

Safety Data Sheet Octamar™ HF-10 Plus

1. Product and company identification

Product name : Øctamar™ HF-10 Plus

Material uses : Industrial applications: Fuel additive.

Version : 1.01

Supplier : Innospec Fuel Specialties LLC

8310 South Valley Highway

Suite 350 Englewood CO, 80112 USA

Information contact : 1-800-441-9547

e-mail address of person responsible

for this SDS

: sdsinfo@innospecinc.com

NON-emergency enquiries : corporatecommunications@innospecinc.com

Emergency telephone number

In USA, Canada and North America, 24 hour / 7 day emergency information for our product is provided by the CHEMTREC® Emergency Call Center based in the USA

Country information : Emergency telephone number

USA, Canada, Puerto Rico, Virgin Islands : +1 800 424 9300 In case of difficulties, or for ships at sea : +1 703 527 3887

In Europe, Middle East, Africa, Asia Pacific and South America 24 hour / 7 day emergency response for our products is provided by the NCEC CARECHEM 24 global network



The main regional centres are listed here in Section 1.

Other local contact numbers for specific language support in Asia Pacific are listed in Section 16

Country information : Emergency telephone number Location

South America (all countries) : +1 215 207 0061 Philadelphia USA

Brazil

Mexico

: +55 11 3197 5891

Brazil

Mexico

: +52 555 004 8763

Mexico

Europe (all countries) Middle East, Africa (French, Portuguese, English) : +44 (0) 1235 239 670

London, UK

Middle East, Africa (Arabic, French, English) : +44 (0) 1235 239 671

Lebanon

Asia Pacific (all countries except China): +65 3158 1074SingaporeChina: 400 120 6011Beijing China

Section 2. Hazards identification

OSHA/HCS status

: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

: FLAMMABLE LIQUIDS - Category 4 CARCINOGENICITY - Category 2 ASPIRATION HAZARD - Category 1

GHS label elements

Hazard pictograms



Signal word : Danger

Hazard statements : H227 - Combustible liquid.

H351 - Suspected of causing cancer.

H304 - May be fatal if swallowed and enters airways.

Precautionary statements

Prevention: P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood. P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.

P210 - Keep away from flames and hot surfaces. - No smoking.

Response : P308 + P313 - IF exposed or concerned: Get medical attention.

P301 + P310 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or

physician. Do NOT induce vomiting.

Storage : P405 - Store locked up.

P403 - Store in a well-ventilated place.

P235 - Keep cool.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national

and international regulations.

Hazards not otherwise

classified

: None known.

See toxicological information (Section 11)

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Distillates (petroleum), hydrotreated light	60 - 100	64742-47-8 [1174522-15-6]
Solvent naphtha (petroleum), heavy arom.	9.99 - 14.99	64742-94-5
Polymer.	Proprietary	-
naphthalene	0.09 - 0.99	91-20-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Additional information

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes

: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10

minutes. Get medical attention.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If

not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may

need to be kept under medical surveillance for 48 hours.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and

shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing

before reuse. Clean shoes thoroughly before reuse.

Ingestion: Get medical attention immediately. Call a poison center or physician. Remove

dentures if any. Wash out mouth with water. Stop if the exposed person feels sick as vomiting may be dangerous. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention

immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt

or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact
 Inhalation
 No known significant effects or critical hazards.
 Skin contact
 No known significant effects or critical hazards.
 Ingestion
 May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : Adverse symptoms may include the following:

nausea or vomiting

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

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed.

The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments: No specific treatment.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. It may

be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing

media

Unsuitable extinguishing media

: Do not use water jet.

nitrogen oxides

Specific hazards arising from the chemical

: Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials: carbon dioxide carbon monoxide

: Use dry chemical, CO₂, water spray (fog) or foam.

Special protective actions for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters Flash point

: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

: Closed cup: 66.5°C (151.7°F)

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders:

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".

Environmental precautions

: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill

: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible. absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not swallow. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Distillates (petroleum), hydrotreated light	ACGIH TLV (United States, 3/2018). Absorbed through skin.
	TWA: 200 mg/m³, (as total hydrocarbon vapor) 8 hours.
naphthalene	ACGIH TLV (United States, 3/2018). Absorbed through skin.
	TWA: 10 ppm, 0 times per shift, 8 hours.
	TWA: 52 mg/m³, 0 times per shift, 8 hours.
	OSHA PEL 1989 (United States, 3/1989).
	TWA: 10 ppm, 0 times per shift, 8 hours.
	TWA: 50 mg/m³, 0 times per shift, 8 hours.
	STEL: 15 ppm, 0 times per shift, 15 minutes.
	STEL: 75 mg/m³, 0 times per shift, 15 minutes.
	NIOSH REL (United States, 10/2016).
	TWA: 10 ppm, 0 times per shift, 10 hours.
	TWA: 50 mg/m³, 0 times per shift, 10 hours.
	STEL: 15 ppm, 0 times per shift, 15 minutes.
	STEL: 75 mg/m³, 0 times per shift, 15 minutes.
	OSHA PEL (United States, 5/2018).
	TWA: 10 ppm, 0 times per shift, 8 hours.
	TWA: 50 mg/m³, 0 times per shift, 8 hours.

