Material Safety Data Sheet: DEPLOY

Supercedes Date 01/01/0001 **Issuing Date** 12/28/2010

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name DEPLOY
Recommended use Lubricant

Information on Manufacturer
NATIONAL CHEMSEARCH
245 ORENDA RD
BRAMPTON ONT L6T 1E7

Product Code 5607
Chemical Nature Petroleum distillates mixture

Emergency Telephone Number
CHEMTREC ® 800-424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview
DANGER
Extremely flammable
May be harmful if inhaled
Causes skin irritation
Causes eye irritation
Harmful or fatal if swallowed
Contents under pressure

Color Off-white **Physical State** Liquid **Odor** Petroleum distillates

Potential Health Effects

Principle Route of Exposure	Skin contact, Eye contact, Inhalation.
Primary Routes of Entry	Inhalation, Skin Absorption.
Acute Effects	
Eyes	Causes eye irritation.
Skin	Causes skin irritation. May be absorbed through the skin in harmful amounts.
Inhalation	May cause irritation of respiratory tract. Inhalation may cause central nervous system effects. May cause central nervous system depression. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Chronic Toxicity	Repeated and prolonged exposure to solvents may cause brain and nervous system damage. Prolonged or repeated inhalation may cause damage to the lungs. Prolonged skin contact may defat the skin and produce dermatitis. Suspect reproductive hazard - contains material which may injure unborn child. Kidney injury may occur.
Target Organ Effects	Respiratory system, Central nervous system, Peripheral Nervous System (PNS), Ears, Skin, Eyes, Kidney.
Aggravated Medical Conditions	Respiratory disorders, Skin disorders, Neurological disorders, Kidney disorders.
Potential Environmental Effects	See Section 12 for additional Ecological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No
Butane	106-97-8
Hexane	110-54-3
Cyclohexane	110-82-7
Heptane (n-)	142-82-5
Naphtha, petroleum, hydrotreated light	64742-49-0
Solvent naphtha (petroleum), light aliphatic	64742-89-8
Propane	74-98-6
Methyl acetate	79-20-9
Petrolatum	8009-03-8

4. FIRST AID MEASURES

General Advice	Avoid breathing vapors, mist, or gas. Avoid contact with skin, eyes and clothing.
Eye Contact	Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention if irritation develops and persists. Wash contaminated clothing before re-use.
Inhalation	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
Ingestion	Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.
Notes to Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point 75.2 °F / 24 °C **Method** Seta closed cup
Autoignition Temperature No information available.
Flammability Limits in Air % Solvent mixture. **Upper** 16 **Lower** 1.05
Suitable Extinguishing Media
Foam. Carbon dioxide (CO2). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Specific hazards arising from the chemical
Extremely flammable. Solvent vapors are heavier than air and may spread along floors. Vapors may ignite and explode. Flame extension: >18 inches / >46 cm and Burnback: 2 inches / 5 cm. Material can create slippery conditions.
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Aerosol Level (NFPA 30B) - 3

NFPA	**Health** 2	**Flammability** 4	**Instability** 0
HMIS	**Health** 2	**Flammability** 4	**Instability** 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Remove all sources of ignition. Ensure adequate ventilation. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.

Environmental Precautions Do not flush into surface water or sanitary sewer system.

Methods for Containment Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

Methods for Cleaning Up Use clean non-sparking tools to collect absorbed material. Pick up and transfer to properly labeled containers.

Neutralizing Agent Not applicable.

7. HANDLING AND STORAGE

Handling Keep away from open flames, hot surfaces and sources of ignition. Avoid breathing vapors, mist or gas. Avoid contact with skin, eyes and clothing.

Storage Keep away from heat and sources of ignition. Store in original container. Keep in a dry, cool and well-ventilated place.

