

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Name of the substance Residual Fuel Oils - All Grades (Refer to Synonyms for Product Name)
Identification number 649-024-00-9
Registration number 01-2119474894-22-0031
Harmonized Code 2710190605
Synonyms Diesel Fuel #2
Print Date May 23, 2014
Revision Date May 13, 2020
SDS number 2003
Version number 07

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Laboratory test sample

Uses advised against: Other uses are not recommended unless an assessment is completed, prior to commencement of that use, which demonstrates that the use will be controlled.

1.3. Details of the supplier of the safety data sheet

Supplier

Clark Laboratories
1801 Route 51 South
Jefferson Hills, PA 15025
412-387-1001

1.4. Emergency telephone number

Transportation Emergency Response

Chemtrec- 24 hour emergency response: (800)424-9300

International Collect: +1 703 741 5970

SDS Assistance Email: sds@clarktesting.com

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The substance has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Directive 67/548/EEC or 1999/45/EC as amended

Classification Carc. Cat. 2;R45, Repr. Cat. 3;R63, Xn;R20-48/21, R66, N;R50/53

The full text for all R-phrases is displayed in section 16.

Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards

Flammable liquid and Vapor	Category 3	H226-Flammable Liquid & Vapor
Acute toxicity, inhalation	Category 4	H332 - Harmful if inhaled.
Specific target organ toxicity - repeated exposure	Category 2 (blood, thymus, liver)	H373 - May cause damage to organs (blood, thymus, liver) through prolonged or repeated exposure.
Aspiration hazard	Category 1	H304 - May be fatal if swallowed and enters airways.

Environmental

Hazard: Not Classified

Hazard summary

Physical hazards

Not classified for physical hazards.

Health hazards

May cause cancer. Also harmful by inhalation. Also harmful: danger of serious damage to health by prolonged exposure in contact with skin. Possible risk of harm to the unborn child. Repeated exposure may cause skin dryness or cracking.

Environmental hazards

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Specific hazards

Breathing of high vapour concentrations may cause dizziness, light-headedness, headache, nausea and loss of co-ordination. Continued inhalation may result in unconsciousness. Prolonged or repeated contact with skin may cause redness, itching, irritation, eczema/chapping and oil acne. Components of the product may be absorbed into the body through the skin.

Main symptoms

In high concentrations, vapours are narcotic and may cause headache, fatigue, dizziness and nausea. Defatting of the skin. Dermatitis. Ingestion may cause irritation and malaise.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains:

Fuel oil, residual

Identification number

649-024-00-9

Hazard pictograms



Signal word

DANGER

Hazards Statements:

Flammable liquid and vapor.

May be fatal if swallowed and enters airways.

Toxic in inhaled.

May cause cancer

May cause damage to organs through prolonged or repeated exposure.

Causes skin irritation.

Toxic to aquatic life with long lasting effects

Precautionary statements:

Keep away from heat/sparks/open flames/hot surfaces- no smoking.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wear protective gloves/protective clothing/eye

Protection/face protection.

Use only outdoors or in well ventilated area.

Keep container tightly closed. Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use only outdoors or in a well ventilated area.

Use only non-sparking tools.

Do not handle until all safety precautions have been read and understood.

Obtain special instruction before use.

Take precautionary measures against static discharge.

Wash face, hands and any exposed skin thoroughly after handling.

Keep cool.

Response

In case of fire: Use CO2, dry chemical, or foam to extinguish.

IF exposed or concerned: Get medical advice/attention.

IF skin irritation occurs: Get medical advice/attention.

IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Get medical attention/advice.

Rinse skin with water/shower. Wash contaminated clothing before reuse. If skin irritation occurs:

CENTER/doctor if you feel unwell.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON

IF SWALLOWED: Immediately call a POISON CENTER or

Doctor. Do not induce vomiting.

Storage

Store in a well ventilated place. Keep cool. Store locked up.

Keep container tightly closed.

Dispose of contents/container at an approved waste

Disposal plant.

