



MATERIAL SAFETY DATA SHEET

4Plus Gas Treatment

Section 1 – COMPANY IDENTIFICATION

DSG Saskatoon Diesel Services
230 29th Street East
Saskatoon, SK S7L 6Y6

Product Information: 1-800-667-6879
In Case of Emergency
Call Chemtrac: 1-800-424-9300

Section 2 – COMPOSITION/INFORMATION ON INGREDIENTS

<u>Material</u>	<u>CAS Number</u>	<u>%</u>
Detergent.....		<10
*Xylene.....	1330-20-7.....	<3
*(Ethylbenzene).....	100-41-4.....	(<0.3) Heavy Aromatic
Naphtha.....	64742-94-5.....	<2 Light Ends of Polyethylbenzene
Residue.....	178535-25-6.....	80-95
(Triethylbenzene).....	102-25-0.....	(<20)
*(Naphthalene).....	91-20-3.....	(<4) *Disclosure as a toxic chemical is required under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

Section 3 – HAZARDOUS IDENTIFICATION

Potential Health Effects:

Eye contact with the product ingredients may cause eye irritation with discomfort, tearing, or blurring of vision. Direct exposure may cause skin irritation (redness, swelling). A single prolonged exposure may result in the material being absorbed through the skin in harmful amounts.

In general, overexposure to high atmospheric concentrations of alkyl-substituted aromatics may produce central nervous system depression, headache, dizziness, incoordination, nausea and loss of appetite. Aspiration (liquid enters the lung), may cause lung damage due to chemical pneumonia, a condition caused by petroleum-like solvents.

Minute amounts of petroleum hydrocarbons aspirated into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury and possible death.

Individuals with preexisting diseases of the kidneys or liver may have increased susceptibility to the toxicity of excessive exposures.

Inhalation or ingestion of Heavy Aromatic Naphtha may cause central nervous system depression with anesthetic effects, such as dizziness, headache, confusion, incoordination and loss of consciousness. Higher exposures may result in fatality from gross overexposure. Ingestion may cause gastrointestinal irritation. Aspiration hazard! Small amounts aspirated into the lungs during ingestion or vomiting may cause lung injury, possibly leading to death. Symptoms of aspiration into the lungs include coughing, gasping, choking, shortness of breath, bluish discolored skin, rapid breathing and heart rate. Chemical pneumonitis from aspiration may result in fever. Pulmonary edema or bleeding, drowsiness, confusion,



coma and seizures may occur in more serious cases. Symptoms may develop immediately or as late as 24 hours after the exposure, depending on how much chemical entered the lungs.

Skin contact may cause skin irritation with discomfort or rash. Xylene can penetrate the skin in amounts capable of causing systemic toxicity. Eye contact may cause eye irritation with discomfort, tearing or blurring of vision. Inhalation of Ethylbenzene may cause irritation of the upper respiratory passages with coughing and discomfort.

Inhalation or ingestion of Xylene or Ethylbenzene may cause nonspecific discomfort, such as nausea, headache, or weakness; or temporary nervous system depression with anesthetic effects such as dizziness, headache, confusion, incoordination, and loss of consciousness.

Inhalation or ingestion of Ethylbenzene may cause abnormal liver or kidney function. Aspiration of Ethylbenzene into the lungs during ingestion or vomiting may lead to chemical pneumonitis.

Ingestion of Xylene or Ethylbenzene may cause gastrointestinal tract irritation. Higher exposure to Xylene may lead to cardiac stress; anemia and other blood changes; respiratory effects; possible liver and kidney damage; or fatality from gross overexposure.

CARCINOGENICITY INFORMATION

Naphthalene and Ethylbenzene have been classified by the International Agency for Research on Cancer (IARC) as possibly carcinogenic to humans (Group 2B). This IARC classification was based upon limited evidence of carcinogenicity to animals and inadequate evidence of carcinogenicity to humans.

