Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

METALLOCENE C-08

Product Use: Catalyst Support
Synonyms: None Established
Product CAS No.: Mixture

Company Identification:
Chevron Phillips Chemical Company LP
10001 Six Pines Drive
The Woodlands, TX 77380

Product Information:
MSDS Requests: 1 - (800) 852-5530
Technical Information: 1 - (800) 852-5531
Responsible Party: Product Safety Group
Email:msds@cpchem.com

Chevron Phillips Chemicals International N.V.
Brusselsesteenweg 355
B-3090 Overijse
Belgium

24-Hour Emergency Telephone Numbers:
HEALTH:Chevron Phillips Emergency Information Center 866.442.9628 (North America) and 1.832.813.4984 (International)
TRANSPORTATION: North America: CHEMTREC 800.424.9300 or 703.527.3887
ASIA: +1.703.527.3887
EUROPE: BIG .32.14.584545 (phone) or .32.14.583516 (telefax)
SOUTH AMERICA SOS-Cotec Inside Brazil: 0800.111.767
Outside Brazil: 55.19.3467.1600

SECTION 2 HAZARDS IDENTIFICATION

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EMERGENCY OVERVIEW
Yellow or orange liquid with slight odor.
NFPA RATINGS: **Health:** 2 **Flammability:** 3 **Reactivity:** 0

Signal Word:
Warning

Risk Phrases:
R61: May cause harm to the unborn child.
R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R66: Repeated exposure may cause skin dryness or cracking.
R11: Highly flammable.
R36: Irritating to eyes.
R65: Harmful: may cause lung damage if swallowed.

Additional Hazards:
MAY CAUSE DAMAGE TO:
- - - - - AUDITORY SYSTEM
- - - - - NERVOUS SYSTEM

Safety Phrases:
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S51: Use only in well-ventilated areas.
S38: In case of insufficient ventilation, wear suitable respiratory equipment.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S9: Keep container in a well-ventilated place.
S62: If swallowed do not induce vomiting: seek medical advice immediately and show this container or label.
S25: Avoid contact with eyes.
S2: Keep out of the reach of children.
S16: Keep away from sources of ignition - No smoking.
S53: Avoid exposure - obtain special instructions before use.

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IMMEDIATE HEALTH EFFECTS:
Eye: Contact with the eyes causes irritation. If this material is heated, thermal burns may result from eye contact. Symptoms may include pain, tearing, reddening, swelling and impaired vision. Not expected to cause prolonged or significant eye irritation.
Skin: Thermal burns to the skin: may include pain or feeling of heat, discoloration, swelling, and blistering. If this material is heated, thermal burns may result from skin contact. Prolonged or repeated skin contact may cause drying or defatting of the skin. Symptoms may include pain, itching, discoloration, swelling, and blistering. Not expected to be harmful to internal organs if absorbed through the skin.
Ingestion: This material can directly enter the lungs, if swallowed, or if subsequently vomited. Once in the lungs it is very difficult to remove and can cause severe injury or death.
Inhalation: Breathing of high vapor concentrations may cause dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness. The vapor or fumes from this material may cause respiratory irritation. If this material is heated, fumes may be unpleasant and produce nausea and irritation of the upper respiratory tract.

DELAYED OR OTHER HEALTH EFFECTS:
Reproduction and Birth Defects: Concentrations of this material above the recommended exposure limit may cause birth defects.
Target Organs: Repeated inhalation of this material at elevated concentrations may cause damage to the following organ(s) based on animal data: - Nervous System - Auditory System

See Section 11 for additional information. Risk depends on duration and level of exposure.

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENT	CAS NUMBER	AMOUNT	EINECS / ELINCS	SYM	R-PHRASES
Toluene	108-88-3	2 - 50 % weight	203-625-9	F Xn	R11, R63, R67, R65, R48/20, R38
1-Hexene	592-41-6	50 - 98 % weight	209-753-1	NA	NA
Proprietary	Proprietary	0.1 - 5 % weight	NA	NA	NA

Occupational Exposure Limits:

Component	Limit	TWA	STEL	Ceiling / Peak	Notation
1-Hexene	ACGIH	50 ppm	NA	NA	NA
1-Hexene	CPCHEM	50 ppm	NA	NA	NA
Proprietary	ACGIH	Not Established	NA	NA	NA
Toluene	ACGIH	20 ppm	NA	NA	Skin (BEI) A4
Toluene	German MAK	50 ppm	NA	4	Skin, C
Toluene	OSHA PEL	200 ppm	NA	300 ppm	NA

This is an experimental material: The composition of this material may vary.