Section 8. Exposure controls/personal protection

Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with sideshields.

Skin protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Yellowish-brown.
Odor : Not available.
Odor threshold : Not available.
pH : Not available.
Melting point/freezing point : Not available.

Boiling point : Lowest known value: 178 to 215°C (352.4 to 419°F)(Solvent naphtha (petroleum),

heavy arom.). Weighted average: 244.6°C (472.3°F)

Section 9. Physical and chemical properties

Flash point

: Closed cup: 66.5°C (151.7°F)

Evaporation rate

: 0.05 (Solvent naphtha (petroleum), heavy arom.) compared with butyl acetate

Flammability (solid, gas)

: Not available.

Lower and upper explosive (flammable) limits

: Greatest known range: Lower: 0.5% Upper: 8% (Distillates (petroleum), hydrotreated

Vapor pressure

: Highest known value: 0.1 kPa (0.8 mm Hg) (at 20°C) (Solvent naphtha (petroleum), heavy arom.). Weighted average: 0.05 kPa (0.38 mm Hg) (at 20°C)

Vapor density

: Highest known value: 4.6 to 5.5 (Air = 1) (Solvent naphtha (petroleum), heavy arom.). Weighted average: 1.71 (Air = 1)

Density

: 0.8738 g/cm³ [15°C (59°F)]

Specific gravity

: Not available.

Solubility

: Insoluble in the following materials: cold water, hot water.

Partition coefficient: n-

: Not available.

octanol/water

Auto-ignition temperature

: Lowest known value: >230°C (>446°F) (Distillates (petroleum), hydrotreated light).

Decomposition temperature: Not available.

Viscosity

: Dynamic (room temperature): 14 mPa·s (14 cP) Kinematic (40°C (104°F)): 0.12 cm²/s (12 cSt)

Pour point

Aerosol product

Section 10. Stability and reactivity

Reactivity

: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability

: The product is stable.

Possibility of hazardous reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid

: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Incompatible materials

: Reactive or incompatible with the following materials: oxidizing materials

Hazardous decomposition

products

: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Test	Species	Result	Dos	se
Distillates (petroleum), hydrotreated light	OECD 403 Acute Inhalation Toxicity	Rat	LC50 Inhalation Vapor	>5000 mg/ m³	8 hours
	OECD 402 Acute Dermal Toxicity	Rabbit	LD50 Dermal	>5000 mg/ kg	-
	OECD 401 Acute Oral Toxicity	Rat	LD50 Oral	>5000 mg/ kg	-
Solvent naphtha (petroleum), heavy arom.	-	Rat	LC50 Inhalation Vapor	>590 mg/ m³	4 hours
	-	Rabbit	LD50 Dermal	>2 mL/kg	-

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Section 11. Toxicological information

	-	Rabbit	LD50 Dermal	2000 mg/kg	-
	-	Rat	LDLo Oral	5 mL/kg	-
Polymer.	-	Rat	LD50 Oral	>5000 mg/	-
				kg	
naphthalene	-	Rat	LC50 Inhalation	>340 mg/	1 hours
			Vapor	m³	
	-	Rabbit	LD50 Dermal	>2000 mg/	-
				kg	
	-	Rat	LD50 Oral	490 mg/kg	-

Potential chronic health effects

Not available.

Irritation/Corrosion

Product/ingredient name	Test	Species	Result
Solvent naphtha (petroleum), heavy arom.	-		Skin - Mild irritant - Eyes - Mild irritant -

Sensitization

Product/ingredient name	Test	Species	Result
Distillates (petroleum), hydrotreated light	-	Rat	Not sensitizing -

Mutagenicity

Product/ingredient name	Test	Experiment	Result
Distillates (petroleum),	-	Experiment: In vivo	Negative
hydrotreated light		Subject: Bacteria	

Carcinogenicity

Classification

Product/ingredient name	OSHA	IARC	NTP
naphthalene	-	2B	Reasonably anticipated to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Solvent naphtha (petroleum), heavy arom.	Category 3	Not applicable.	Narcotic effects

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

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Section 11. Toxicological information

Name	Result
, , ,	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Solvent naphtha (petroleum), heavy arom.	Acute EC50 1 to 3 mg/l	Algae	72 hours
	Acute EC50 3 to 10 mg/l	Daphnia	48 hours
	Acute LC50 2 to 5 mg/l	Fish	96 hours
naphthalene	Acute EC50 1.96 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
·	Acute LC50 2350 μg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 1.6 mg/l	Fish	96 hours
	Chronic NOEC 0.5 mg/l Marine water Chronic NOEC 1.5 mg/l Fresh water	Crustaceans - Uca pugnax - Adult Fish - Oreochromis mossambicus	