Section 4 – FIRST AID MEASURES

INHALATION:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

SKIN CONTACT:

Flush skin with water after contact. Wash contaminated clothing before reuse.

EYES:

In case of contact immediately, flush eyes with plenty of water for at least 15 minutes. Call a physician.

INGESTION:

If swallowed, do not induce vomiting. Allow victim to rinse his mouth and then to drink 2-4 cupfuls of water. Never give anything by mouth to an unconscious person. Call a physician.

NOTES TO PHYSICIANS

Activated charcoal mixture may be administered. To prepare activated charcoal mixture, suspend 50 grams activated charcoal in 400-ml water and mix thoroughly. Administer 5 ml/kg or 350 ml for an average adult. Because of the danger of aspiration, emesis or gastric lavage should not be employed unless the risk is justified by the presence of additional toxic substances. Activated charcoal may induce vomiting, but may be given after emesis or lavage to absorb toxic additives. Steroid therapy in mild to moderate cases does not improve outcome. Bacterial pneumonia often occurs after exposure, but prophylactic antibiotics are not indicated and should be reserved for documented bacterial pneumonia.



Section 5 – FIRE FIGHTING MEASURES

Flash Point (Method Used): 74.0° C (PMCC)

Flammability Limits: None known

EXTINGUISHING MEDIA:

Dry chemical, foam, halon, CO₂, water spray (fog). Water stream may splash the burning liquid and spread fire.

SPECIAL FIRE FIGHTING PROCEDURES:

Use water spray to cool drums exposed to fire. Wear self-containing breathing apparatus. Wear full protective equipment.

Section 6 – ACCIDENTAL RELEASE MEASURES/SPILL CLEAN-UP PROCEDURES

Note: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) SECTIONS before proceeding with clean up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean up. Soak up with sawdust, sand, oil dry or other absorbent material. Remove source of heat, sparks, flame, impact, friction, or electricity. Dike spill. Prevent material from entering sewers, waterways, or low areas.

SPILL CLEAN-UP

Soak up with sawdust, sand, oil dry or other absorbent material.

ACCIDENTAL RELEASE MEASURES

Spills are very slippery and should be cleaned up promptly.

Section 7 – HANDLING AND STORAGE

Handling (Personnel)

Avoid breathing vapors or mist. Avoid contact with eyes, skin, or clothing. Wash thoroughly after handling.

Handling (Physical Aspects)

Keep away from heat, sparks and flames.

Storage

Store in a well-ventilated place. Keep container tightly closed. Store in accordance with National Fire Protection Association recommendations.

Section 8 – EXPOSURE CONTROL/PERSONAL PROTECTION

ENGINEERING CONTROLS

Use only with adequate ventilation. Keep container tightly closed.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE



Wear overall chemical splash goggles or safety glasses.

RESPIRATORS

Where there is potential for airborne exposures in excess of applicable limits, wear NIOSH/MSHA approved respiratory protection.

PROTECTIVE CLOTHING

Where there is potential for skin contact have available and wear as appropriate Impervious gloves, apron, pants, hood and jacket.

EXPOSURE LIMITS

Xylene:

PEL (OSHA).....	100 ppm, 435 ,mg/m3, 8 hr TWA
TLV (ACGIH).....	100 ppm, 434 mg/m3, 8 hr TWA
	STEL 150 ppm,651 mg/m3, A4; BEI
AEL* (Octel Starreon).....	100 ppm, 8 & 12 hr, TWA, skin
	150 ppm, 15 minute TWA

Ethylbenzene:

PEL (OSHA).....	100 ppm, 435 mg/m3, 8 hr, TWA
TLV (ACGIH).....	100 ppm, 434 mg/m3, 8 hr, TWA, A3, BEI
	STEL 125 ppm, 543 mg/m3
AEL* (Octel Starreon).....	None established

Heavy Aromatic Naphtha:

PEL (OSHA).....	None established
TLV (ACGIH).....	None established
AEL* (Octel Starreon).....	50 ppm, 300 mg/m3, 8 hr, TWA