2.3. Other hazards

Not a PBT or vPvB substance or mixture. Hydrogen sulfide (H₂S) can accumulate in the headspace of storage tanks and reach potentially hazardous concentrations. Static accumulator - Static accumulating flammable materials can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite material and vapor may cause flash fire (or explosion).

SECTION 3: Composition/information on ingredients

3.1. Substances

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Fuel oil, residual	100	68476-33-5 270-675-6	01-2119474894-22-0031	649-024-00-9	

SECTION 4: First aid measures

General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
4.1. Description of first aid measures	
Inhalation	<p>Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.</p> <p>If there is any suspicion of inhalation of H₂S: Rescuers must wear breathing apparatus, belt and safety rope, and follow rescue procedures. Remove casualty to fresh air as quickly as possible. Immediately begin artificial respiration if breathing has ceased. Provision of oxygen may help. Obtain medical advice for further treatment.</p>
Skin contact	Remove contaminated clothing and shoes. Wash off immediately with soap and plenty of water. Get medical attention if irritation develops or persists. Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes. If high pressure injection under the skin occurs, always seek medical attention.
Eye contact	Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids wide apart. Get medical attention if irritation develops or persists.
Ingestion	Immediately rinse mouth and drink plenty of water or milk. Keep person under observation. Do not induce vomiting. If vomiting occurs, keep head low. Transport immediately to hospital and take these instructions.
4.2. Most important symptoms and effects, both acute and delayed	Defatting of the skin. May cause eye irritation on direct contact. In high concentrations, vapours are narcotic and may cause headache, fatigue, dizziness and nausea. May cause damage to organs () through prolonged or repeated exposure.
4.3. Indication of any immediate medical attention and special treatment needed	Treat symptomatically. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards	The product is combustible, and heating may generate vapours which may form explosive vapour/air mixtures. Material will float and can be re-ignited on surface of water.
5.1. Extinguishing media	
Suitable extinguishing media	Water spray, foam, dry powder or carbon dioxide.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
5.2. Special hazards arising from the substance or mixture	Thermal decomposition may produce smoke, oxides of carbon and lower molecular weight organic compounds whose composition have not been characterised. Sulfur Oxides (SO _x). Nitrogen Oxides (NO _x).
5.3. Advice for firefighters	
Special protective equipment for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Special fire fighting procedures	Move containers from fire area if you can do it without risk. Use water spray to cool unopened containers. Cool containers with flooding quantities of water until well after fire is out.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures	
For non-emergency personnel	Keep upwind. Keep out of low areas. Ventilate closed spaces before entering. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Local authorities should be advised if significant spillages cannot be contained.
For emergency responders	Keep unnecessary personnel away. Wear protective clothing as described in Section 8 of this safety data sheet.
6.2. Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. If facility or operation has an "oil or hazardous substance contingency plan", activate its procedures. Stay upwind and away from spill. Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not enter or stay in area unless monitoring indicates that it is safe to do so. Isolate hazard area and restrict entry to emergency crew. Extremely flammable. Review Fire and Explosion Hazard Data before proceeding with clean up. Keep all sources of ignition (flames, smoking, flares, etc.) and hot surfaces away from release. Contain spill in smallest possible area. Recover as much product as possible (e.g., by vacuuming).

Stop leak if it can be done without risk. Use water spray to disperse vapors. Spilled material may be absorbed by an appropriate absorbent, and then handled in accordance with environmental regulations. Prevent spilled material from entering sewers, storm drains, other unauthorized treatment or drainage systems and natural waterways. Contact fire authorities and appropriate federal, state and local agencies.

6.3. Methods and material for containment and cleaning up

6.4. Reference to other sections ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Use non-sparking tools and explosion-proof equipment. Stop leak if you can do so without risk. This material is a water pollutant and should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.

Small Spills: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. This material and its container must be disposed of as hazardous waste.

Large Spills: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent product from entering drains. Do not allow material to contaminate ground water system. Should not be released into the environment.

