

Conforms to HCS 2012 - United States

SAFETY DATA SHEET

CRACKBOND JF-90 HD PART A

Section 1. Identification

GHS product identifier : CRACKBOND JF-90 HD PART A

Other means of identification :

Product type :

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

Identified uses

Supplier's details :

Emergency telephone number (with hours of operation) :

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 :

- SKIN CORROSION/IRRITATION - Category 2
- SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
- SKIN SENSITIZATION - Category 1
- CARCINOGENICITY - Category 2
- TOXIC TO REPRODUCTION - Category 2
- AQUATIC HAZARD (ACUTE) - Category 1
- AQUATIC HAZARD (LONG-TERM) - Category 1

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements :

- H315 - Causes skin irritation.
- H317 - May cause an allergic skin reaction.
- H318 - Causes serious eye damage.
- H351 - Suspected of causing cancer.
- H361 - Suspected of damaging fertility or the unborn child.
- H410 - Very toxic to aquatic life with long lasting effects.



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Section 2. Hazards identification

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, protective clothing and eye or face protection.
- P273 - Avoid release to the environment.
- P261 - Avoid breathing vapor.
- P264 - Wash thoroughly after handling.
- P272 - Contaminated work clothing must not be allowed out of the workplace.

Response

- : P391 - Collect spillage.
- P308 + P313 - IF exposed or concerned: Get medical advice or attention.
- P362 + P364 - Take off contaminated clothing and wash it before reuse.
- P363 - Wash contaminated clothing before reuse.
- P302 + P352 - IF ON SKIN: Wash with plenty of water.
- P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.
- P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Immediately call a POISON CENTER or doctor.

Storage

- : P405 - Store locked up.

Disposal

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

Hazards not otherwise classified

- : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification :

Ingredient name	%	CAS number
Propane, 2,2-bis[p-(2,3-epoxypropoxy) phenyl]-, polymers	≥50 - ≤75	25085-99-8
Oxirane, Mono[(C12-14-Alkyloxy)Methyl] Derivs.	≥10 - ≤25	68609-97-2
4-Nonylphenol, Branched	<5	84852-15-3
Titanium dioxide	≥0.3 - ≤1	13463-67-7
Amide	≥0.3 - <1	-

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

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

- : Get medical attention immediately. Call a poison center or physician. 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 20 minutes. Chemical burns must be treated promptly by a physician.



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Section 4. First aid measures

- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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. 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.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. 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** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
stomach pains
reduced fetal weight
increase in fetal deaths
skeletal malformations



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Section 4. First aid measures

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

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
halogenated compounds

- 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.

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

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. Do not breathe 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 non-emergency 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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.



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Section 6. Accidental release measures

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. 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. 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). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. 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. 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 original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. 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. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Propane, 2,2-bis[p-(2,3-epoxypropoxy) phenyl]-, polymers Oxirane, Mono[(C12-14-Alkyloxy)Methyl] Derivs. 4-Nonylphenol, Branched Titanium dioxide	None. None. None. ACGIH TLV (United States, 3/2020). TWA: 10 mg/m ³ 8 hours. OSHA PEL (United States, 5/2018). TWA: 15 mg/m ³ 8 hours. Form: Total dust
Amide	None.



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Section 8. Exposure controls/personal protection

- Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.
- 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. Contaminated work clothing should not be allowed out of the workplace. 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: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- 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, if required, 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. [Viscous.]
- Color** : Grey
- Odor** : Mild
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Not available.
- Evaporation rate** : Not available.



