



Safety Data Sheet

Parafast PG-1 LRF Part 1

SECTION 1: Identification

1.1 GHS Product identifier

Product name Parafast PG-1 LRF Part 1

1.2 Other means of identification

Parafast PG-1 LRF Cartridge
Parafast PG-1 LRF 5-gal
Parafast PG-1 LRF 15-gal
Parafast PG-1 LRF 50-gal

1.4 Supplier's details

Name Siplast
Address 14911 Quorum Drive
Suite 600
Dallas, TX 75254

Telephone 800-922-8800

1.5 Emergency phone number 800-424-9300 (CHEMTREC)

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

GHS classification in accordance with: OSHA (29 CFR 1910.1200)

- Acute toxicity, inhalation, Cat. 4
- Eye damage/irritation, Cat. 2A
- Sensitization, respiratory, Cat. 1
- Skin corrosion/irritation, Cat. 2
- Sensitization, skin, Cat. 1
- Specific target organ toxicity (repeated exposure), Cat. 2
- Specific target organ toxicity (single exposure), Cat. 3

2.2 GHS label elements, including precautionary statements

Pictograms



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Signal word

Danger

Hazard statement(s)

H315
H317
H319
H332
H334
H335
H336
H373

Causes skin irritation
May cause an allergic skin reaction
Causes serious eye irritation
Harmful if inhaled
May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause respiratory irritation
May cause drowsiness or dizziness
May cause damage to organs [CNS] through prolonged or repeated exposure

Precautionary statement(s)

P260
P261
P264
P271
P272
P280
P284
P302+P352
P304+P340
P305+P351+P338

Do not breathe dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
Wear eye protection/face protection/protective gloves.
[In case of inadequate ventilation] wear respiratory protection.
IF ON SKIN: Wash with plenty of water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
Call a POISON CENTER/doctor if you feel unwell.
Get medical advice/attention if you feel unwell.
Specific treatment (see supplemental first aid instructions on this label).
If skin irritation occurs: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
Take off contaminated clothing and wash it before reuse.
Wash contaminated clothing before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

P312
P314
P321
P332+P313
P333+P313
P337+P313
P342+P311
P362+P364
P363
P403+P233
P405
P501

2.3 Other hazards which do not result in classification

The product is classified and labeled according to the Globally Harmonized System (GHS).

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

1. 4,4' Diphenylmethanediisocyanate, isomere, homologue and mixtures (pMDI)

Concentration	50 - 100 % (weight)
EC no.	618-498-9
CAS no.	9016-87-9

- Acute toxicity, inhalation, Cat. 4

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- Skin corrosion/irritation, Cat. 2
- Eye damage/irritation, Cat. 2A
- Sensitization, respiratory, Cat. 1
- Sensitization, skin, Cat. 1
- Carcinogenicity, Cat. 2
- Specific target organ toxicity (single exposure), Cat. 3
- Specific target organ toxicity (repeated exposure), Cat. 2

H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer [route]
H373	May cause damage to organs [organs] through prolonged or repeated exposure [route]
SCLs/M-factors/ATEs	STOT SE 3; : C ≥ 5 % Resp. Sens. 1; : C ≥ .1 % Eye Irrit. 2; : C ≥ 5 % Skin Irrit. 2; : C ≥ 5 %

2. 4,4'-Methylenediphenyl diisocyanate (MDI)

Concentration	25 - 50 % (weight)
EC no.	202-966-0
CAS no.	101-68-8

- Acute toxicity, inhalation, Cat. 4
- Skin corrosion/irritation, Cat. 2
- Eye damage/irritation, Cat. 2A
- Sensitization, respiratory, Cat. 1
- Sensitization, skin, Cat. 1
- Carcinogenicity, Cat. 2
- Specific target organ toxicity (single exposure), Cat. 3
- Specific target organ toxicity (repeated exposure), Cat. 2

H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer [route]
H373	May cause damage to organs [organs] through prolonged or repeated exposure [route]