For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Before entering storage tanks and commencing any operation in a confined area check the atmosphere for oxygen content and flammability. (Subject to applicability) If sulfur compounds are suspected to be present in the product, check the atmosphere for H₂S content. Access to work area should be restricted to people handling the product only. Should be handled in closed systems, if possible. Avoid inhalation of vapors and contact with skin, eyes and clothing. Avoid release to the environment. Wear appropriate personal protective equipment. Immediately change contaminated clothes. Do not eat, drink or smoke when using the product. Be aware of potential for surfaces to become slippery. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, dry place with adequate ventilation. Keep away from incompatible materials, open flames and high temperatures. Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

Distribution of a substance. Formulation & (re) packaging of substances and mixtures. Manufacture of substance. Use as a Fuel.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Bulgaria

Material	Type	Value
Fuel oil, residual (CAS 68476-33-5)	TWA	300 mg/m ³

Czech Republic

Material	Type	Value
Fuel oil, residual (CAS 68476-33-5)	Ceiling	1000 mg/m ³
	TWA	400 mg/m ³

Iceland

Material	Type	Value
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Fuel oil, residual (CAS 68476-33-5)

Italy

TWA

180 mg/m³

25 ppm

Material**Type****Value**Fuel oil, residual (CAS
68476-33-5)

Romania

Biological limit valuesNo biological exposure limits
noted for the ingredient(s).**Recommended monitoring
procedures****Derived no-effect level (DNEL)**

Material	Type	Route	Value	Form
Fuel oil, residual (CAS 68476-33-5)	Workers	Dermal	0,065 mg/kg/8h	Long term exposure systemic effects
		Inhalation	4700 mg/m ³ /15min	Aerosol, Acute exposure systemic effects
		Inhalation	0,12 mg/m ³ /8h	Aerosol, Long term exposure systemic effects

**Predicted no effect
concentrations (PNECs)**

Not available.

8.2. Exposure controls**Appropriate engineering
controls**

Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment.

Individual protection measures, such as personal protective equipment**General information**

Use personal protective equipment as required. Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. Keep working clothes separately. Launder contaminated clothing before reuse.

Eye/face protection

Wear safety glasses. If splash potential exists, wear full face shield or chemical goggles.

Skin protection**- Hand protection**

Chlorinated Polyethylene (or Chlorosulfonated Polyethylene), Viton, Polyurethane, Nitrile rubber. Suitable gloves can be recommended by the glove supplier. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Wear suitable gloves tested to EN374.

- Other

Full body suit and boots are recommended when handling large volumes or in emergency situations. Flame retardant protective clothing is recommended.

Respiratory protection

In case of inadequate ventilation or risk of inhalation of oil mist, suitable respiratory equipment with combination filter (type A2/P2) can be used. Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

Hygiene measures

When using, do not eat, drink or smoke. Wash hands after handling. Launder contaminated clothing before reuse. Private clothes and working clothes should be kept separately. Handle in accordance with good industrial hygiene and safety practices. Follow up on any medical surveillance requirements.

**Environmental exposure
controls**

Contain spills and prevent releases and observe national regulations on emissions.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties****Appearance**

Clear to straw, May

contain red dye

Physical state Liquid.

Form Liquid.

Colour Clear to straw,
May contain red dye

Odour Hydrocarbon

Odour threshold Not available.

pH Not applicable.

Melting point/freezing point Not available.

Initial boiling point and boiling range 160 - 315 °C (320 - 600 °F)

Flash point >61 °C 141 °F estimated, ASTM D93

Evaporation rate Not available.

Flammability (solid, gas) Non flammable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)

Flammability limit - upper (%)
Not available.

Not available.

Vapour pressure < 0,07 psi estimated

Vapour density > 1 estimated

Relative density Not available.

Solubility(ies) Insoluble in water.

Partition coefficient (n-octanol/water) Not applicable.

Auto-ignition temperature No data available

Decomposition temperature Not available.