SECTION 4 FIRST AID MEASURES

Eye: Flush eyes with running water immediately while holding the eyelids open. Remove contact lenses, if worn, after initial flushing, and continue flushing for at least 15 minutes. Get immediate medical attention. If heated material should splash into eyes, flush eyes immediately with fresh water for 15 minutes while holding the eyelids open. Remove contact lenses, if worn. Get immediate medical attention.
Skin: To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse. Get medical attention if any symptoms develop. If the hot material gets on skin, quickly cool in water. See a doctor for extensive burns. Do not try to peel the solidified material from the skin or use solvents or thinners to dissolve it. The use of vegetable oil, mineral oil, or petroleum jelly is recommended for removal of this material from the skin.
Ingestion: If swallowed, do not induce vomiting. Give the person a glass of water or milk to drink and get immediate medical attention. Never give anything by mouth to an unconscious person.
Inhalation: Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue.

Note to Physicians: Ingestion of this product or subsequent vomiting may result in aspiration of light hydrocarbon liquid, which may cause pneumonitis.

SECTION 5 FIRE FIGHTING MEASURES

See Section 7 for proper handling and storage.
FIRE CLASSIFICATION:
OSHA Classification (29 CFR 1910.1200): Flammable liquid.
NFPA RATINGS: **Health:** 2 **Flammability:** 3 **Reactivity:** 0
FLAMMABLE PROPERTIES:
Flashpoint: -83°C (-117.4°F) - 4.4°C (39.9°F)
Autoignition: NDA
Flammability (Explosive) Limits (% by volume in air): **Lower:** NDA **Upper:** NDA

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.
Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion. Combustion may form: Carbon Dioxide, Carbon Monoxide

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in the vicinity of the spill or released vapor. If this material is released into the work area, evacuate the area immediately. Monitor area with combustible gas indicator. Wear appropriate personal protective equipment when cleaning up spills. Refer to Section 8.
Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible sorbent materials or pumping. All equipment used when handling the product must be grounded. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. If heated material is spilled, allow it to cool before proceeding with disposal methods.
Reporting: U.S.A. regulations may require reporting spills of this material that could reach any surface waters. Report spills to local authorities and/or the National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL . REFER TO PRODUCT LABEL OR MANUFACTURERS TECHNICAL BULLETINS FOR THE PROPER USE AND HANDLING OF THIS MATERIAL .

Precautionary Measures: This material presents a fire hazard. Liquid quickly evaporates and forms vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Fire hazard is greater as liquid temperature rises above 15°F. Do not breathe vapor or fumes from heated material. Avoid contact of heated material with eyes, skin, and clothing. Do not get in eyes. Do not taste or swallow. Do not breathe vapor or fumes.
Unusual Handling Hazards: Potentially toxic/irritating fumes may be evolved from heated material.
General Handling Information: Avoid work practices that may release volatile components in the atmosphere. Local air pollution regulations should be consulted to determine if the release of volatile components is regulated or restricted in the area in which this material is used. Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.
Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations, which have the potential of generating an accumulation of electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids, National Fire Protection Association (NFPA 77), Recommended Practice on Static Electricity' (liquids, powders and dusts), and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents' (liquids).
General Storage Information: This material should be stored under nitrogen to avoid contact with oxygen and moisture. Store in a cool, dry place, out of direct sunlight. May generate heat in contact with moisture.
Container Warnings: This material should be stored under nitrogen to avoid contact with oxygen and moisture. Store in a cool, dry place, out of direct sunlight. May generate heat in contact with moisture.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:
Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If

engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:
Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits. If heated material generates vapor or fumes, use process enclosures, local exhaust ventilation, or other engineering controls to control exposure.

