



John Deere HyGard™

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Date of issue: 03/03/2015 Version: 1.0

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

1.1. Product identifier

Product form : Mixture
Trade name : John Deere HyGard™
Product code : TY6354, TY22062, AR69444, TY6238, AR69445, TY26992, TY22028, TY25261, TY26625
Other means of identification : Universal Tractor Hydraulic Fluid

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

Use of the substance/mixture : Hydraulic Fluid

1.3. Details of the supplier of the safety data sheet

MANUFACTURER:

Northland Products
1000 Rainbow Drive
Waterloo, IA 50704

Tel: +1-319-234-5585
+1-800-772-1724

SUPPLIER:

Deere & Company
One John Deere Place
Moline, IL 61265
E-mail: ESOC@JohnDeere.com

1.4. Emergency telephone number

Emergency number : Chemtrec 1-800-424-9300
Chemtrec (Outside USA) +1 703-527-3887 (24 hours)
Supplier: +1-309-748-5636 or 1-800-822-8262 (24 hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified

2.2. Label elements

GHS-US labelling

No labelling applicable

2.3. Other hazards

other hazards which do not result in classification : This product contains a petroleum-based mineral oil. Prolonged or repeated skin contact can cause mild irritation and inflammation characterized by drying, cracking, (dermatitis) or oil acne. Repeated or prolonged inhalation of petroleum-based mineral oil mists at concentrations above applicable workplace exposure levels can cause respiratory irritation or other pulmonary effects. Repeated or prolonged inhalation of petroleum-based mineral oil mists at concentrations above applicable workplace exposure levels can cause respiratory irritation or other pulmonary effects. Spills of this product present a serious slipping hazard. Used oil, may contain harmful impurities. Used motor oil was associated with cancer in lifetime skin painting studies with laboratory animals. When using high-pressure equipment, injection of product can occur. Injection under the skin of pressurized hydrocarbons can cause severe, permanent tissue damage.

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

Full text of H-phrases: see section 16

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Distillates, petroleum, solvent-refined heavy paraffinic	(CAS No) 64741-88-4	0,1 - 5	Acute Tox. 4 (Inhalation:dust,mist), H332 Asp. Tox. 1, H304

Name	Product identifier	%	GHS-US classification
Distillates, petroleum, solvent-refined light paraffinic	(CAS No) 64741-89-5	0,1 - 5	Acute Tox. 4 (Inhalation:dust,mist), H332 Asp. Tox. 1, H304
Distillates, petroleum, solvent-dewaxed heavy paraffinic	(CAS No) 64742-65-0	0,4 - 1,5	Asp. Tox. 1, H304
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	(CAS No) 68649-42-3	< 3	Not Classified

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Injection under the skin of pressurized hydrocarbons can cause severe, permanent tissue damage. If material is injected under the skin, seek medical attention immediately.
First-aid measures after inhalation	: Assure fresh air breathing. Allow the victim to rest. In case of breathing difficulties administer oxygen.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist. Obtain medical attention if pain, blinking or redness persist.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries	: This product contains a petroleum-based mineral oil. Prolonged or repeated skin contact can cause mild irritation and inflammation characterized by drying, cracking, (dermatitis) or oil acne. Repeated or prolonged inhalation of petroleum-based mineral oil mists at concentrations above applicable workplace exposure levels can cause respiratory irritation or other pulmonary effects.
Symptoms/injuries after inhalation	: In the event of insufficient ventilation: Repeated or prolonged inhalation of petroleum-based mineral oil mists at concentrations above applicable workplace exposure levels can cause respiratory irritation or other pulmonary effects. Typical symptoms are respiratory irritation, breathlessness, coughing, chest tightness and difficulty breathing.
Symptoms/injuries after skin contact	: Frequent or prolonged contact with skin may cause dermal irritation.
Symptoms/injuries after eye contact	: If user operations generate dust or fumes, . May cause eye irritation. Exposure to vapor may cause intense watering and irritation to eyes.

