

1. Product and Company Identification

Product Code:	C19, C20, C1955	
Product Name:	Motor Flush	
Company Name:	CYCLO INDUSTRIES, INC. 902 SOUTH US HIGHWAY 1 JUPITER, FL 33477	Phone Number: (800)843-7813
Web site address:	www.cyclo.com	
Email address:	ehs@cyclo.com	
Emergency Contact:	First Aid Emergency CHEMTREC (800) 424-9300	(800)752-7869 001 (703)527-3887
Information:	First Aid Emergency (Outside U.S.)	001 (312)906-6194
Intended Use:	Motor Flush	

2. Hazards Identification

Flammable Liquids, Category 4
Aspiration Toxicity, Category 1
Skin Corrosion/Irritation, Category 2
Serious Eye Damage/Eye Irritation, Category 2
Acute Toxicity: Inhalation, Category 4
Specific Target Organ Toxicity (single exposure), Category 3
Carcinogenicity, Category 2
Specific Target Organ Toxicity (repeated exposure), Category 2
Aquatic Toxicity (Acute), Category 3



GHS Signal Word:	Danger
GHS Hazard Phrases:	H227: Combustible liquid. H304: May be fatal if swallowed and enters airways. H315: Causes skin irritation. H320: Causes eye irritation. H332: Harmful if inhaled. H335: May cause respiratory irritation. H351: Suspected of causing cancer. H402: Harmful to aquatic life.
GHS Precaution Phrases:	P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P210: Keep away from heat/sparks/open flames/hot surfaces - No smoking. P261: Avoid breathing dust/fume/gas/mist/vapors/spray. P263: Wash contaminated clothing before reuse. P264: Wash hands thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P271: Use only outdoors or in a well-ventilated area. P273: Avoid release to the environment. P280: Wear protective gloves/protective clothing/eye protection/face protection.
GHS Response Phrases:	P370+378: In case of fire, use foam, alcohol foam, carbon dioxide, dry chemical or water fog for extinction. P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. P301+330+331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P363: Wash contaminated clothing before reuse.
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P309+311: Call a POISON CENTER or doctor/physician if exposed or you feel unwell.

GHS Storage and Disposal Phrases:

P403+P233+P235: Keep in a cool/well ventilated space. Keep container tightly closed.
P405: Store locked up.
P501: Dispose of contents/container in accordance with local/regional/national/international regulation.

3. Composition/Information on Ingredients

CAS #	Hazardous Components (Chemical Name)	Concentration
68476-30-2	Fuel oil, no. 2	85.0 -100.0 %
91-20-3	Naphthalene	0.1 -1.0 %

4. First Aid Measures

Emergency and First Aid Procedures:

If swallowed, do not induce vomiting. Rinse mouth. If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult give oxygen. In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. In case of skin contact, remove contaminated clothing and launder before reuse. Wash with soap and water for 15 minutes. Call physician immediately if adverse reaction occurs.

5. Fire Fighting Measures

Flash Pt: 65.00 C (149.0 F) Method Used: Pensky-Marten Closed Cup
Explosive Limits: LEL: N.D. UEL: N.D.
Autoignition Pt: NA
Suitable Extinguishing Media: Dry chemical, water fog, CO2 or foam.
Fire Fighting Instructions: Use NIOSH/MSHA approved positive pressure self-contained breathing apparatus when any material is involved in a fire.
Flammable Properties and Hazards: Avoid using straight water streams. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and spray from as far a distance as possible. Avoid excessive water spray application. Keep surrounding area cool with water spray from a distance and prevent further ignition of combustible material. Keep run-off out of sewers and water sources.

This product has been determined to be a combustible liquid per the OSHA Hazard Communication Standard and should be handled accordingly. For additional fire related information, see NFPA 30 or the North American Emergency Response Guide 128.

Hazardous Combustion Products:

No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled: Keep public away. Isolate and evacuate area. Shut off source if safe to do so. Eliminate all ignition sources. Advise authorities and National Response Center if substance has entered a watercourse or sewer. Notify local health and pollution control agencies, if appropriate. Contain liquid with sand or soil. Recover and return free product to proper containers. Use suitable absorbent materials such as vermiculite, sand, or clay to clean up residual liquids.

7. Handling and Storage

Precautions To Be Taken in Handling: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces - No smoking. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash contaminated clothing before reuse. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Keep out of the reach of children.

