

PACK SIZES
AVAILABLE

20 LITRES
200 LITRES
1000 LITRES
10,000 LITRES
20,000 LITRES

TECHNICAL SUPPORT

Chemiphase will offer on-site technical support during all stages of production. Technical support includes on-site testing and results.

PRODUCT SAFETY

All Chemiphase products are thoroughly researched and tested. All products are also COSHH registered and come complete with delivery.

For more information on any of our products or services please visit us on the Web at:

www.chemiphase.co.uk

Phone :
(08456) 432900
Email :

sales@chemiphase.co.uk

Coldflow 350

Biodiesel Pour Point Additive for UCO, RME, SME Biodiesel Blends



PRODUCT DESCRIPTION

Chemiphase are proud to launch our latest development in biodiesel technology, a cold flow improver designed for biodiesel's produced from blends of Rapeseed Oil, Used Cooking Oils, Palm and Soybean Oil.

Coldflow 350 will provide cold weather protection and improve performance of storage and stability in biodiesels produced from blends of all ester based fuels.

Coldflow 350 will significantly improve the point at which biodiesel made from Rapeseed, Used Cooking Oils, Waste Vegetable Oil blends start to cloud and then gel causing serious fuel problems such as fuel gelling up completely and engine not starting / fuel filters blocking / fuel pump failure etc.

It is well documented Biodiesel will cloud like petroleum diesel fuel when the weather gets cold and gel. Initially we see little crystals of wax forming and these crystals will begin to clog fuel filters.

When it becomes colder still, the biodiesel will form into a gel that will eventually set solid in the fuel tank.

To achieve the best results possible with Coldflow 350 we recommend in house testing. Depending on the type of oils used to make your biodiesel the pour point of the biodiesel will vary due to quality of the produced fuel, i.e. virgin vegetable oils have a lower pour-point than used cooking oil mixtures.



CHEMIPHASE
INTERNATIONAL

PRODUCT RANGE :

BIODIESEL ADDITIVE'S

ALLKLEAR 400

Biodiesel antioxidant to control oxidation levels in biodiesel which can cause degradation and damage to tank storage.

BIO-CONTROL 41

Biodiesel biocide to control micro-biological growth in biodiesel.

BIOBOOST 1000

Biodiesel cetane enhancing product which increase performance and efficiency.

PH CORRECT

pH correction agent to control the pH of the biodiesel after the reaction stage.

COLDFLOW 402

Pour point additive designed for heavy oils like PME, SME, Tallow.

CITRACLEAN

Excellent cleaning detergent for areas where oil staining and greasy floors are a problem.

Coldflow 350

How biodiesel is made

MIXING OF METHANOL AND CATALYST
A catalyst, typically sodium hydroxide, is dissolved in methanol (wood alcohol).

REACTION

The methanol/catalyst mix and oil or fat are added together and heated, producing a reaction called "transesterification," which results in two major products: glycerin and biodiesel. Technically, biodiesel is methyl esters.

SETTLING

Glycerin is much more dense than biodiesel, and the two can be gravity-separated, with glycerin simply drawn off the bottom of the settling vessel.

WASH

Biodiesel must be washed with water to remove contaminants. Water is heavier than biodiesel and absorbs the excess methanol, sodium hydroxide and soap suspended in it. After washing and settling, the water can be drained from the bottom of the container. Several wash cycles are generally needed.