3. Diphenylmethane Diisocyanate (MDI) Mixed Isomers

Concentration	2.5 - 10 % (weight)
EC no.	247-714-0
CAS no.	26447-40-5

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- Skin corrosion/irritation, Cat. 2
- Eye damage/irritation, Cat. 2A
- Sensitization, skin, Cat. 1
- Acute toxicity, inhalation, Cat. 4
- Specific target organ toxicity (single exposure), Cat. 3
- Sensitization, respiratory, Cat. 1
- Carcinogenicity, Cat. 2
- Specific target organ toxicity (repeated exposure), Cat. 2

Trade secret statement (OSHA 1910.1200(i))

All concentrations are in percent by weight unless the ingredient is a gas. Gas concentrations are in percent by volume. Any pigments or fillers in this product which may be considered "Hazardous" are potentially hazardous only if inhaled as an airborne dust. Exposure by these ingredients as used in sealants, putties, bedding compounds and non-sprayable products is highly unlikely. For the wording of the listed risk phrases refer to section 15.

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice	Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
If inhaled	Supply fresh air and to be sure call for a doctor. In case of unconsciousness place patient stably in side position for transportation. Call a doctor immediately. Overexposure, remove to fresh air and seek medical attention.
In case of skin contact	If skin becomes irritated seek medical attention. Immediately wash with water and soap and rinse thoroughly.
In case of eye contact	Rinse opened eye for 20 minutes under running water. Call a Doctor immediately. Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
If swallowed	Rinse out mouth with water. Drink 1 - 2 glasses of water but DO NOT induce vomiting. Do not give liquids to a drowsy, convulsing or unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Seek medical treatment.

4.2 Most important symptoms/effects, acute and delayed

No further relevant information available.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

No further relevant information available.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

CO₂, extinguishing powder or water spray. Fight larger fires with water spray.
Use fire fighting measures that suit the environment.

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For safety reasons unsuitable extinguishing agents:
Do not use direct water stream.

5.2 Specific hazards arising from the chemical

No further relevant information available.

5.3 Special protective actions for fire-fighters

Mouth respiratory protective device.
Protective clothing and respiratory protective device.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep away from ignition sources
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation

6.2 Environmental precautions

Do not allow to enter sewers/ surface or ground water.

6.3 Methods and materials for containment and cleaning up

Cover spilled material with neutralization solution (see below) and mix Wait 15 minutes. Collect material in open-head metal containers. Repeat neutralization and cleaning process until surface is decontaminated. Apply drum lid but DO NOT secure. Allow containers to vent for 72 hours to let carbon dioxide escape. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose of contaminated material as waste in accordance with federal state and local regulations. Ensure adequate ventilation.

Reference to other sections

Neutralization solutions:

1. A mixture of 90% water, 3-8% ammonium hydroxide or concentrated ammonia, and 2% liquid detergent.
2. A mixture of 80% water, 20% non-ionic surfactant.

Apply solution. Wait 15 minutes. Collect in open-head container. Re-apply until surface is decontaminated. Apply drum lid but DO NOT secure. Let containers vent for 72 hours allowing carbon dioxide to escape. Secure drum lid.

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid prolonged or repeated contact with skin.
Avoid contact with eyes.
Wash thoroughly after handling.
Prevent formation of aerosols.

Information about protection against explosions and fires:
Product reacts with water. Reaction may produce heat and/or gases. Container may rupture from gas generation in a fire situation. This reaction may be violent.

7.2 Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles:
· Keep containers tightly closed when not in use. Protect from atmospheric moisture.

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Information about storage in one common storage facility:

- Keep away from open flames and high temperatures.

Further information about storage conditions:

- Storage Temperature - 32°F - 90°F
- Keep receptacle tightly sealed.