Precautions To Be Taken in Storing: Store locked up. Keep in a cool/well ventilated space. Keep container tightly closed.

8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
68476-30-2	Fuel oil, no. 2	No data.	TLV: 100 mg/m3	No data.
91-20-3	Naphthalene	PEL: 10 ppm	TLV: 10 ppm STEL: 15 ppm	No data.

CAS #	Chemical Name	Jurisdiction	Recommended Exposure Limits	Notations
68476-30-2	Fuel oil, no. 2	Ontario, CA	TWA: 100 mg/m3 (Inhalable aerosol and vapor)	
91-20-3	Naphthalene	Austria	TWA: 52 mg/m3 (10 ppm) STEL: 79 mg/m3 (15 ppm)	
		California, USA PELs	TWA: 10 ppm STEL: 15 ppm	
		Ontario, CA	TWA: 10 ppm STEL: 15 ppm	
		China	TWA: 50 mg/m3 STEL: 75 mg/m3 (15 min)	
		Québec, CA	TWA: 52 mg/m3 (10 ppm) STEL: 79 mg/m3 (15 ppm)	
		Europe	TWA: 50 mg/m3 (10 ppm)	
		Mexico OEL	TWA: 50 mg/m3 (10 ppm) STEL: 75 mg/m3 (15 ppm)	
		NIOSH	TWA: 50 mg/m3 (10 ppm) STEL: 75 mg/m3 (15 ppm)	
		New Zealand	TWA: 52 mg/m3 (10 ppm) STEL: 79 mg/m3 (15 ppm)	

Respiratory Equipment (Specify Type):	Use approved organic vapor chemical cartridge or supplied air respirators when material produces vapors that exceed permissible limits or excessive vapors are generated. Observe respirator protection factor criteria cited in ANSI Z88.2. Self-contained breathing apparatus should be used for fire fighting.
Eye Protection:	No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields.
Protective Gloves:	Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride and polyurethane gloves to prevent skin contact.
Other Protective Clothing:	No data available.
Engineering Controls (Ventilation etc.):	Local or general exhaust required when using at elevated temperatures that generate vapors or mists.
Work/Hygienic/Maintenance Practices:	No special protective clothing is normally required. Select protective clothing depending on industrial operations. Use Mechanical ventilation equipment that is explosion-proof.

9. Physical and Chemical Properties

Physical States:	[] Gas [X] Liquid [] Solid
Appearance and Odor:	Clear, red liquid with petroleum odor.
pH:	NA
Melting Point:	NA
Boiling Point:	360.00 F (182.2 C) - 550.00 F (287.8 C)
Flash Pt:	65.00 C (149.0 F) Method Used: Pensky-Marten Closed Cup
Evaporation Rate:	NA
Flammability (solid, gas):	No data available.
Explosive Limits:	LEL: N.D. UEL: N.D.
Vapor Pressure (vs. Air or mm Hg):	NA
Vapor Density (vs. Air = 1):	NA
Specific Gravity (Water = 1):	.727 - .859
Density:	6.06 - 7.16 LB/GA at 70.0 F (21.1 C)
Solubility in Water:	Negligible
Saturated Vapor Concentration:	NA
Octanol/Water Partition Coefficient:	No data.
Percent Volatile:	10.0 % by weight.
Autoignition Pt:	NA
Decomposition Temperature:	No data.
Viscosity:	NA

10. Stability and Reactivity

Stability:	Unstable [] Stable [X]
Conditions To Avoid - Instability:	This material is stable at 70 F, 760 mm pressure.
Incompatibility - Materials To Avoid:	Strong oxidizers such as nitrates, perchlorates, chlorine, fluorine.
Hazardous Decomposition or Byproducts:	Combustion produces carbon monoxide, aldehydes, aromatic and other hydrocarbons.
Possibility of Hazardous Reactions:	Will occur [] Will not occur [X]
Conditions To Avoid -	No data available.