METHANOL RECOVERY

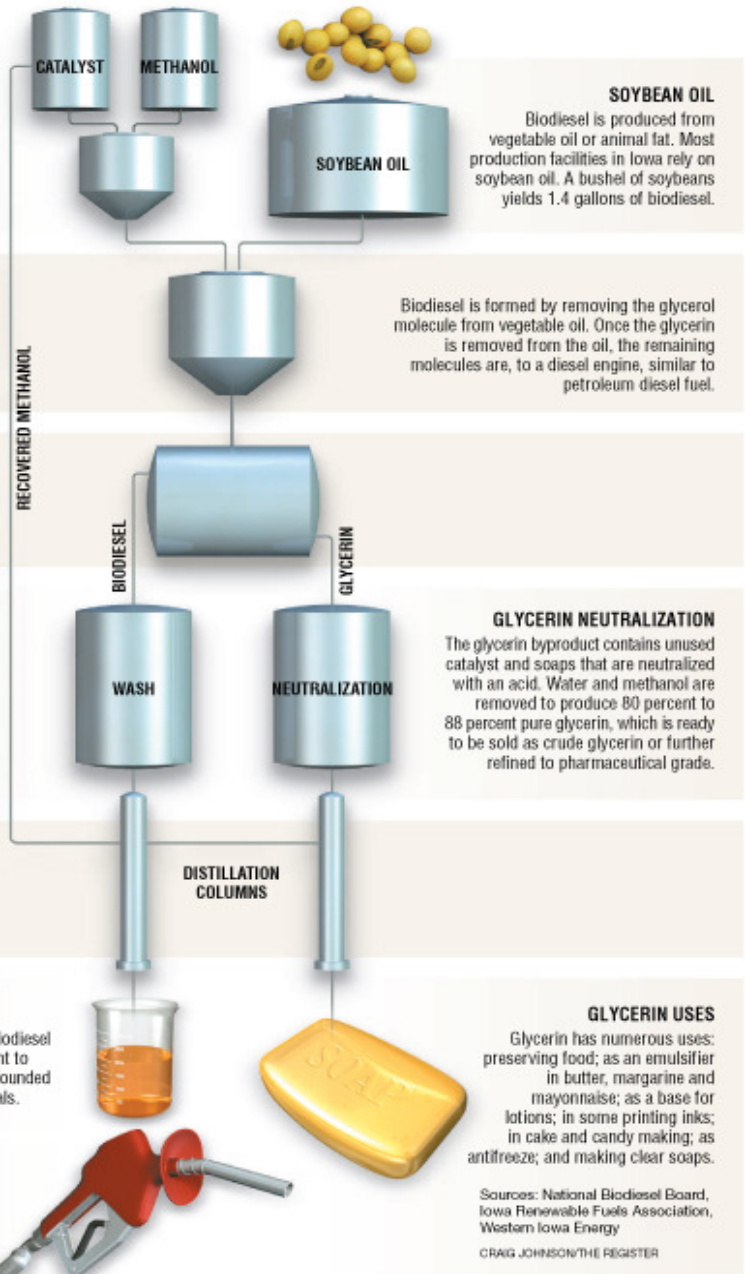
Excess methanol remaining in the biodiesel and glycerin are removed through distillation and recycled for reuse.

PRODUCT QUALITY AND REGISTRATION

Prior to use as a commercial fuel, the finished biodiesel must be analyzed using sophisticated equipment to ensure it meets ASTM specifications. ASTM was founded as the American Society for Testing and Materials.

FINAL PRODUCT

The finished biodiesel is shipped to fuel distributors by rail or truck, to be sold as pure biodiesel or blended with petroleum diesel.



Coldflow 350 Application

Coldflow 350 is mixed into solution after the distillation of the biodiesel occurs. For maximum results the biodiesel must be 5°C above the cloud point (point at which the biodiesel begins to cloud up in cold temperatures) of the fuel before the Coldflow 350 is added. Once the correct dosage rate has been added the solution must then be thoroughly mixed to ensure product effectiveness. For best practices a re-circulation pump is sufficient to turn the tank round and mix the product into solution. For customers who resin wash instead of water washing: - The Coldflow 350 can be added before the biodiesel is passed through the resin towers. Again the temperature must be 5°C above the cloud point of the fuel.