Storage Temperature **Minimum** 35 °F / 2 °C **Maximum** 120 °F / 49 °C

Storage Conditions **Indoor** X **Outdoor** **Heated** **Refrigerated**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Butane	: 1000 ppm TWA (listed under Aliphatic hydrocarbon gases: Alkane C1-4) : 1000 ppm TWA	No data available	: 800 ppm TWA; 1900 mg/m^3 TWA
Hexane	Skin : 1000 ppm STEL (other than n-Hexane) : 50 ppm TWA : 500 ppm TWA (other than n-Hexane)	: 500 ppm TWA; 1800 mg/m^3 TWA	: 1100 ppm IDLH (10% LEL) : 50 ppm TWA; 180 mg/m^3 TWA : 100 ppm TWA (other than n-Hexane); 350 mg/m^3 TWA (other than n-Hexane) : 510 ppm Ceiling (other than n-Hexane, 15 min); 1800 mg/m^3 Ceiling (other than n-Hexane, 15 min)
Cyclohexane	: 100 ppm TWA	: 300 ppm TWA; 1050 mg/m^3 TWA	: 1300 ppm IDLH (10% LEL) : 300 ppm TWA; 1050 mg/m^3 TWA
Heptane (n-)	: 500 ppm STEL (listed under Heptane, all isomers) : 500 ppm STEL : 400 ppm TWA : 400 ppm TWA (listed under Heptane, all isomers)	: 500 ppm TWA; 2000 mg/m^3 TWA	: 750 ppm IDLH : 85 ppm TWA; 350 mg/m^3 TWA : 440 ppm Ceiling (15 min); 1800 mg/m^3 Ceiling (15 min)
Naphtha, petroleum, hydrotreated light	No data available	No data available	No data available
Solvent naphtha (petroleum), light aliphatic	No data available	No data available	No data available
Propane	: 1000 ppm TWA (listed under Aliphatic hydrocarbon gases: Alkane C1-4) : 1000 ppm TWA	: 1000 ppm TWA; 1800 mg/m^3 TWA	: 2100 ppm IDLH (10% LEL) : 1000 ppm TWA; 1800 mg/m^3 TWA
Methyl acetate	: 250 ppm STEL : 200 ppm TWA	: 200 ppm TWA; 610 mg/m^3 TWA	: 3100 ppm IDLH (10% LEL) : 200 ppm TWA; 610 mg/m^3 TWA 250 ppm STEL; 760 mg/m^3 STEL
Petrolatum	5 mg/m^3 as oil mist	10 mg/m^3 as oil mist	No data available

Engineering Measures Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/Face Protection Safety glasses with side-shields.

Skin Protection Wear suitable protective clothing, Impervious gloves.

Respiratory Protection In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

General Hygiene Considerations Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	**Viscosity**	Non viscous
Color	Off-white	**Odor**	Petroleum distillates
Appearance	Opaque	**pH**	Not applicable
Specific Gravity	0.731	**Evaporation Rate**	53.3 (Butyl acetate=1)
Percent Volatile (Volume)	90.6	**VOC Content (%)**	48.5
VOC Content (g/L)	355	**Vapor Pressure**	1891 mmHg @ 70°F
Vapor Density	1.7 (Air = 1.0)	**Solubility**	Negligible
Boiling Point/Range	134 °F / 57 °C		

10. STABILITY AND REACTIVITY

Chemical Stability Stable. Hazardous polymerization does not occur.

Conditions to Avoid Heat, flames, and sparks

Incompatible Products Strong oxidizing agents, Reducing agents, Strong acids, Strong bases.

Hazardous Decomposition Products Carbon oxides

Possibility of Hazardous Reactions None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information No information available.

Component Information

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Butane	no data available	no data available	= 658 mg/L (Rat) 4 h	no data available	no data available
Hexane	= 25 g/kg (Rat)	= 3000 mg/kg (Rabbit)	= 48000 ppm (Rat) 4 h	no data available	no data available
Cyclohexane	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	= 13.9 mg/L (Rat) 4 h	no data available	no data available
Heptane (n-)	no data available	= 3000 mg/kg (Rabbit)	= 103 g/m^3 (Rat) 4 h	no data available	no data available
Naphtha, petroleum, hydrotreated light	> 5000 mg/kg (Rat)	> 3160 mg/kg (Rabbit)	= 73680 ppm (Rat) 4 h	no data available	no data available
Solvent naphtha (petroleum), light aliphatic	no data available	= 3000 mg/kg (Rabbit)	no data available	no data available	no data available
Propane	no data available	no data available	= 658 mg/L (Rat) 4 h	no data available	no data available
Methyl acetate	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rat) > 5000 mg/kg (Rabbit)	= 16000 ppm (Rat) 4 h	no data available	no data available
Petrolatum	no data available	= 3600 mg/kg (Rabbit)	no data available	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Butane	no data available	no data available	no data available	no data available	CNS
Hexane	no data available	no data available	no data available	yes	eyes, CNS, respiratory system, auditory system, skin, PNS
Cyclohexane	no data available	no data available	no data available	no data available	eyes, CNS, kidneys, respiratory system, skin
Heptane (n-)	no data available	no data available	no data available	no data available	skin, CNS, respiratory system
Naphtha, petroleum, hydrotreated light	no data available	no data available	no data available	no data available	no data available
Solvent naphtha (petroleum), light aliphatic	no data available	no data available	no data available	no data available	no data available
Propane	no data available	no data available	no data available	no data available	CNS
Methyl acetate	no data available	no data available	no data available	no data available	eyes, CNS, respiratory system, skin
Petrolatum	no data available	no data available	no data available	no data available	no data available

Carcinogenicity There are no known carcinogenic chemicals in this product.