Viscosity 1.9 -4.1 mm²/s (40°C)

Explosive properties Not explosive.

Oxidizing properties Not oxidizing.

9.2 Other information

Density 810.00 – 880.00 kg/m³ (15 °C)

300 ppm

SECTION 10: Stability and reactivity

10.1. Reactivity The product is stable and non reactive under normal conditions of use, storage and transport.

10.2. Chemical stability Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions Hazardous polymerisation does not occur.

10.4. Conditions to avoid Heat, flames and sparks. Ignition sources. Contact with incompatible materials. Do not pressurize, cut, weld, braze, solder, drill, grind or expose empty containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death.

10.5. Incompatible materials Strong acids. Strong oxidizers such as nitrates, chlorates, peroxides.

10.6. Hazardous decomposition products Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Ingestion	Ingestion may cause irritation and malaise.
Inhalation	Harmful if inhaled. In high concentrations, vapours and spray mists are narcotic and may cause headache, fatigue, dizziness and nausea.
Skin contact	Repeated exposure may cause skin dryness or cracking. May be absorbed through the skin.
Eye contact	Direct contact with eyes may cause temporary irritation.
Symptoms	Skin irritation. Defatting of the skin. Rash. May cause eye irritation on direct contact. In high concentrations, vapours and spray mists are narcotic and may cause headache, fatigue, dizziness and nausea.

11.1. Information on toxicological effects

Acute toxicity	Harmful if inhaled.
Skin corrosion/irritation	Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.

SECTION 12: Ecological information

12.1.	Toxicity	Oil spills are generally hazardous to the environment.	
Product		Species	Test results
Fuel oil, residual (CAS 68476-33-5)			
Aquatic			
Algae	EL50	Pseudokirchneriella subcapitata	0,75 mg/l, 72 Hours
Crustacea	EL50	Daphnia magna	2 mg/l, 48 Hours
Fish	LL50	Oncorhynchus mykiss	79 mg/l, 96 Hours
12.2.	Persistence and degradability	The degradability of the product has not been stated.	
12.3. Bioaccumulative potential		No data available on bioaccumulation.	
Partition coefficient n-octanol/water (log Kow)		Not available.	
Bioconcentration factor (BCF)		Not available.	
12.4. Mobility in soil		Not available.	
Mobility in general		The product is insoluble in water. It will spread on the water surface while some of the components will eventually sediment in water systems. The volatile components of the product will spread in the atmosphere.	
12.5. Results of PBT and vPvB assessment		Not a PBT or vPvB substance or mixture.	
12.6. Other adverse effects		Very toxic to aquatic life with long lasting effects. Oil spills are generally hazardous to the environment.	

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	Dispose of in accordance with local regulations.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied.
EU waste code	13 07 03* The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Disposal methods/information	Dispose in accordance with all applicable regulations. This material and its container must be disposed of as hazardous waste. Do not discharge into drains, water courses or onto the ground.

SECTION 14: Transport information

Environmentally hazardous substances may be shipped as non restricted when meeting the descriptions of UN3082 as they are not subject to the IMO-IMDG or IATA/ICAO Codes when transported in packaging that does not exceed 5L or 5kg net and the packaging used meets defined standards (Special Provision A197)

ADR

14.1. UN number	UN3082
14.2. UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (Fuel oil, residual)
14.3. Transport hazard class(es)	9
Subsidiary class(es)	-
14.4. Packing group	III
14.5. Environmental hazards	Yes