Coldflow 350

Test Methods :

Pour Point – ASTM D5950 (Deg C)

CFPP – ASTM D6371 (Deg C)

PACK SIZES

AVAILABLE

20 LITRES

200 LITRES

1000 LITRES

10,000 Tanker

20,000 Tanker

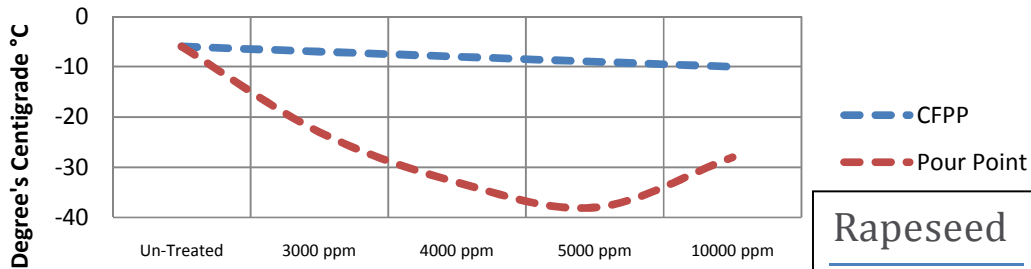
TECHNICAL SUPPORT

Chemiphase will offer on-site technical support during all stages of production. Technical support includes on-site testing.

DISCLAIMER :

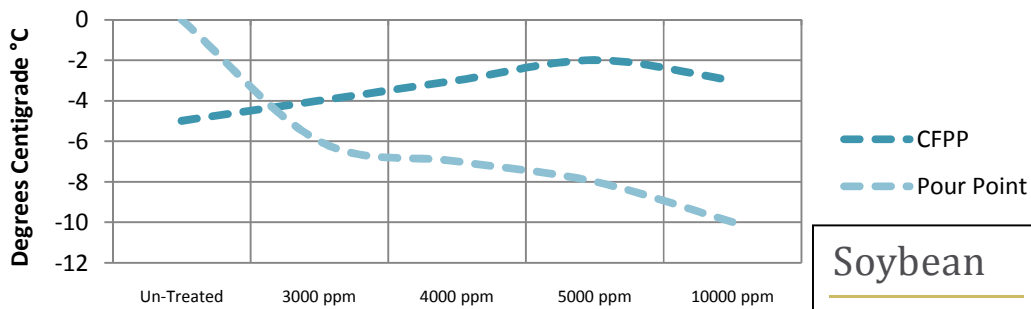
The information and all further technical advice are based on our present knowledge and experience. However, they imply no liability or other legal responsibility on our part, including with regards to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied of guarantee of product properties is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out by qualified experts in the sole responsibility of the customer.