Naphthalene:

PEL (OSHA).....	10 ppm, 50 mg/m3, 8 hr. TWA
TLV (ACGIH).....	10 ppm, 52 mg/m3, 8 hr TWA, Skin; A4
	STEL 15 ppm, 79 mg/m3, A4
AEL* (Octel Starreon).....	None established

The “skin” notation following the exposure guideline refers to the potential for dermal absorption of the material. It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposure should be considered

* AEL is Octel Starreon’s acceptable exposure limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

Section 9 – PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DATA

Appearance.....	Dark Amber
Form.....	Liquid
Odor.....	Aromatic
Specific Gravity.....	0.903 @ 60/60°F (16/16°C)
Density.....	7.52 lbs./gal. @ 60°F (16°C)
Solubility in water.....	nil

Section 10 – STABILITY AND REACTIVITY

CHEMICAL STABILITY

Stable at normal temperatures and storage conditions.

INCOMPATIBILITY

Incompatible with strong oxidizers.

DECOMPOSITION

Decomposes with heat. Hazardous decomposition products include oxides of carbon.

POLYMERIZATION

Will not occur.

Section 11 – TOXICOLOGICAL INFORMATION

Animal Data

Heavy Aromatic Naphtha:

Inhalation 6 hour LC50.....>11.67 mg/L in rats Skin Absorption
 LD50.....>3,160 mg/kg in rabbits Oral
 LD50.....>5,000 mg/kg in rats

Naphthalene:

Inhalation 15 minute LC50:.....>0.34 mg/L in rats Skin Absorption
 LD50:.....10,000 mg/kg in rabbits Oral
 LD50:.....1,780 mg/kg in rats

Xylene (mixed isomers):

Inhalation 4 hour LC50.....6,700 ppm in rats Skin absorption
 LD50.....4,320 mg/kg in rabbits Oral
 ALD.....4,500 mg/kg in rats

**Ethylbenzene: Inhalation 4 hour LC50.....>4,000 ppm in rats Skin
 absorption LD50.....~15,000 mg/kg in mice Oral
 LD50.....>3,500 mg/kg in rats**

Dermal absorption of Xylene in animals causes narcosis. Toxic effects described in animals by inhalation include upper respiratory irritation; central nervous system effects; behavioral effects; decreased weight gain; hearing loss; and effects on the blood, liver, kidneys, heart, spleen, lungs and bone marrow. By ingestion, xylene caused central nervous system effects; decreased body weight and liver effects. Tests of xylene in animals demonstrate no carcinogenic activity. Xylene does not produce heritable genetic damage in animals or genetic damage in bacterial or mammalian cell cultures. Although abnormal sperm were observed after an interperitoneal injection in rats, xylene did not produce reproductive effects. Developmental toxicity was observed in animals exposed to xylene but only at concentrations that were maternally toxic.

Heavy Aromatic Naphtha is a severe skin irritant, and is an eye irritant, but is not a skin sensitizer in animals. Repeated inhalation exposures caused reduced growth rate, respiratory tract irritation, congestion in liver and spleen, changes in blood tests and equilibrium disturbances. No animal test reports are available to define carcinogenic, mutagenic, developmental or reproductive hazards.



Section 15 - US FEDERAL REGULATIONS

TSCA Inventory Status.....Reported / Included

Title III Hazard Classifications Sections 311, 312

Acute.....Yes

Chronic.....Yes

Fire.....Yes

Reactivity.....No

Pressure.....No

Section 16 - OTHER INFORMATION

NPCA-HMIS Rating

Health.....2* (Chronic Health Effects)

Flammability.....2

Reactivity.....0

Personal Protection rating to be supplied by user depending on use conditions.

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS:

MSDS Coordinator
DSG Canada
230 – 29th Street East
Saskatoon, SK S7L 6Y6
(800) 667-6879 or
(306) 242-7644