4.3. Indication of any immediate medical attention and special treatment needed

Injection under the skin of pressurized hydrocarbons can cause severe, permanent tissue damage. Immediate treatment at a surgical emergency center is recommended.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Leaks/ruptures in high pressure system can create a fire hazard when in the vicinity of ignition sources (eg. open flame, pilot lights, sparks, or electric arcs).
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5.3. Advice for firefighters

Precautionary measures fire	: Stop and contain spill/release if it can be done safely. If this cannot be done, allow fire to burn under control. Gases/vapours, toxic.
Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protective equipment for firefighters	: Do not enter fire area without proper protective equipment, including respiratory protection. Wear self-contained respiratory apparatus during longer or intensive exposition or spraying processing.
Other information	: Special danger of slipping by leaking/spilling product.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Use personal protective equipment as required. Special danger of slipping by leaking/spilling product. Stop leak if safe to do so. Relevant water authorities should be notified of any large spillage to water course or drain. This material can burn but will not readily ignite. Eliminate all ignition sources if safe to do so.
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6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel. Avoid breathing mist or vapor . Avoid direct eye contact with product, also via contamination on hands. Avoid contact with skin, eyes and clothes.
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6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : The low volatility of this product does not require ventilation. However depending on the condition an adequate ventilation might be required.

6.2. Environmental precautions

Prevent entry to sewers and public waters. An environmental fate analysis is not available for this specific product. Plants and animals may experience harmful or fatal effects when coated with petroleum products. Petroleum-based (mineral) lubricating oils normally will float on water. In stagnant or slow-flowing waterways, an oil layer can cover a large surface area. As a result, this oil layer might limit or eliminate natural atmospheric oxygen transport into the water. With time, if not removed, oxygen depletion in the waterway may be sufficient to cause a fish kill or create an anaerobic environment. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as fabric absorbents, clay or diatomaceous earth as soon as possible. Recover large spills by pumping (use an explosion proof or hand pump). Prevent from spreading by making a barrier with sand, earth or other containment material. Collect spillage. Store away from other materials. Consult the appropriate authorities about waste disposal. This material and its container must be disposed of in a safe way, and as per local legislation.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Special danger of slipping by leaking/spilling product. Never use pressure to empty containers. Over pressure may rupture containers, cause serious injury, cause or accelerate fire.
- Precautions for safe handling : Keep out of reach of children. Work in a well-ventilated area. Avoid contact with skin, eyes and clothes. Personal protective equipment should be selected based upon the conditions under which this product is handled or used. Do not use in high pressure systems in the vicinity of flames, sparks and hot surfaces. Provide good ventilation in process area to prevent formation of vapour. Avoid breathing dust/fume/gas/mist/vapours/spray. Empty container retains product residue. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Ground/bond container and receiving equipment. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose containers to flames, sparks, heat, or other potential ignition sources.
- Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : A washing facility/water for eye and skin cleaning purposes should be present. Avoid static electricity discharges. Comply with applicable regulations. Ensure adequate ventilation. Ground/bond container and receiving equipment. Have equipments for fires and leaks readily available.
- Storage conditions : Keep container closed when not in use. Keep only in the original container in a cool, well-ventilated place away from highly flammable substances. Keep container closed (and grounded).
- Incompatible materials : Strong acid. Base. Oxidizing agents.
- Storage temperature : Store at ambient temperature
- Heat and ignition sources : Remove all sources of ignition. Store away from excessive heat. Light hydrocarbon vapours can build up in the headspace of containers.
- Storage area : Protect against direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls

- Appropriate engineering controls : Use adequate general or local ventilation to keep airborne concentrations below the exposure limits.
- Personal protective equipment : Personal protective equipment should be selected based upon the conditions under which this product is handled or used. Avoid all unnecessary exposure. Gloves. Protective clothing. Protective goggles.



- Hand protection : Wear protective gloves, rubber gloves.