Coldflow 350 - CFPP Test + Pour Point Test on Rapeseed Methyl Esters



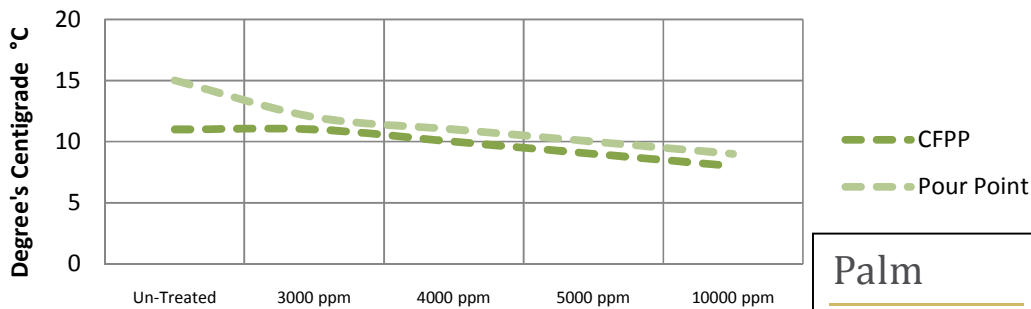
Rapeseed

Coldflow 350 - CFPP + Pour Point Test on Soy Methyl Ester



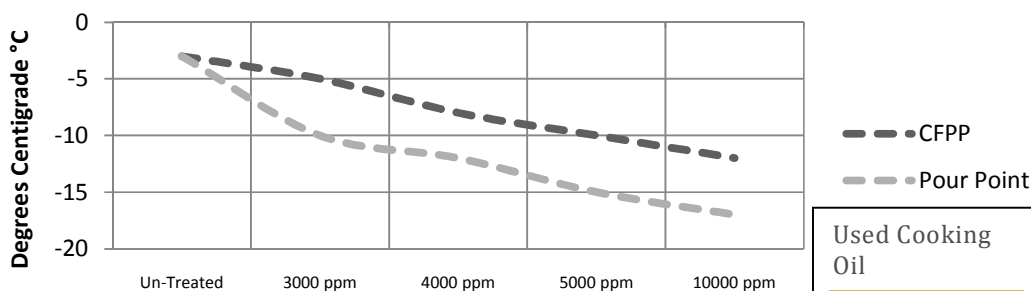
Soybean

Coldflow 350 - CFPP + Pour Point Test on Palm Methyl Esters



Palm

Coldflow 350 - CFPP + Pour Point Test on Used Cooking Oil Methyl Esters



Used Cooking Oil

CHEMIPHASE LTD
SAFETY DATA SHEET
COLDFLOW 350



CHEMIPHASE
INTERNATIONAL

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY UNDERTAKING

PRODUCT NAME: COLDFLOW 350

PRODUCT Description: Biodiesel Additive - **NEW FORMULATION NOVEMBER 2015**

APPLICATION BIODIESEL

SUPPLIER Chemiphase International Ltd
 PO Box 168
 Ormskirk
 L40 6ZX
 Tel: 00 44 8456 932 400
 Fax: 00 44 1744 886633

EMERGENCY TELEPHONE (24 HR) 00 44 (0) 1744 886622

2. COMPOSITION INFORMATION ON INGREDIENTS

NAME	EU No	CAS No	PERCENTAGE BY WEIGHT	CLASSIFICATION
TOLUENE	203-625-9	Confidential	2%	R11 R38 R48/20 R63 R65 R67

The Full Text for all R- Phrases are displayed in Section 16

3. HAZARDS IDENTIFICATION

Symbol(s) Not applicable

Product Classification Not applicable

4. FIRST AID MEASURES

GENERAL INFORMATION

Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

INHALATION

Remove exposed person to fresh air if adverse effects are observed. If breathing is laboured administer oxygen. If breathing has stopped, Apply artificial respiration. If irritation persists or if toxic symptoms are observed, get medical attention.

INGESTION

DO NOT INDUCE VOMITTING. If conscious, give 2 glasses of water. Get immediate medical attention.

SKIN CONTACT

Wash with soap and water. Remove contaminated clothing. Get medical attention if irritation develops. Launder contaminated clothing before reuse.

EYE CONTACT

Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eyelids. Continue to rinse for at least 15 minutes and get medical attention.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Use: Dry chemical, Carbon dioxide (CO₂) or foam. Water can be used to cool and protect exposed material.

FLASH POINT

>61 °C, 141.8 °F PMCC (Minimum)

FIRE FIGHTING PROCEDURES

Recommend wearing self-contained breathing apparatus. Water may cause splattering.

UNUSUAL FIRE & EXPOSURE HAZARDS

Vapours may be heavier than air and may travel along the ground to a distant ignition sources and flash back. Container may rupture on heating.

6. ACCIDENTAL RELEASE MEASURES

SPILL PROCEDURES

Evacuate all non-essential personnel. Personal Protective Equipment must be worn, see Personal Protection Section for PPE recommendations. Remove sources of ignition. Ventilate spill area. Prevent entry into sewers and waterways. Pick up free liquid for recycle and/or disposal. Residual liquid can be absorbed on inert material. Check under Transportation and Labelling (DOT/CERCLA) and other Regulatory Information Section (SARA) for hazardous substances to determine regulatory reporting requirements for spills.