PERSONAL PROTECTIVE EQUIPMENT:
Eye/Face Protection: Wear eye protection such as safety glasses, chemical goggles, or faceshields if engineering controls or work practices are not adequate to prevent eye contact. If this material is heated, wear chemical goggles or safety glasses and a face shield.
Skin Protection: Wear impervious protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted. Users should determine acceptable performance characteristics of protective clothing. Consider physical requirements and other substances present when selecting protective clothing. Suggested materials for protective gloves include: If this material is heated, wear insulated clothing to prevent skin contact if engineering controls or work practices are not adequate to prevent skin contact. Viton, or Silver Shield, or Polyvinyl Alcohol (PVA)(Note: PVA deteriorates in water. Avoid contact with water.)
Respiratory Protection: If exposure is anticipated to be greater than applicable exposure limits, wear a NIOSH approved respirator that provides adequate protection from measured concentrations of this material, such as: Supplied-Air Respirator, or Air-Purifying Respirator for Organic Vapors, or Self-contained breathing apparatus (SCBA) for use in environments with unknown concentrations or emergency situations. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component	Limit	TWA	STEL	Ceiling / Peak	Notation
1-Hexene	ACGIH	50 ppm	NA	NA	NA
1-Hexene	CPCHEM	50 ppm	NA	NA	NA
Proprietary	ACGIH	Not Established	NA	NA	NA
Toluene	ACGIH	20 ppm	NA	NA	Skin (BEI) A4
Toluene	German MAK	50 ppm	NA	4	Skin, C
Toluene	OSHA PEL	200 ppm	NA	300 ppm	NA

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Yellow or orange liquid with slight odor.
Autoignition: NDA
Boiling Point: NDA
Density: 0.68 - 0.8 g/ml
Evaporation Rate: NDA
Flammability (Explosive) Limits (% by volume in air): **Lower:** NDA **Upper:** NDA
Flashpoint: -83°C (-117.4°F) - 4.4°C (39.9°F)
Molecular Formula: Mixture
Molecular Weight: NA
Melting Point: NDA
Octanol / Water Partition Coefficient: log-Kow: NDA
pH: NA
Pour Point: NDA

Solubility (in water): Immiscible
Vapor Pressure: NDA
Vapor Density (AIR=1): NDA
Viscosity: NDA
Percent Volatile: NDA

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Conditions to Avoid: Avoid contact with strong oxidants.
Incompatibility With Other Materials: May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Hazardous Decomposition Products: Combustion may produce irritants and toxic gases.
Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS:

Acute Oral Toxicity: Toluene: LD50 / rat / >5 g/kg
Acute Dermal Toxicity: Toluene: LD50 / rabbit / 12.4 g/kg
Acute Inhalation Toxicity: Toluene: LC50 / rat / 8000-8800 ppm / 4 hour(s)

Eye Irritation: Toluene:This material is irritating to the eyes.
Skin Irritation: Toluene: This material is not expected to be irritating to the skin.

ADDITIONAL TOXICOLOGY INFORMATION:
This product contains 1-HEXENE:
Repeated Dose Studies: 28 days/ gavage / rat / Doses: 0, 10, 101, 1010, 3365 mg/kg / daily / LOAEL = 1010 mg/kg for male (male rat specific kidney effect) and 3365 mg/kg for female (irritation of the gastric mucosa); 90 days / inhalation / rat / Doses: 0, 300, 1000, or 3000 ppm / 6 hrs/day, 5days/wk / NOAEL = 1000ppm (Body weight depression)
Genetic toxicity: Negative in the following tests: Ames test; in vitro Unscheduled DNA synthesis assay; Mouse lymphoma assay; Mouse micronucleus assay; Mouse embryo cell transformation assay
Reproductive and Developmental Toxicity: OECD 421 test/44 days (males), 41-55 days (females) / gavage / rat / Doses: 0, 100, 500, or 1000 mg/kg / daily / NOAEL (maternal and developmental toxicity) = 1000mg/kg (Microscopic kidney changes were seen in males at all dose levels. This effect is consistent with alpha 2u-globulin associated hydrocarbon nephropathy, which is specific to young adult male rats and is not considered a potential risk to humans)