Tunnel restriction code
Labels required
14.6. Special precautions
for user

RID

14.1. UN number

14.2. Environmental hazards	Yes	Read safety instructions, SDS and emergency procedures before handling.
Labels required	9	
		UN3082
		Environmentally Hazardous Liquid, N.o.s. (Fuel oil, residual)
14.3. Special precautions for user	9	
ADN		
14.1. UN number	-	
14.2. UN proper shipping name	III	
14.3. Transport hazard class(es)		
Subsidiary class(es)		
14.4. Packing group		
14.5. Environmental hazards	Yes	
Labels required	9	
14.6. Special precautions for user		Read safety instructions, SDS and emergency procedures before handling.
IATA		
14.1. UN number	UN3082	
14.2. UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (Fuel oil, residual)	
14.3. Transport hazard class(es)	9	
Subsidiary class(es)	-	
14.4. Packing group	III	
14.5. Environmental hazards	Yes	
Labels required	9	
ERG code	9L	
14.6. Special precautions for user		Read safety instructions, SDS and emergency procedures before handling.
IMDG		
14.1. UN number	UN3082	
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Residues (petroleum), atmospheric)	
14.3. Transport hazard class(es)	9	
Subsidiary class(es)	-	
14.4. Packing group	III	
14.5. Environmental hazards		
Marine pollutant	Yes	
Labels required	9	
EmS	F-A, S-F	
14.6. Special precautions for user		Read safety instructions, SDS and emergency procedures before handling.
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code		Not applicable. However, this product is a liquid and if transported in bulk covered under MARPOL 73/78, Annex I.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I

Not listed.

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(1) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Fuel oil, residual (CAS 68476-33-5)

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work

Not regulated.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding

Fuel oil, residual (CAS 68476-33-5)

Other EU regulations

Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances

Not regulated.

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Fuel oil, residual (CAS 68476-33-5)

Directive 94/33/EC on the protection of young people at work

Fuel oil, residual (CAS 68476-33-5)

Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended and respective national laws implementing EC directives. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006. 96/82/EC (Seveso II) Directive; Part 2 (Classified Substances) - Extremely Flammable

National regulations

Young people under 18 years old are not allow to work with this product according to the EU Directive 94/33/EC on the protection of young people at work. Pregnant women should not work with the product, if there is the least risk of exposure.

15.1. Chemical safety assessment

For this substance a chemical safety assessment has been carried out.

SECTION 16: Other information

List of abbreviations

DSD: Directive 67/548/EEC.
CLP: Regulation No. 1272/2008.
DNEL: Derived No-Effect Level.
PNEC: Predicted No-Effect Concentration.
PBT: Persistent, bioaccumulative and toxic.
vPvB: Very Persistent and very Bioaccumulative.

References

Chemical safety report.
CLP files – <http://concawe.org/>

Information on evaluation method leading to the classification of mixture

Full text of any statements or R-phrases and H-statements under Sections 2 to 15

The mixture is classified based on test data for physical hazards. The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available. For details, refer to Sections 9, 11 and 12.

R20 Harmful by inhalation. R45 May cause cancer.

R48/21 Harmful: danger of serious damage to health by prolonged exposure in contact with skin.

R63 Possible risk of harm to the unborn child.

R66 Repeated exposure may cause skin dryness or cracking. H332 Harmful if inhaled.

H373 May cause damage to organs through prolonged or repeated exposure.

This safety data sheet contains revisions in the following section(s): 2, 3, 5, 7, 11, 12.

NOTICE: The information presented herein is based on data considered to be accurate as of the date of preparation of this Safety Data Sheet. Adequate training and instruction should be given by you to your employees and affected personnel. Appropriate warnings and safe handling procedures should be provided by you to handlers and users. Additionally, the user should review this information, satisfy itself as to its suitability and completeness, and pass on the information to its employees or customers in accordance with the applicable federal, state, provincial or local hazard communication requirements. This SDS may not be used as a commercial specification sheet of manufacturer or seller, and no warranty or representation, expressed or implied, is made as to the fitness for use of the material, or the accuracy or comprehensiveness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. In addition, vendor neither assumes nor retains any responsibility for any damage or injury resulting from abnormal use, from any failure to adhere to appropriate practices, or from any hazards inherent in the nature of the material. Moreover, unless an employee or a customer accesses or receives a SDS directly from the company, there is no assurance that a document obtained from alternate sources is the most currently available SDS. The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

Completed by Clark PTP Staff

NO ANNEX