Hazardous Reactions:

11. Toxicological Information

Toxicological Information:

Lifetime skin painting studies in animals with similar distillate fuels have produced weak to moderate carcinogenic activity following prolonged and repeated exposure. Similar middle distillates, when tested at nonirritating dose levels, did not show any significant carcinogenic activity indicating that this tumorigenic response is likely related to chronic irritation and not to dose. Repeated dermal application has produced severe irritation and systemic toxicity in subacute toxicity studies. Some components of this product, have been shown to produce a species specific, sex hormonal dependent kidney lesion in male rats from repeated oral or inhalation exposure. Subsequent research has shown that the kidney damage develops via the formation of a alpha-2u-globulin, a mechanism unique to the male rat. Humans do not form alpha-2u-globulin, therefore, the kidney effects resulting from this mechanism are not relevant in humans. Some components of this product were found to be positive in a few mutagenicity tests while negative in the majority of others. The exact relationship between these results and human health is not known.

Summary of health effect data on distillate fuel components:

This products sub-components may contain >.01% naphthalene. Exposure to naphthalene at 30 pm for two years caused lung tumors in female mice. Male mice with the same exposure did not develop tumors. Exposure to 10-60 ppm naphthalene for 2 years caused tumors in the tissue lining of the nose and respiratory tract in male and female rats. Oral administration of 133-267 mg/kg/day of naphthalene in mice for up to 90 days did not produce mortality, systemic toxicity, adversely affect organ or body weight or produce changes in blood. Repeated oral administration of naphthalene produced an anemia in dogs. Repeated intraperitoneal doses of naphthalene produced lung damage in mice. Repeated high doses of naphthalene has caused the formation of cataracts and retinotoxicity in the eyes of rats and rabbits due to accumulation of 1,2-naphthoquinone, a toxic metabolite. Effects in human eyes is uncertain and not well documented. Pregnant rats administered intraperitoneal doses of naphthalene during gestation gave birth to offspring that had delayed heart and bone development. Pregnant mice given near lethal doses of naphthalene showed no significant maternal toxicity and a reduction in the number of pups per litter, but no gross abnormalities in offspring. Suppressed spermiogenesis and progeny development have been reported in mice, rats and guinea pigs after exposure to high concentrations of naphthalene in their drinking water. Certain groups or individuals, i.e., infants, Semites, Arabs, Asians and Blacks, with a certain blood enzyme deficiency (glucose-6-phosphate dehydrogenase) are particularly susceptible to hemolytic agents and can rapidly develop hemolytic anemia and systemic poisoning from ingestion or inhalation of naphthalene.

CAS# 68476-30-2:

Other Studies:, TDLo, Skin, Species: Rabbit, 100.0 ML/KG, 12 D.

Results:

Skin and Appendages: Skin: After systemic exposure: Dermatitis, irritative.

Nutritional and Gross Metabolic:Weight loss or decreased weight gain.

Related to Chronic Data - death.

- "Toxicology of Petroleum Hydrocarbons, Proceedings of the Symposium, 1st, 1982,"

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MacFarland, H.N., et al., eds., Washington, DC, American Petroleum Institute, 1983
Volume, Vol/p/yr: 1,1, 1983

Acute toxicity, LD50, Oral, Rat, 12.00 GM/KG.

Results:

Behavioral: Somnolence (general depressed activity).

- Advances in Modern Environmental Toxicology., Senate Press, Inc., P.O. Box 252,
Princeton Junction, NJ 08550, Vol/p/yr: 6,1, 1984

Acute toxicity, LD (Lethal dose), Skin, Species: Rabbit, > 5.000 GM/KG.

Results:

Behavioral: Tremor.

Behavioral: Convulsions or effect on seizure threshold.

- Advances in Modern Environmental Toxicology., Senate Press, Inc., P.O. Box 252,
Princeton Junction, NJ 08550, Vol/p/yr: 6,1, 1984

Tumorigenic Effects:, TDLo, Skin, Mouse, 243.0 GM/KG, 97 W.

Results:

Tumorigenic: Carcinogenic by RTECS criteria.

Skin and Appendages: Other: Tumors.

- Fundamental and Applied Toxicology., Academic Press, Inc., 1 E. First St., Duluth, MN
55802, Vol/p/yr: 9,297, 1987

Standard Draize Test, Skin, Species: Rabbit, 500.0 MG, 24 H, Moderate.

Results:

Brain and Coverings: Changes in surface EEG.

- "Toxicology of Petroleum Hydrocarbons, Proceedings of the Symposium, 1st, 1982,"
MacFarland, H.N., et al., eds., Washington, DC, American Petroleum Institute, 1983
Volume, Vol/p/yr: 1,1, 1983

Standard Draize Test, Eyes, Species: Rabbit, 100.0 MG, 30 S, Mild.