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Section 9. Physical and chemical properties

Flammability (solid, gas)	: Not available.
Lower and upper explosive (flammable) limits	: Not available.
Vapor pressure	: Not available.
Vapor density	: Not available.
Relative density	: Not available.
Solubility	: Not available.
Solubility in water	: Not available.
Partition coefficient: n-octanol/water	: Not applicable.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Not available.
Flow time (ISO 2431)	: Not available.
Volatile organic compounds	: See Part B for VOC's

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	: No specific data.
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	Result	Species	Dose	Exposure
Oxirane, Mono[(C12-14-Alkyloxy)Methyl] Derivs.	LD50 Oral	Rat	17100 mg/kg	-
4-Nonylphenol, Branched Amide	LD50 Oral	Rat	1300 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	>5.08 mg/L	1 days
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-



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Section 11. Toxicological information

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Oxirane, Mono[(C12-14-Alkyloxy)Methyl] Derivs. 4-Nonylphenol, Branched	Skin - Moderate irritant	Rabbit	-	24 hours 500 uL	-
	Eyes - Severe irritant	Rabbit	-	100 mg	-
	Skin - Severe irritant	Rabbit	-	24 hours 500 mg	-

Sensitization

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

Classification

Product/ingredient name	OSHA	IARC	NTP
Titanium dioxide	-	2B	-

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

There is no data available.

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations



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Section 11. Toxicological information

- Skin contact** : Adverse symptoms may include the following:
 pain or irritation
 redness
 blistering may occur
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
 stomach pains
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

- Potential immediate effects** : No known significant effects or critical hazards.
- Potential delayed effects** : No known significant effects or critical hazards.

Long term exposure

- Potential immediate effects** : No known significant effects or critical hazards.
- Potential delayed effects** : No known significant effects or critical hazards.

Potential chronic health effects

- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : Suspected of damaging the unborn child.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : Suspected of damaging fertility.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
CRACKBOND JF-90 HD PART A	30693.6	N/A	N/A	N/A	N/A
Oxirane, Mono[(C12-14-Alkyloxy)Methyl] Derivs.	17100	N/A	N/A	N/A	N/A
4-Nonylphenol, Branched	1300	N/A	N/A	N/A	N/A
Amide	2500	2500	N/A	N/A	N/A



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Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
4-Nonylphenol, Branched	Acute EC50 0.03 mg/L Marine water	Algae - Skeletonema costatum	72 hours
	Acute EC50 0.027 mg/L Marine water	Algae - Skeletonema costatum	96 hours
	Acute EC50 0.044 mg/L	Crustaceans - Moina macrocopa	48 hours
	Acute LC50 17 µg/L Marine water	Fish - Pleuronectes americanus - Larvae	96 hours
	Chronic EC10 0.012 mg/L Marine water	Algae - Skeletonema costatum	96 hours
	Chronic NOEC 5 µg/L Fresh water	Crustaceans - Gammarus fossarum - Adult	21 days
Titanium dioxide	Chronic NOEC 7.4 µg/L Fresh water	Fish - Pimephales promelas - Embryo	33 days
	Acute LC50 >1000000 µg/L Marine water	Fish - Fundulus heteroclitus	96 hours

Persistence and degradability

There is no data available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Oxirane, Mono[(C12-14-Alkyloxy)Methyl] Derivs.	3.77	160 to 263	low
4-Nonylphenol, Branched	5.4	740	high

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should 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 empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.



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Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	UN3082	UN3082	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (4-Nonylphenol, Branched)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (4-Nonylphenol, Branched)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (4-Nonylphenol, Branched)
Transport hazard class(es)	9  	9  	9  
Packing group	III	III	III
Environmental hazards	Yes.	Yes.	Yes.

AERG : 171

Additional information

DOT Classification

: Non-bulk packages of this product are not regulated as hazardous materials unless transported by inland waterway. This product is not regulated as a hazardous material when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of §§ 173.24 and 173.24a.