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Eye protection	: Use splash goggles when eye contact due to splashing is possible. Chemical goggles or safety glasses. with side-shields.
Skin and body protection	: Wear suitable protective clothing. Wear rubber boots.
Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment. Protection factors vary depending upon the type of respirator used. Wear a self-contained breathing apparatus and appropriate personal protective equipment (PPE).
Environmental exposure controls	: Do not allow run-off from fire-fighting to enter drains or water courses. Ensure waste is collected and contained. Notify authorities if product enters sewers or public waters.
Other information	: Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Clear to light amber.
Odour	: Petroleum. Characteristic.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: > 320 °C (608 °F)
Flash point	: 202 °C (396 °F) Test method: COC
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Lower Flammability Limit (LFL) 0.9 Upper Flammability Limit (UFL) 7.0
Vapour pressure	: < 0,01 mm Hg Maximum @ 37.8 °C (100 °F)
Relative vapour density at 20 °C	: > 1
Relative density	: 0,881 g/cm ³ at 15.6 °C / 60 °F
Solubility	: Water: insoluble Organic solvent: completely soluble
Log Pow	: Base oil hydrocarbons: log Kow > 4 (estimate)
Log Kow	: Base oil hydrocarbons: log Kow > 4 (estimate)
Viscosity, kinematic	: 60 cSt (40 °C/104 °F)
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable at normal temperatures and pressures.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Do not pressurize, cut, weld, braze, solder, drill, grind, or expose containers to flames, sparks, heat, or other potential ignition sources.

10.5. Incompatible materials

Strong acid. Strong bases. Oxidizing agents.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. unburned hydrocarbons.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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Acute toxicity : Not classified

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)	
LD50 dermal rabbit	> 2000 mg/kg

Distillates, petroleum, solvent-refined heavy paraffinic (64741-88-4)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	2,18 mg/l/4h
ATE (dust,mist)	2,180 mg/l/4h

Distillates, petroleum, solvent-refined light paraffinic (64741-89-5)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 5 g/kg
LC50 inhalation rat (mg/l)	2,18 mg/l/4h
ATE (dust,mist)	2,180 mg/l/4h

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified (Conclusive but not sufficient for classification)
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classifiedBased on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classifiedBased on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classifiedBased on available data, the classification criteria are not met
Aspiration hazard	: Not classifiedMay be fatal if swallowed and enters airways
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	: In the event of insufficient ventilation: Repeated or prolonged inhalation of petroleum-based mineral oil mists at concentrations above applicable workplace exposure levels can cause respiratory irritation or other pulmonary effects. Typical symptoms are respiratory irritation, breathlessness, coughing, chest tightness and difficulty breathing.
Symptoms/injuries after skin contact	: Frequent or prolonged contact with skin may cause dermal irritation.
Symptoms/injuries after eye contact	: If user operations generate dust or fumes, . May cause eye irritation. Exposure to vapor may cause intense watering and irritation to eyes.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May be toxic to aquatic life.

Distillates, petroleum, solvent-dewaxed heavy paraffinic (64742-65-0)	
LC50 fishes 1	> 5000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	> 1000 mg/l (Exposure time: 48 h - Species: Daphnia magna)

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)	
EC50 Daphnia 1	1 - 1,5 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	10,0 - 35,0 mg/l (Exposure time: 96 h - Species: Pimephales promelas [semi-static])

Distillates, petroleum, solvent-refined heavy paraffinic (64741-88-4)	
LC50 fishes 1	> 5000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	> 1000 mg/l (Exposure time: 48 h - Species: Daphnia magna)

Distillates, petroleum, solvent-refined light paraffinic (64741-89-5)	
LC50 fishes 1	> 5000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	> 1000 mg/l (Exposure time: 48 h - Species: Daphnia magna)

12.2. Persistence and degradability

John Deere HyGard™	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

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Log Pow	Base oil hydrocarbons: log Kow > 4 (estimate)
Log Kow	Base oil hydrocarbons: log Kow > 4 (estimate)
Bioaccumulative potential	Not established.

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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Liquid product may not be disposed of with household waste or landfilled. Do not allow to enter into drains/waters or in the soil. It is the responsibility of the user to determine if disposal material is hazardous according to federal, state and local regulations. Do not re-use empty containers. Do not pressurize, cut, weld, braze solder, drill, grind, or expose containers to flames, sparks, heat, or other potential ignition sources. Dispose in a safe manner in accordance with local/national regulations.