Persistence and degradability

Product/ingredient name	Test	Result
Distillates (petroleum), hydrotreated light Polymer.	Respirometry Test	69 % - Readily - 28 days 12 % - Inherent - 28 days
. o.yor.	Vessels (Headspace Test)	12 /s minorone 20 days

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Distillates (petroleum), hydrotreated light	-	-	Readily
Solvent naphtha (petroleum), heavy arom.	-	-	Inherent
Polymer.	-	-	Inherent

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Distillates (petroleum), hydrotreated light	6 to 8	-	high
Solvent naphtha (petroleum), heavy arom.	-	<100	low
Polymer. naphthalene	<-1 3.3	- >100	low low

Section 13. Disposal considerations

: 2020-01-02

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any byproducts should at all times comply with the requirements of environmental protection and waste disposal legislation and
any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal
contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all
authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when
recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when
handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product

Section 13. Disposal considerations

residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	NA1993	Not regulated.	Not regulated.
UN proper shipping name	Combustible liquid, n.o.s. (Distillates (petroleum), hydrotreated light, Solvent naphtha (petroleum), heavy arom.) RQ (naphthalene)	-	-
Transport hazard class(es)	Combustible liquid.	-	-
Packing group	III	-	-
Environmental hazards	No.	No.	No.
Additional information	Non-bulk packages (less than or equal to 119 gal) of combustible liquids are not regulated as hazardous materials in package sizes less than the product reportable quantity. Reportable quantity 10940.9 lbs / 4967.2 kg [1501.7 gal / 5684.6 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements. Limited quantity Yes. Packaging instruction Exceptions: 150. Non-bulk: 203. Bulk: 241. Quantity limitation Passenger aircraft/rail: 60 L. Cargo aircraft: 220 L. Special provisions 148, IB3, T1, TP1		

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 14. Transport information

Section 15. Regulatory information

U.S. Federal regulations

: TSCA 5(a)2 final significant new use rules: 4-nonylphenol, branched

United States inventory (TSCA 8b): All components are listed or exempted.

Clean Water Act (CWA) 307: naphthalene

Clean Air Act Section 112 : Listed

(b) Hazardous Air Pollutants (HAPs) Liotot

SARA 302/304

Composition/information on ingredients

			SARA 302 TPQ		SARA 304 RQ	
Name	%	EHS	(lbs)	(gallons)	(lbs)	(gallons)
formaldehyde	0 - 0.09	Yes.	500	55	100	11

SARA 304 RQ : 7262164.1 lbs / 3297022.5 kg [996774.1 gal / 3773200.4 L]

SARA 311/312

Classification : Fire hazard

Delayed (chronic) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Solvent naphtha (petroleum), heavy arom.	9.99 - 14. 99	Yes.	No.	No.	Yes.	No.
Polymer. naphthalene	, ,	No. No.	No. No.	No. No.	Yes. Yes.	No. Yes.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	naphthalene	91-20-3	0.09 - 0.99
Supplier notification	naphthalene	91-20-3	0.09 - 0.99

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : None of the components are listed.

New York : The following components are listed: Naphthalene

New Jersey : The following components are listed: NAPHTHALENE; MOTH FLAKES

Pennsylvania : The following components are listed: NAPHTHALENE

California Prop. 65

Section 15. Regulatory information

: **WARNING**: This product can expose you to chemicals including naphthalene, formaldehyde, which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level	Contains : % or ppm
naphthalene Formaldehyde, solution	Yes. Yes.	No. No.			<1 <0.1

International lists

National inventory

Australia inventory (AICS)

Canada inventory

China inventory (IECSC)

Europe inventory

Japan inventory (ENCS)

Korea inventory (KECI)

Philippines inventory (PICCS)

: All components are listed or exempted.

: All components are listed or exempted.

: All components are listed or exempted.

: MI components are listed or exempted.

: Japan inventory (ENCS): All components are listed or

exempted.

Japan inventory (ISHL): Not determined.

: All components are listed or exempted.

: MI components are listed or exempted.

Taiwan inventory (TCSI)
United States inventory (TSCA 8b)

New Zealand Inventory of Chemicals (NZIoC)

Our REACH (pre-) registrations DO NOT cover the following:

- 1. The manufacture of these products by our company outside the EU unless covered by the Only Representative provisions, and
- 2. The importation of these products into Europe by other companies. Re-importation by other companies is not covered by our (pre-) registrations Customers and other third parties importing and/or re-importing our products into Europe will need either:
- Their own (pre-) registration for substances contained in the imported product, or constituent monomers (imported above 1 tonne per year and >2% by weight) in the case of imported polymers, or
- In the case of importation only, to make use of the "Only Representative" provisions, if available.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

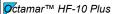


Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)





Section 16. Other information

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Date of printing : 2020-01-02

Date of issue/Date of : 2020-01-02

revision

Date of previous issue : 2019-09-17

Version : 1.01

Key to abbreviations : ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the

Protocol of 1978. ("Marpol" = marine pollution)

UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

13/13