Component	ACGIH	IARC	NTP	OSHA	Other
Butane	not applicable	not applicable	not applicable	not applicable	not applicable
Hexane	not applicable	not applicable	not applicable	not applicable	not applicable
Cyclohexane	not applicable	not applicable	not applicable	not applicable	not applicable
Heptane (n-)	not applicable	not applicable	not applicable	not applicable	not applicable
Naphtha, petroleum, hydrotreated light	not applicable	not applicable	not applicable	not applicable	not applicable
Solvent naphtha (petroleum), light aliphatic	not applicable	not applicable	not applicable	not applicable	not applicable
Propane	not applicable	not applicable	not applicable	not applicable	not applicable
Methyl acetate	not applicable	not applicable	not applicable	not applicable	not applicable
Petrolatum	not applicable	not applicable	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information
No information available.

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Butane	no data available	no data available	no data available	no data available	2.89
Hexane	no data available	LC50 2.1-2.98 mg/L Pimephales promelas 96 h	no data available	> 1000 mg/L 24 h	N/A
Cyclohexane	EC50 > 500 mg/L Desmodesmus subspicatus 72 h	LC50 23.03-42.07 mg/L Pimephales promelas 96 h LC50 24.99-44.69 mg/L Lepomis macrochirus 96 h LC50 3.96-5.18 mg/L Pimephales promelas 96 h LC50 48.87-68.76 mg/L Poecilia reticulata 96 h	EC50 = 85.5 mg/L 5 min EC50 = 93 mg/L 10 min	> 400 mg/L 24 h	3.44
Heptane (n-)	no data available	LC50 = 375.0 mg/L Cichlid fish 96 h	no data available	> 10 mg/L 24 h	4.66
Naphtha, petroleum, hydrotreated light	no data available	no data available	no data available	= 2.6 mg/L 96 h	N/A
Solvent naphtha (petroleum), light aliphatic	EC50 = 4700 mg/L Pseudokirchneriella subcapitata 72 h	no data available	no data available	no data available	N/A
Propane	no data available	no data available	no data available	no data available	2.8
Methyl acetate	EC50 > 120 mg/L Desmodesmus subspicatus 72 h	LC50 250-350 mg/L Brachydanio rerio 96 h LC50 295-348 mg/L Pimephales promelas 96 h	EC50 = 6000 mg/L 16 h EC50 = 6100 mg/L 30 min	= 1026.7 mg/L 48 h	0.18
Petrolatum	no data available	no data available	no data available	no data available	N/A

Persistence and Degradability No information available.
Bioaccumulation No information available.
Mobility No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal Dispose of in accordance with local regulations.
Container Disposal Contents under pressure. Do not puncture. Empty remaining contents. Empty containers should be taken for local recycling, recovery, or waste disposal.

14. TRANSPORT INFORMATION

DOT
Proper Shipping Name Consumer Commodity
Hazard Class ORM-D
Description Consumer Commodity, ORM-D

TDG
Proper shipping name Consumer Commodity
Hazard Class ORM-D
Description Consumer Commodity, ORM-D

ICAO
UN-No UN1950
Proper Shipping Name Aerosols
Hazard Class 2.1
Shipping Description UN1950, AEROSOLS, 2.1, LTD QTY

IATA
UN-No UN1950
Proper Shipping Name Aerosols, flammable
Hazard Class 2.1
ERG Code 10L
Shipping Description UN1950, AEROSOLS, FLAMMABLE, 2.1, LTD QTY

IMDG/IMO
Proper Shipping Name Aerosols
Hazard Class 2
UN-No UN1950
EmS No. F-D, S-U
Shipping Description UN1950, AEROSOLS,FLAMMABLE, 2.1, (15°C c.c.),LTD QTY

15. REGULATORY INFORMATION

Inventories

TSCA	Complies
DSL	Complies

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372.

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Hexane	110-54-3	5-10	1.0 % de minimis concentration
Cyclohexane	110-82-7	1-5	1.0 % de minimis concentration

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	Yes	Yes	No

CERCLA

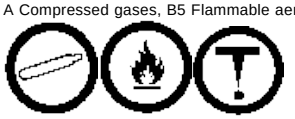
Component	Hazardous Substances RQs	CERCLA EHS RQs
Butane	Not applicable	Not applicable
Hexane	Not applicable	Not applicable
Cyclohexane	Not applicable	Not applicable
Heptane (n-)	Not applicable	Not applicable
Naphtha, petroleum, hydrotreated light	Not applicable	Not applicable
Solvent naphtha (petroleum), light aliphatic	Not applicable	Not applicable
Propane	Not applicable	Not applicable
Methyl acetate	Not applicable	Not applicable
Petrolatum	Not applicable	Not applicable

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

A Compressed gases, B5 Flammable aerosol, D2A Very toxic materials, D2B Toxic materials.



16. OTHER INFORMATION

Prepared By	Mike McDowell
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Reason for Revision	No information available.
Glossary	No information available.
List of References.	No information available.

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