7. HANDLING AND STORAGE

PUMPING TEMPERATURE Not determined.
MAXIMUM HANDLING TEMPERATURE 55 °C, 131 °F
HANDLING PROCEDURES Keep away from potential sources of ignition. Open container in a well ventilated area. Avoid breathing vapours. Keep containers closed when not in use. Wash thoroughly after handling. Empty containers retain material residue. Do not cut, weld, braze, solder, drill, grind or expose containers to heat, flames, spark or other sources of ignition.
MAXIMUM STORAGE TEMPERATURE 45 °C, 113 °F
STORAGE PROCEDURES Do not store near potential sources of ignition. Store in well ventilated place.
LOADING TEMPERATURE 110 °C, 230 °F

8. EXPOSURE CONTROL/PERSONAL PROTECTION

EXPOSURE LIMITS - EU

Name	CAS No.	LONG TERM (8 Hours T.W.A.)	SHORT TERM (15 mins.)
TOLUENE	108-88-3	50 ppm (s)	N/E

UK
Not applicable.

- (s) Skin exposure
- (p) Proposed limit
- (c) Ceiling exposure
- (l) Recommended exposure limit
- (u) Supplier recommended exposure limit
- (N/E) – None established

OTHER EXPOSURE LIMITS: Contains mineral oil. Under conditions which may generate mists, observe the OSHA PEL of 5 mg per cubic meter, ACGIH STEL of 10 mg per cubic metre

ENGINEERING CONTROLS: Use local exhaust ventilation to control mists or vapours. Additional ventilation or exhaust may be required to maintain air concentrations below recommended exposure limits.

HAND PROTECTION: Nitrile

EYE PROTECTION: Safety glasses. If potential for splash or mist exists, wear chemical goggles or faceshield.

RESPIRATORY PROTECTION: Use full face respirator with a combination organic vapour and high efficiency filter cartridge if the recommended exposure limit is exceeded. Use self-contained breathing apparatus for entry into confined space, for other poorly ventilated areas and for large spill clean-up sites.

CLOTHING RECOMMENDATION: Long sleeve shirt is recommended. Wear either a chemical protective suit or apron when potential for contact with material exists. Launder contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Flash Point >61 °C, 141.8 °F PMCC (Minimum)
Upper Flammable Limit Not determined
Lower Flammable Limit Not determined
Autoignition Point Not determined
Explosion Data Material does not have explosive properties
Vapour Pressure 0.0001 mm Hg (20 °C)
0.0046 mm Hg (77 °C)
pH Not Determined
Specific Gravity 0.92 (15.6 °C)
Bulk Density Not Determined
Water Solubility Insoluble
Percent Solid Not Determined
Percent Volatile Unknown
Percent VOC Not Determined
Vapour Density Not Determined
Evaporation Rate Not Determined
Odour Mild

Appearance	Amber coloured liquid
Viscosity	6000 Centistokes (40 °C) 660 Centistokes (100 °C)
Odour Threshold	Unknown
Boiling Point	Not Determined
Pour Point Temperature	Not Determined
Melting/freezing Point	Not Determined

The above data are typical values and do not constitute a specification

10. STABILITY AND REACTIVITY

STABILITY	Material is normally stable at moderately elevated temperatures and pressures.
DECOMPOSITION TEMPERATURE	Not Determined
INCOMPATIBILITY	Strong oxidising agents
THERMAL DECOMPOSITION	Smoke, carbon monoxide, carbon dioxide, aldehydes and other products of incomplete combustion.