Results:

Behavioral: Somnolence (general depressed activity).

- "Toxicology of Petroleum Hydrocarbons, Proceedings of the Symposium, 1st, 1982,"
MacFarland, H.N., et al., eds., Washington, DC, American Petroleum Institute, 1983
Volume, Vol/p/yr: 1,1, 1983

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
68476-30-2	Fuel oil, no. 2	n.a.	2B	A3	n.a.
91-20-3	Naphthalene	Possible	2B	A4	n.a.

12. Ecological Information

General Ecological Information:

Product can cause fouling of shoreline and may be harmful to aquatic life in low concentrations. The 96 hour LL50 values for an accomadated fraction (WAF) of fuel oil ranged from 3.2 to 65 mg/l in fish and 2-210 mg/l in invertebrates. EL 50 values for inhibition of algal growth ranged from 1.8 to 2.9 mg/l for No. 2 fuel oil and from 10 to 78 mg/l for diesel fuel. This product does not concentrate or accumulate in the food chain. If released to soil and water, this product is expected to biodegrade under both aerobic and anaerobic conditions.

Environmental Hazards: TOXIC TO AQUATIC ORGANISMS. MAY CAUSE

LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.

Environmental Fate: THIS PRODUCT CONTAINS COMPONENTS WHICH MAY BE PERSISTENT IN THE ENVIRONMENT.

13. Disposal Considerations

Waste Disposal Method: Dispose of contents/container in accordance with local/regional/national/international regulation.

14. Transport Information

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not-Regulated

DOT Hazard Class:

UN/NA Number:

LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name: Not-Regulated

UN Number:

Hazard Class:

MARINE TRANSPORT (IMDG/IMO):

IMDG/IMO Shipping Name: Not-Regulated

UN Number:

Hazard Class:

Packing Group:

IMDG MFAG Number:

Marine Pollutant: No

IMDG EMS Page:

AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Not-Regulated

15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
68476-30-2	Fuel oil, no. 2	No	No	No
91-20-3	Naphthalene	No	Yes 100 LB	Yes

CAS # Hazardous Components (Chemical Name)

Other US EPA or State Lists

68476-30-2	Fuel oil, no. 2	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; FIFRA: Yes - Active - 063505, Inert: NF; FDA/DEA CSA: No; CA PROP.65: No; CA TAC, Title 8: No; MA Oil/HazMat: No; MI CMR, Part 5: No; NC TAP: No; NJ EHS: No; NY Part 597: No; PA HSL: No; SC TAP: No; WI Air: No
91-20-3	Naphthalene	CAA HAP,ODC: HAP; CWA NPDES: Yes; TSCA: Yes - Inventory, 8A PAIR; FIFRA: Yes - Active - 055801, Inert: NF/Fr; FDA/DEA CSA: No; CA PROP.65: Yes: Canc.; CA TAC, Title 8: TAC, Title 8; MA Oil/HazMat: Yes; MI CMR, Part 5: Part 5; NC TAP: Yes; NJ EHS: Yes - 1322; NY Part 597: Yes; PA HSL: Yes - E; SC TAP: Yes; WI Air: Yes

CAS # Hazardous Components (Chemical Name)

International Regulatory Lists

68476-30-2	Fuel oil, no. 2	Canadian DSL: Yes; Canadian NDSL: No; Mexico INSQ: No; Australia ICS: Yes; New Zealand IOC: Yes; China IECSC: Yes; Japan ENCS: Yes - 9-1700; Japan ISHL: No; Korea ECL: Yes - KE-17285; Philippines ICCS: Yes; Taiwan TCSCA: Yes; Singapore HSL: No; REACH: Yes - (R), (P)
91-20-3	Naphthalene	Canadian DSL: Yes; Canadian NDSL: No; Mexico INSQ: Yes;

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Australia ICS: Yes; New Zealand IOC: Yes; China IECSC:
Yes; Japan ENCS: Yes - 9-2603; Japan ISHL: No; Korea
ECL: Yes - KE-25545; Philippines ICCS: Yes; Taiwan TCSCA:
Yes; Singapore HSL: No; REACH: Yes - (R), (P)

16. Other Information

Revision Date: 12/20/2017

Additional Information About This Product: No data available.

This Product:

Company Policy or

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