IMDG

: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

IATA

: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

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.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 5(a)2 proposed significant new use rules:** 4-Nonylphenol, Branched
TSCA 8(a) PAIR: 4-Nonylphenol, Branched; Siloxanes and Silicones, di-Me, reaction products with silica
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
TSCA 12(b) one-time export: 4-Nonylphenol, Branched
Clean Water Act (CWA) 311: 1-Chloro-2,3-epoxypropane

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed



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Section 15. Regulatory information

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
1-Chloro-2,3-epoxypropane	≤0.001	Yes.	1000	101.6	100	10.2

SARA 304 RQ : 1000000000 lbs / 454000000 kg

SARA 311/312

Classification : SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 2
TOXIC TO REPRODUCTION - Category 2

Composition/information on ingredients

Name	%	Classification
Propane, 2,2-bis[p-(2,3-epoxypropoxy) phenyl]-, polymers	≥50 - ≤75	SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1
Oxirane, Mono[(C12-14-Alkyloxy) Methyl] Derivs.	≥10 - ≤25	SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1
4-Nonylphenol, Branched	<5	ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION/IRRITATION - Category 1B SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 TOXIC TO REPRODUCTION - Category 2
Titanium dioxide Amide	≥0.3 - ≤1 ≥0.3 - <1	CARCINOGENICITY - Category 2 COMBUSTIBLE DUSTS SKIN SENSITIZATION - Category 1

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	4-Nonylphenol, Branched	84852-15-3	<5
Supplier notification	4-Nonylphenol, Branched	84852-15-3	<5

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 : None of the components are listed.

New Jersey : None of the components are listed.



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Section 15. Regulatory information

Pennsylvania : The following components are listed: Alkyl Phenol Blocked Polyisocyanate

California Prop. 65

⚠ WARNING: This product can expose you to chemicals including 1-Chloro-2,3-epoxypropane, which is known to the State of California to cause cancer and birth defects or other reproductive harm. This product can expose you to chemicals including Titanium dioxide and Carbon black, non respirable, which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Titanium dioxide	-	-
Carbon black, non respirable	-	-
1-Chloro-2,3-epoxypropane	Yes.	-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia	: Not determined.
Canada	: Not determined.
China	: Not determined.
Europe	: Not determined.
Japan	: Japan inventory (CSCL): Not determined. Japan inventory (ISHL): Not determined.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: Not determined.
Thailand	: Not determined.
Turkey	: Not determined.
United States (TSCA 8b)	: All components are active or exempted.
Viet Nam	: Not determined.



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Section 16. Other information

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

Health	*	3
Flammability		0
Physical hazards		0

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.

Procedure used to derive the classification

Classification	Justification
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
CARCINOGENICITY - Category 2	Calculation method
TOXIC TO REPRODUCTION - Category 2	Calculation method
AQUATIC HAZARD (ACUTE) - Category 1	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 1	Calculation method

History

Date of issue/Date of revision	: 07/21/2021
Date of previous issue	: Not applicable
Version	: 1
Prepared by	: KMK Regulatory Services Inc.
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) N/A = Not available SGG = Segregation Group UN = United Nations

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.



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Conforms to HCS 2012 - United States

SAFETY DATA SHEET

CRACKBOND JF-90 HD Part B

Section 1. Identification

GHS product identifier : CRACKBOND JF-90 HD Part B

Other means of identification :

Product type :

Relevant identified uses of the substance or mixture and uses advised against**Identified uses**

Epoxy joint filler.

Supplier's details :

Emergency telephone number (with hours of operation) :

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 :

- ACUTE TOXICITY (oral) - Category 4
- SKIN CORROSION/IRRITATION - Category 2
- SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
- SKIN SENSITIZATION - Category 1
- TOXIC TO REPRODUCTION - Category 2
- AQUATIC HAZARD (ACUTE) - Category 1
- AQUATIC HAZARD (LONG-TERM) - Category 1

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements :

- H302 - Harmful if swallowed.
- H315 - Causes skin irritation.
- H317 - May cause an allergic skin reaction.
- H318 - Causes serious eye damage.
- H361 - Suspected of damaging fertility or the unborn child.
- H410 - Very toxic to aquatic life with long lasting effects.



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Section 2. Hazards identification

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, protective clothing and eye or face protection.
- P273 - Avoid release to the environment.
- P261 - Avoid breathing vapor.
- P270 - Do not eat, drink or smoke when using this product.
- P264 - Wash thoroughly after handling.
- P272 - Contaminated work clothing must not be allowed out of the workplace.

