in accordance with good industrial hygiene and safety practices.

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Use sealed systems as far as possible. Adequate ventilation to control airborne concentrations



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below the exposure guidelines/limits. Local exhaust ventilation is recommended. Eye washes and showers should be available for emergency use. Firewater monitors and deluge systems are recommended. Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping. Define procedures for safe handling and maintenance of controls. Educate and train workers in the hazards and control measures relevant to normal activities associated with this product. Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation. Do not ingest. If swallowed then seek immediate medical assistance.

## Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

## Individual Protection Measures

### Personal protective equipment

#### Eyes / face

Chemical splash goggles are recommended. However, if a local risk assessment determines that chemical splash goggles may not be required, safety glasses should be selected to provide adequate eye protection. If splash potential exists, add the use of a face shield.

#### Skin

Wear disposable nitrile gloves for incidental contact. For more substantial contact, wear thicker nitrile or other similar oil-resistant gloves. Wear protective garments, such as a chemical apron, chemical resistant coveralls, or chemical resistant coat and pants, along with impervious oil-resistant boots. Remove soaked protective equipment, decontaminate with soapy water, and rinse thoroughly before reuse. Note: product will cause natural rubbers to degrade at a very rapid rate. Such protective equipment will need to be carefully inspected after decontamination to see if it is still in serviceable condition. Any defective or worn out equipment should be immediately discarded.

#### Respiratory

No exposure limits are available for this product as a mixture, but appropriate organic vapor or supplied air respiratory protection may be worn if irritation or discomfort is experienced. Where required, respiratory protection must be provided and used in accordance with all local, state, and federal regulations.

## Section 9 – Physical and Chemical Properties

<b>Appearance - Physical State:</b>	Liquid	<b>Appearance - Color:</b>	Clear to yellow/green tint ( <i>May also be colored red – if sold for off road use</i> )
<b>Odor:</b>	Odorless to mild paraffin	<b>Odor Threshold:</b>	No information available
<b>pH:</b>	No information available	<b>Melting/Freezing Point:</b>	No information available
<b>Boiling Point/Range:</b>	150-360° C (300-680° F)	<b>Flash Point:</b>	>60° C (>140° F)
<b>Evaporation Rate:</b>	No information available	<b>Flammability (solid/gas):</b>	No information available
<b>LFL:</b>	0.6%	<b>UFL:</b>	4.7%
<b>Vapor Pressure:</b>	<0.3 mmHg @ 20° C	<b>Vapor Density:</b>	>1 (air=1)
<b>Relative Density @ 15° C:</b>	0.77 - 0.82 g/ml	<b>VOC:</b>	No information available
<b>Solubility (H<sub>2</sub>O):</b>	Insoluble	<b>Solubility (other):</b>	No information available
<b>Auto Ignition Temp.:</b>	No information available	<b>Decomposition Temp.:</b>	No information available
<b>Viscosity (at 40° C):</b>	1.9 – 4.1 cP	<b>Partition coefficient (n-octanol/water) :</b>	No information available

## Section 10 – Stability and Reactivity

Reactivity	When handled and stored appropriately, no dangerous reactions are known
Chemical stability	Stable in closed containers at room temperature under normal storage and handling conditions. Hazardous polymerization will not occur.
Possibility of hazardous reactions	When handled and stored appropriately, no dangerous reactions are known.  If product is heated beyond its flash point, vapors can cause a flash fire.  See Sections 5 and 6 regarding spontaneous combustion of product-saturated absorbent materials.
Conditions to avoid	Ignition sources, accumulation of static electricity, heating product to its flash point, or allowing the product to cool below its melting point (otherwise it may solidify and not be transferable until it is reheated).
Incompatible materials	Keep away from strong oxidizing agents, strong reducing agents, strong acids, and strong bases.
Hazardous decomposition products	Carbon monoxides, carbon dioxide, nitrogen oxides, hydrocarbons, water vapor