Specific end use(s)

No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. 4,4'-Methylenediphenyl diisocyanate (MDI) (CAS: 101-68-8)

PEL (Inhalation): (C) 0.02 ppm (OSHA)

OSHA Annotated Table Z-1, www.osha.gov

PEL (Inhalation): (C) 0.2 mg/m³ (OSHA)

OSHA Annotated Table Z-1, www.osha.gov

PEL (Inhalation): 0.005 ppm (Cal/OSHA)

OSHA Annotated Table Z-1, www.osha.gov

REL (Inhalation): 0.05 mg/m³, (C) 0.2 mg/m³ [10-min] (NIOSH)

OSHA Annotated Table Z-1, www.osha.gov

TLV® (Inhalation): 0.005 ppm (ACGIH)

Respiratory sensitizer

TWA (Inhalation): See Isocyanates, all ppm; Australia (AU/SWA)

Advisory carc cat: Carc. 2; Other advisory: Sen

2. Diphenylmethane Diisocyanate (MDI) Mixed Isomers (CAS: 26447-40-5 EC: 247-714-0)

PEL-TWA (Inhalation): 0.005 ppm; 0.051 mg/m³ (OSHA)

TLV® (Inhalation): 0.005 ppm; 0.051 mg/m³ (OSHA)

respiratory sensitizer

8.3 Individual protection measures, such as personal protective equipment (PPE)

Pictograms



Eye/face protection

Face Shield

Safety glasses with side shields.

Skin protection

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

- Material of gloves

Chloroprene rubber, CR

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Nitrile rubber, NBR
Butyl rubber, BR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Body protection

Apron
Protective work clothing

Respiratory protection

Use approved respiratory protection equipment when airborne exposure is excessive. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by the manufacturer.

Environmental exposure controls

Components with limit values that require monitoring at the workplace:

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

· General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance	Dark amber liquid
Color	Dark Amber
Odor	Characteristic
Odor threshold	Not determined
Melting point/freezing point	Undetermined
Boiling point or initial boiling point and boiling range	200°C (392°F)
Flammability	Not applicable
Lower and upper explosion limit/flammability limit	0.4% - 6.7%
Flash point	220°C (428°F)
Explosive properties	Product does not present an explosion hazard.
Auto-ignition temperature	>482°F
Decomposition temperature	No data available.
Oxidizing properties	No data available.
pH	No data available.
Kinematic viscosity	Not determined
Solubility	Not miscible or difficult to mix with water
Partition coefficient n-octanol/water (log value)	No data available.
Vapor pressure	0 mm Hg
Evaporation rate	Not determined
Density and/or relative density	1.22 g/cm ³ (10.1809 lbs/gal) at 20°C (68°F)

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Relative vapor density

Not determined

Particle characteristics

Dynamic Viscosity at 20°C (68°F): 200mPas

Organic Solvents: 0.0%

Supplemental information regarding physical hazard classes

No data available.

Further safety characteristics (supplemental)

No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

No further relevant information available.

10.2 Chemical stability

No data available.

10.3 Possibility of hazardous reactions

Violent reaction with water at high temperatures.

May produce violent reactions with bases and numerous organic substances including alcohols and amines.

MDI reacts slowly with water to form Carbon Dioxide gas. This gas can cause sealed containers to expand and possibly rupture. Contact with moisture, other materials that react with isocyanates, or temperatures above 350°F, may cause polymerization.

10.4 Conditions to avoid

Contact with moisture, other materials that react with isocyanates, or temperatures above 350°F (177°C), may cause polymerization.

10.5 Incompatible materials

Reacts with amines, caustic alkali solutions, alcohols, ammonia, oxidizers, acids, polyols.

Reacts with water forming carbon dioxide-may rupture sealed containers if contaminated with water.

May produce violent reactions with bases and numerous organic substances including alcohols and amines.

10.6 Hazardous decomposition products

Carbon dioxide, carbon monoxide, oxides of nitrogen, dense black smoke, hydrogen cyanide, isocyanic acid, other undetermined compounds.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

LD/LC50 values that are relevant for classification:

101-68-8 4,4'-methylenediphenyl diisocyanate (MDI)

Oral LD50 2,200 mg/kg (mouse)

Skin corrosion/irritation

Skin irritant.