This product contains TOLUENE:
Repeated Dose Toxicity: 15 wks / inhalation / rat / Doses: 0, 100, 625, 1250, 2500 or 3000 ppm/ 6.5 h/d, 5 d/wk / NOAEL = 625 ppm (changes in liver and kidney weights, decreased leukocyte count); 14 wks / inhalation / mice/ Doses: 0, 100, 625, 1250, 2500 or 3000 ppm/ 6.5 h/d, 5 d/wk / NOAEL = 100 ppm (increased organ weights, decreased body weights)
Reproductive and Developmental Toxicity: 2-generation/95 days/ inhalation/ rats / Doses: 0, 100, 500, or 2000ppm/ NOAEL = 2000ppm (max dose) -no effect on fertility, repro or lactation parameters; NOAEL for developmental effects = 400-750 ppm (skeletal malformations)
Genetic Toxicity: Ames test - negative; Sister Chromatid Exchange assay - negative; Mouse lymphoma assay - negative; Cytogenetic assay in vivo/in vitro - negative; Micronucleus test - negative
Carcinogenicity: 2 yrs / inhalation / rat & mouse / Doses: 0, 600, or 1200ppm / 6.5 h/day, 5 d/week / no evidence of carcinogenicity Since this is an experimental material, limited data are available regarding potential health effects following exposure to it. Therefore, we strongly recommend that this document be read carefully and the precautions outlined in it be followed to minimize exposure.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY:
This material is expected to be toxic to aquatic organisms.
Toluene - 96 hour(s) / LC50 / fathead minnow (*Pimephales promelas*) / 18-36 mg/l
Toluene - 96 hour(s) / LC50 / pink salmon (*Oncorhynchus gorbuscha*) / 6.4 - 8.1 mg/l
Toluene - 96 hour(s) / LC50 / rainbow trout (*Oncorhynchus mykiss*) / 5.8 mg/l
1-Hexene - 96 hour(s) / LC50 / rainbow trout (*Oncorhynchus mykiss*) / 5.6 mg/l
1-Hexene - 48 hour(s) / EC50 / water flea (*Daphnia magna*) / 10.0 - 230.0 mg/l

ENVIRONMENTAL FATE:
This material is expected to be readily biodegradable. Toluene is volatile and when released into water will be volatilized to the atmosphere where it is degraded with a half-life of 10 to 104 hours. Toluene is readily biodegradable in tests using sewage or sludge inocula. The biodegradation half-life for toluene in surface waters and soils is expected to range from 4 to 22 days. Toluene that does not evaporate following release to soil is expected to be highly mobile and may leach to groundwater. In groundwater, toluene has been reported to be degraded in 7 to 28 days.

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

SECTION 14 TRANSPORT INFORMATION

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition). Consult the appropriate domestic or international mode- specific and quantity- specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the MSDS and the bill of lading.

Shipping Descriptions per regulatory authority.

US DOT
UN1993, FLAMMABLE LIQUIDS, N.O.S., (Toluene, 1-Hexene), 3, II, RQ (Toluene)

ICAO / IATA
UN1993, FLAMMABLE LIQUIDS, N.O.S. , (Toluene, 1-Hexene), 3, II

IMO / IMDG
UN1993, FLAMMABLE LIQUIDS, N.O.S., (Toluene, 1-Hexene), 3, II , (-83°C-4.4°C), RQ (Toluene)

RID / ADR
UN1993, FLAMMABLE LIQUIDS, N.O.S., (Toluene, 1-Hexene), 3, II, ADR

SECTION 15 REGULATORY INFORMATION

SARA 311/312 CATEGORIES:

1.	Immediate (Acute) Health Effects:	YES
2.	Delayed (Chronic) Health Effects:	YES
3.	Fire Hazard:	YES
4.	Sudden Release of Pressure Hazard:	NO
5.	Reactivity Hazard:	NO

REGULATORY LISTS SEARCHED:

01= CA Prop 65	17 = FDA 178	33 = -
02 = LA RTK	18 = FDA 179	34 = -
03 = MA RTK	19 = FDA 180	35 = -
04 =MN Hazardous Substance	20 = FDA 181	36 = -
05 =NJ RTK	21 = FDA 182	37 = SARA Section 302
06 = PA RTK	22 = FDA 184	38 = SARA Section 313
07 = -	23 = FDA 186	39 = TSCA 12 (b)
08 = -	24 = FDA 189	40 = TSCA Section 4
09 = CWA Section 311	25 = IARC Group 1	41 = TSCA Section 5(a)
10 =DOT Marine Pollutant	26 = IARC Group 2A	42 = TSCA Section 8(a) CAIR
11 = FDA 172	27 = IARC Group 2B	43 = TSCA Section 8(a) PAIR
12 = FDA 173	28 = IARC Group 3	44 = TSCA Section 8(d)
13 = FDA 174	29 = IARC Group 4	45 = WHIMS - IDL
14 = FDA 175	30 = NTP Carcinogen	46 = Germany D TAL
15 = FDA 176	31 = OSHA Carcinogen	47 = Germany WKG
16 = FDA 177	32 = OSHA Highly Hazardous	48 = DEA List 1
		49 = DEA List 2

The following components of this material are found on the regulatory lists indicated.

Toluene	4, 5, 6, 7, 9, 36, 38, 49
1-Hexene	3, 5, 6

CERCLA REPORTABLE QUANTITIES(RQ)/SARA 302 THRESHOLD PLANNING QUANTITIES(TPQ):

Component	Component RQ	Component TPQ	Product RQ
Toluene	1000 lbs	None	2000 lbs

WHMIS CLASSIFICATION:

Class B, Division 2: Flammable Liquids
Class D, Division 2, Subdivision A: Very Toxic Material
Teratogenicity and Embryotoxicity
Chronic Toxic Effects
Skin or Eye Irritation

CHEMICAL INVENTORY LISTINGS:

AUSTRALIA	NO (AUS)
CANADA	NO (DSL/NDSL)
CHINA	NO (IECSC)
EUROPEAN UNION	NO (EINECS/ELINCS)
JAPAN	NO (ENCS)
KOREA	NO (ECL)

PHILIPPINES	NO (PICCS)
UNITED STATES	NO (TSCA)

EU LABELING:
Signal Word: Warning
Symbols: Xn - Harmful F - Flammable N - Environment
Risk and Safety Phrases:
R61: May cause harm to the unborn child.
R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R66: Repeated exposure may cause skin dryness or cracking.
R11: Highly flammable.
R36: Irritating to eyes.
R65: Harmful: may cause lung damage if swallowed.
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S51: Use only in well-ventilated areas.
S38: In case of insufficient ventilation, wear suitable respiratory equipment.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S9: Keep container in a well-ventilated place.
S62: If swallowed do not induce vomiting: seek medical advice immediately and show this container or label.
S25: Avoid contact with eyes.
S2: Keep out of the reach of children.
S16: Keep away from sources of ignition - No smoking.
S53: Avoid exposure - obtain special instructions before use.

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 2 Flammability: 3 Reactivity: 0 Special: NA

(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA).

REVISION STATEMENT: The following sections have been updated: 7

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV	-	Threshold Limit Value	TWA	-	Time Weighted Average
STEL	-	Short-term Exposure Limit	PEL	-	Permissible Exposure Limit
ACGIH	-	American Conference ofGovernment Industrial Hygienists	OSHA	-	Occupational Safety & Health Administration
NIOSH	-	National Institute for Occupational Safety & Health	NFPA	-	National Fire Protection Agency
WHMIS	-	Workplace Hazardous Materials Information System	IARC	-	Intl. Agency for Research on Cancer
EINECS	-	European Inventory ofexisting Commercial Chemical Substances	RCRA	-	Resource Conservation Recovery Act
SARA	-	Superfund Amendments and Reauthorization Act.	TSCA	-	Toxic Substance Control Act
EC50	-	Effective Concentration	LC50	-	Lethal Concentration
LD50	-	Lethal Dose	CAS	-	Chemical Abstract Service
NDA	-	No Data Available	NA	-	Not Applicable
<=	-	Less Than or Equal To	>=	-	Greater Than or Equal To

CNS - Central Nervous System MAK - Germany Maximum Concentration Values

This data sheet is prepared according to the latest adaptation of the EEC Guideline 67/548.
This data sheet is prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200).
This data sheet is prepared according to the ANSI MSDS Standard (Z400.1).
This data sheet was prepared by EHS Product Stewardship Group, Chevron Phillips Chemical Company LP, 10001 Six Pines Drive, The Woodlands, TX 77380.

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.