Response

- : P391 - Collect spillage.
- P308 + P313 - IF exposed or concerned: Get medical advice or attention.
- P301 + P312, P330 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth.
- P362 + P364 - Take off contaminated clothing and wash it before reuse.
- P363 - Wash contaminated clothing before reuse.
- P302 + P352 - IF ON SKIN: Wash with plenty of water.
- P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.
- P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Immediately call a POISON CENTER or doctor.

Storage

- : P405 - Store locked up.

Disposal

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

Hazards not otherwise classified

- : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification :

Ingredient name	%	CAS number
4-Nonylphenol, Branched	≥75 - ≤90	84852-15-3
Aminoethylpiperazine	≥10 - ≤25	140-31-8
2-Methylpentane-1,5-diamine	<5	15520-10-2

Any concentration shown as a range is to protect confidentiality or is due to batch variation. If a generic chemical name is shown and/or the CAS number is not disclosed, the specific chemical identity has been withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified 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

- : Get medical attention immediately. Call a poison center or physician. 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 20 minutes. Chemical burns must be treated promptly by a physician.



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Section 4. First aid measures

- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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. 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** : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. 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** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : Harmful if swallowed.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
stomach pains
reduced fetal weight
increase in fetal deaths
skeletal malformations



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Section 4. First aid measures

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. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

- 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.

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

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. Do not breathe 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 non-emergency 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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.



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Section 6. Accidental release measures

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. 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. 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). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. 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. 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 original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. 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. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
4-Nonylphenol, Branched	None.
Aminoethylpiperazine	None.
2-Methylpentane-1,5-diamine	None.

- Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.



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Section 8. Exposure controls/personal protection

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. Contaminated work clothing should not be allowed out of the workplace. 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: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- 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, if required, 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 and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Liquid. [Viscous.]
- Color** :

Odor :

Odor threshold : Not available.

pH : Not available.

Melting point/freezing point : Not available.

Boiling point, initial boiling point, and boiling range : Not available.

Flash point : Not available.

Evaporation rate : Not available.

Flammability : Not available.

Lower and upper explosion limit/flammability limit : Not available.



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Section 9. Physical and chemical properties and safety characteristics

Vapor pressure	: Not available.
Relative vapor density	: Not available.
Relative density	: Not available.
Solubility	: Not available.
Partition coefficient: n-octanol/water	: Not applicable.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Not available.
Flow time (ISO 2431)	: Not available.
Volatile organic compounds	:
<u>Particle characteristics</u>	
Median particle size	: Not applicable.

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	: No specific data.
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	Result	Species	Dose	Exposure
4-Nonylphenol, Branched	LD50 Oral	Rat	1300 mg/kg	-
2-Methylpentane-1,5-diamine	LC50 Inhalation Vapor	Rat	2900 mg/m ³	1 hours
	LD50 Oral	Rat	1690 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
4-Nonylphenol, Branched	Eyes - Severe irritant	Rabbit	-	100 mg	-
	Skin - Severe irritant	Rabbit	-	24 hours 500 mg	-
Aminoethylpiperazine	Eyes - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Skin - Severe irritant	Rabbit	-	24 hours 5 mg	-
2-Methylpentane-1,5-diamine	Eyes - Severe irritant	Rabbit	-	0.1 mL	-
	Skin - Severe irritant	Rabbit	-	0.5 mL	-



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Section 11. Toxicological information

Sensitization

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
2-Methylpentane-1,5-diamine	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

Information on the likely routes of exposure

: Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact

: Causes serious eye damage.

Inhalation

: No known significant effects or critical hazards.

Skin contact

: Causes skin irritation. May cause an allergic skin reaction.