## Section 11 – Toxicological Information

Likely routes of exposure	Absorption, ingestion, and inhalation
Symptoms	
Inhalation	Coughing or irritation (vapor, mist, or aerosols)
Ingestion	Nausea, vomiting, or feeling unwell
Skin contact	Redness, or irritation
Eye contact	Redness or irritation and tearing
Acute toxicity	
Oral	No information available
Dermal	No information available
Inhalation	No information available
Skin corrosion / irritation	No testing was available. However, prolonged or repeated skin contact may irritate the skin and produce dermatitis.
Serious eye damage / eye irritation	No testing was available. However, oil mist may irritate the eyes.
Sensitization ( <i>Respiratory or Skin</i> )	No information available
Germ cell mutagenicity	No information available
Carcinogenicity:	No information available



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Component carcinogenicity	No information was available for the listed components of this product. However, IARC, NTP, and NIOSH list diesel exhaust particulates as a possible carcinogen.
Reproductive / developmental toxicity	No information available
Specific target organ toxicity	No information available
Single exposure	No information available
Repeated exposure	No information available
Aspiration hazard	Due to kinematic viscosity below 5.0 cSt, OSHA regulations state this product may be fatal if it is swallowed and then enters the airways.

## Section 12 – Ecological Information

Acute ecotoxicity - short-term exposure	
Fish	No information available
Invertebrates	No information available
Algae	No information available
Persistence and degradability	No information available
Bioaccumulative potential	No information available
Mobility in soil	No information available
Other adverse effects	No information available

## Section 13 – Disposal Considerations

Disposal ( <i>waste / unwanted product</i> )	If the material is spilled to soil or water, characteristic testing of the contaminated materials is recommended. Further, this material, once it becomes a waste, may be subject to the land disposal restrictions in 40 CFR 268.40 and may require treatment prior to disposal to meet specific standards. Consult federal, state and local regulations to ensure they are followed.
Disposal ( <i>containers with residue</i> )	Container contents should be completely used and containers should be emptied prior to discarding. Containers must be disposed in compliance with federal, state, and local regulations. To assure proper disposal of empty containers, consult federal, state and local regulations and disposal authorities.

## Section 14 – Transport Information

	International	Domestic
ID Number	UN1202	NA1993
Proper Shipping Name	Diesel fuel	Combustible liquid, n.o.s. (Renewable Diesel)
Transport Hazard Class	3	Comb liq
Packing Group	III	III
Placard	Flammable Liquid	Flammable Liquid
Marine Pollutant	No	No
Transport in Bulk Requirements	242 (see 49 CFR §173.242)	241 (see 49 CFR §173.241)
Special Transportation Precautions	No information available	No information available
Special Note	This material may be reclassified as a combustible liquid (49 CFR 173.120(b))	
Shipping Label		
Placard (Shipment by truck or rail in bulk)		

## Section 15 – Regulatory Information

### Inventory Listings

DSL  Listed  Exempt  
 TSCA  Listed  Exempt

### U.S. Federal Regulations

**CERCLA:** This material, as supplied, does contain some substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). Although there is a “petroleum exclusion” clause which exempts crude oil (along with fractions of crude oil and products – both finished and intermediate) from the CERCLA 103 reporting requirements, there may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**Clean Water Act:** This product contains chemical(s) regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

### SARA 311/312 Hazard Categories:

Hazard Class	Hazard Category
Skin Irritation	Category 2
Eye Irritation	Category 2A
Aspiration Hazard	Category 1
Flammable Liquid	Category 4



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## U.S. State Regulations

### California Proposition 65:

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations:** This product does not contain chemicals listed in U.S. State Right-to-Know Regulations.

## Section 16 – Other Information

Issuing Date: Jan 31, 2017

Revision Date: March 9, 2020

Version #: 20200309

Revision Note: Modified the CAS number for methyl esters in Section 3.

WARNING: POTENTIALLY HAZARDOUS MATERIAL. IMPROPER USE OR MISHANDLING CAN RESULT IN SERIOUS INJURY OR DEATH. THIS PRODUCT CONTAINS SUBSTANCES WHICH, IF MODIFIED, MAY BE FLAMABLE AND MAY BURN OR EXPLODE IF HEATED OR EXPOSED TO FLAME OR OTHER IGNITION SOURCE OR WATER, OXIDIZING AGENTS, ACIDS OR OTHER CHEMICALS. AVOID INGESTION, INHALATION AND CONTACT WITH SKIN AND EYES.

### Disclaimer:

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of SDS**