Additional information : Used oil, may contain harmful impurities. Used motor oil was associated with cancer in lifetime skin painting studies with laboratory animals.

Ecology - waste materials : Avoid release to the environment. Hazardous waste due to toxicity.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Additional information

Other information : No supplementary information available.

Overland transport

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Distillates, petroleum, solvent-dewaxed heavy paraffinic (64742-65-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Distillates, petroleum, solvent-refined heavy paraffinic (64741-88-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Distillates, petroleum, solvent-refined light paraffinic (64741-89-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Distillates, petroleum, solvent-dewaxed heavy paraffinic (64742-65-0)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Distillates, petroleum, solvent-refined heavy paraffinic (64741-88-4)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Distillates, petroleum, solvent-refined light paraffinic (64741-89-5)

Listed on the Canadian DSL (Domestic Substances List) inventory.

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EU-Regulations

Distillates, petroleum, solvent-dewaxed heavy paraffinic (64742-65-0)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) substances.

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) substances.

Distillates, petroleum, solvent-refined heavy paraffinic (64741-88-4)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) substances.

Distillates, petroleum, solvent-refined light paraffinic (64741-89-5)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) substances.

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

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

Not classified

15.2.2. National regulations

Distillates, petroleum, solvent-dewaxed heavy paraffinic (64742-65-0)

Listed on the AICS (the Australian Inventory of Chemical Substances)
Listed on Inventory of Existing Chemical Substances (IECSC)
Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory.
Listed on the Korean ECL (Existing Chemical List) inventory.
Listed on New Zealand - Inventory of Chemicals (NZIoC)
Listed on Inventory of Chemicals and Chemical Substances (PICCS)

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)

Listed on the AICS (the Australian Inventory of Chemical Substances)
Listed on Inventory of Existing Chemical Substances (IECSC)
Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory.
Listed on the Korean ECL (Existing Chemical List) inventory.
Listed on New Zealand - Inventory of Chemicals (NZIoC)
Listed on Inventory of Chemicals and Chemical Substances (PICCS)

Distillates, petroleum, solvent-refined heavy paraffinic (64741-88-4)

Listed on the AICS (the Australian Inventory of Chemical Substances)
Listed on Inventory of Existing Chemical Substances (IECSC)
Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory.
Listed on the Korean ECL (Existing Chemical List) inventory.
Listed on New Zealand - Inventory of Chemicals (NZIoC)
Listed on Inventory of Chemicals and Chemical Substances (PICCS)

Distillates, petroleum, solvent-refined light paraffinic (64741-89-5)

Listed on the AICS (the Australian Inventory of Chemical Substances)
Listed on Inventory of Existing Chemical Substances (IECSC)
Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory.
Listed on the Korean ECL (Existing Chemical List) inventory.
Listed on New Zealand - Inventory of Chemicals (NZIoC)
Listed on Inventory of Chemicals and Chemical Substances (PICCS)

15.3. US State regulations

Distillates, petroleum, solvent-dewaxed heavy paraffinic (64742-65-0)

U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (68649-42-3)

U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term

Distillates, petroleum, solvent-refined heavy paraffinic (64741-88-4)

U.S. - Texas - Effects Screening Levels - Long Term

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Distillates, petroleum, solvent-refined heavy paraffinic (64741-88-4)

U.S. - Texas - Effects Screening Levels - Short Term

Distillates, petroleum, solvent-refined light paraffinic (64741-89-5)

U.S. - Massachusetts - Right To Know List
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term

SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Asp. Tox. 1	Aspiration hazard, Category 1
H304	May be fatal if swallowed and enters airways
H332	Harmful if inhaled

SDS US (GHS HazCom 2012)

The information presented herein has been compiled from sources considered to be dependable and is accurate to the best of Northland Products Company's knowledge; however, Northland Products Company makes no warranty whatsoever, expressed or implied, of merchantability or fitness for the particular purpose, regarding the accuracy of such data or the results to be obtained from the use thereof. Northland Products Company assumes no responsibility for the injury to the recipient or to third party persons or for any damage to any property and recipient assumes all such risks