11. TOXICOLOGICAL INFORMATION

-ACUTE EXPOSURE-

EYE IRRITATION	Weak to moderate eye irritant. Does not meet EU R36 criteria. Based on data from components and similar materials.
SKIN IRRITATION	May cause skin irritation, based on data from components or similar materials. Not expected to meet EU R38 criteria. Prolonged or repeated skin contact as from clothing wet with material may cause dermatitis. Symptoms may include redness, edema, drying, and cracking of the skin.
RESPIRATORY IRRITATION	Nose, throat and lung irritant. Based on data from components or similar materials.
DERMAL TOXICITY	The LD50 in rabbits is >5000 mg/kg. Based on data from components or similar materials. Components of this material are absorbed through the skin.
INHALATION TOXICITY	High concentrations may cause headaches, dizziness, nausea, stupor, and other central nervous system effects leading to visual impairment, difficulty breathing and convulsions.
ORAL TOXICITY	The LD50 in rats is > 5000 mg/kg. Based on data from components or similar materials.
DERMAL SENSITISATION	No data available to indicate product or components may be a skin sensitiser.
INHALATION SENSITISATION	No data available to indicate product or components may be respiratory sensitiser.

-CHRONIC EXPOSURE-

CHRONIC TOXICITY	Repeated overexposure to toluene may cause loss of appetite, liver enlargement, and kidney and lung damage. Repeated inhalation of hydrocarbon solvents such as toluene can cause chronic neurological disturbances.
CARCINOGENICITY	This product is formulated with mineral oils which are considered to be severely refined and not considered to be carcinogenic under IARC. All of the oils in this product have been demonstrated to contain less than 3% extractables by the IP 346 test.
MUTAGENICITY	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
REPRODUCTIVE TOXICITY	No data available to indicate either product or components present at greater than 0.1% that may cause reproductive toxicity.
TERATOGENICITY	Prolonged and repeated exposure of pregnant animals to toluene by inhalation has been reported to cause adverse fetal development effects.
OTHER	No other health hazards known.

12. ECOLOGICAL INFORMATION

-ENVIRONMENTAL TOXICITY-

FRESHWATER FISH TOXICITY	The acute LC50 is > 1000 mg/L based on similar products
FRESHWATER INVERTEBRATES TOXICITY	Not Determined.
ALGAE TOXICITY	Not Determined.
SALTWATER FISH TOXICITY	Not Determined.
SALTWATER INVERTEBRATES TOXICITY	Not Determined.
BACTERIA TOXICITY	The acute EC50 is >1000 mg/L based on similar products
MISCELLANEOUS TOXICITY	Not Determined.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL	This material, if discarded, should not be considered a European hazardous waste.
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14. TRANSPORT INFORMATION

Harmonised Code	270730
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ICAO/IATA (International)	Not regulated
IMDG	Not regulated
IMDG EMS Fire	Not applicable
IMDG EMS Spill	Not applicable
IMDG MFAG	Not applicable
IMO Marine Vessel	DO NOT TRANSPORT – ADDITIONAL INFORMATION REQUIRED
USCG Compatability	Not determined
ADR/RID	Not regulated
ADR/RID Hazard ID No.	Not applicable

Review classification requirements before shipping materials at elevated temperatures

15. REGULATORY INFORMATION

SYMBOL(s)	Not applicable
INDICATION OF DANGER	Not applicable
PRECAUTIONARY LABELS	Not applicable
OTHER LABEL INFORMATION	None
RELEVANT R PHRASES	R11 – Highly flammable R38 - Irritating to skin R48/20 – Harmful: danger of serious damage to health by prolonged exposure through inhalation R63 – Possible risk of harm to the unborn child R65 – Harmful: may cause lung damage if swallowed R67 – Vapours may cause drowsiness or dizziness

UK REGULATORY REFERENCES
Approved Supply List

STATUTORY INSTRUMENTS
Chemicals (Hazard Information and Packaging) Regulations
APPROVED CODE OF PRACTICE
Classification and Labelling of Substances and Preparations Dangerous for Supply. Safety Data Sheets for Substances and Preparations.

GUIDANCE NOTES
Occupational Exposure Limits EH40. Approved guide to the classification and labelling of substances and preparations dangerous for supply.

16. OTHER INFORMATION

REVISION COMMENTS
General revision

ISSUED BY
CES

REVISION DATE MARCH 2015

REVISED SDS GENERATED NOVEMBER 2010

DISCLAIMER

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not being considered 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 materials or in any process unless specified in the text.