Irritant to skin and mucous membranes.

Serious eye damage/irritation

Irritating effect.

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Respiratory or skin sensitization

Inhalation - Sensitization possible through inhalation.
Skin Contact - Sensitization possible through skin contact.

Carcinogenicity

IARC (International Agency for Research on Cancer)
9016-87-9 diphenylmethanediisocyanate, isomers and homologues (polymer exempt) - 3
101-68-8 4,4'-methylene diphenyl diisocyanate (MDI) 3

· NTP (National Toxicology Program)
None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients is listed.

Additional information

The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant

SECTION 12: Ecological information

Toxicity

Aquatic toxicity: No further relevant information available.

Persistence and degradability

No further relevant information available.

Bioaccumulative potential

No further relevant information available.

Mobility in soil

No further relevant information available.

Results of PBT and vPvB assessment

Not applicable.

Endocrine disrupting properties

· General notes:

At present there are no ecotoxicological assessments.

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Other adverse effects

No further relevant information available.

SECTION 13: Disposal considerations

Disposal methods

Packaging disposal

Disposal must be made according to official regulations.

Waste treatment

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Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Must be specially treated adhering to official regulations.
Disposal must be made according to official regulations.

SECTION 14: Transport information

DOT (US)

UN Number: Not regulated

Class: Not regulated

Packing Group: Not regulated

Proper Shipping Name: Not regulated

Reportable quantity (RQ): Transport/Additional information: MDI (CAS 101-68-8) exhibits a CERCLA RQ equal to 5,000 pounds. Quantities less than the RQ amount are not regulated in transportation.

Marine pollutant: Not applicable.

IMDG

UN Number: Not regulated

Class: Not regulated

Packing Group: Not regulated

Proper Shipping Name: Not regulated

IATA

UN Number: Not regulated

Class: Not regulated

Packing Group: Not regulated

Proper Shipping Name: Not regulated

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Canadian Domestic Substances List (DSL)

Chemical name: Isocyanic acid, polymethylenepolyphenylene ester

CAS: 9016-87-9

New Jersey Right To Know Components

Common name: METHYLENE DIPHENYL DIISOCYANATE (POLYMERIC)

CAS number: 9016-87-9

Massachusetts Right To Know Components

Chemical name: Polymeric diphenylmethane diisocyanate

CAS number: 9016-87-9

Canadian Domestic Substances List (DSL)

Chemical name: Benzene, 1,1'-methylenebis[4-isocyanato-

CAS: 101-68-8

Pennsylvania Right To Know Components

Chemical name: Benzene, 1,1'-methylenebis[4-isocyanato-

CAS number: 101-68-8

New Jersey Right To Know Components

Common name: METHYLENE BISPHENYL ISOCYANATE

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CAS number: 101-68-8

Massachusetts Right To Know Components

Chemical name: MDI

CAS number: 101-68-8

Canadian Domestic Substances List (DSL)

Chemical name: Benzene, 1,1'-methylenebis[isocyanato-

CAS: 26447-40-5

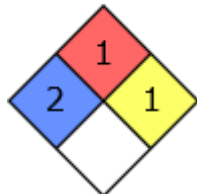
15.2 Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out.

HMIS Rating

Parafast PG-1 LRF Part 1	
HEALTH	2
FLAMMABILITY	1
PHYSICAL HAZARD	1
PERSONAL PROTECTION	

NFPA Rating



SECTION 16: Other information

16.1 Further information/disclaimer

Although the information and recommendations set forth in this SDS are presented in good faith and are believed to be correct as of the date of this SDS, Siplast makes no representations as to the completeness or accuracy thereof. Information is supplied on the condition that the persons receiving and using it will make their own determination as to the suitability for their purpose prior to use. In no event will Siplast or any affiliate thereof be responsible for damages of any nature whatsoever resulting from the use or reliance on the information set forth in the SDS.