Ingestion

: Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact

: Adverse symptoms may include the following:
pain
watering
redness

Inhalation

: Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact

: Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced fetal weight
increase in fetal deaths
skeletal malformations



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Section 11. Toxicological information

Ingestion : Adverse symptoms may include the following:
stomach pains
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Long term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : Suspected of damaging fertility or the unborn child.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
CRACKBOND JF-90 Part B	1086.5	6111.1	N/A	220	N/A
4-Nonylphenol, Branched	1300	N/A	N/A	N/A	N/A
Aminoethylpiperazine	500	1100	N/A	N/A	N/A
2-Methylpentane-1,5-diamine	1690	1100	N/A	11	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
4-Nonylphenol, Branched	Acute EC50 0.03 mg/L Marine water	Algae - Skeletonema costatum	72 hours
	Acute EC50 0.027 mg/L Marine water	Algae - Skeletonema costatum	96 hours
	Acute EC50 0.044 mg/L	Crustaceans - Moina macrocopa	48 hours
	Acute LC50 17 µg/L Marine water	Fish - Pleuronectes americanus - Larvae	96 hours
	Chronic EC10 0.012 mg/L Marine water	Algae - Skeletonema costatum	96 hours
	Chronic NOEC 5 µg/L Fresh water	Crustaceans - Gammarus fossarum - Adult	21 days
Aminoethylpiperazine	Chronic NOEC 7.4 µg/L Fresh water	Fish - Pimephales promelas - Embryo	33 days
	Acute LC50 2190000 µg/L Fresh water	Fish - Pimephales promelas	96 hours



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Section 12. Ecological information

Persistence and degradability

There is no data available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
4-Nonylphenol, Branched Aminoethylpiperazine	5.4 -1.48	740 -	high low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should 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 empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. 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	Not regulated.	UN3082	UN3082
UN proper shipping name	-	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (4-Nonylphenol, Branched)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (4-Nonylphenol, Branched)
Transport hazard class(es)	-	9  	9  
Packing group	-	III	III
Environmental hazards	No.	Yes.	Yes.

AERG : 171



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Section 14. Transport information

Additional information

IMDG

: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

IATA

: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

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.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

U.S. Federal regulations

: **TSCA 5(a)2 proposed significant new use rules:** 4-Nonylphenol, Branched
TSCA 8(a) PAIR: 4-Nonylphenol, Branched
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
TSCA 12(b) one-time export: 4-Nonylphenol, Branched

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ

: Not applicable.

SARA 311/312

Classification

: ACUTE TOXICITY (oral) - Category 4
 SKIN CORROSION/IRRITATION - Category 2
 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
 SKIN SENSITIZATION - Category 1
 TOXIC TO REPRODUCTION - Category 2



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Section 15. Regulatory information

Composition/information on ingredients

Name	%	Classification
4-Nonylphenol, Branched	≥75 - ≤90	ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION/IRRITATION - Category 1B SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 TOXIC TO REPRODUCTION - Category 2
Aminoethylpiperazine	≥10 - ≤15	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 SKIN CORROSION/IRRITATION - Category 1B SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SKIN SENSITIZATION - Category 1
2-Methylpentane-1,5-diamine	<5	FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION/IRRITATION - Category 1A SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	4-Nonylphenol, Branched	84852-15-3	≥75 - ≤90
Supplier notification	4-Nonylphenol, Branched	84852-15-3	≥75 - ≤90

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

: The following components are listed: Aminoethylpiperazine

New York

: None of the components are listed.

New Jersey

: The following components are listed: Aminoethylpiperazine

Pennsylvania

: The following components are listed: Aminoethylpiperazine

California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.



KMK Regulatory Services

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Section 15. Regulatory information

Inventory list

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

Section 16. Other information

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

Health	*	3
Flammability		0
Physical hazards		0

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.

Procedure used to derive the classification

Classification	Justification
ACUTE TOXICITY (oral) - Category 4	Calculation method
SKIN CORROSION/IRRITATION - Category 2	Expert judgment
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
TOXIC TO REPRODUCTION - Category 2	Calculation method
AQUATIC HAZARD (ACUTE) - Category 1	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 1	Calculation method

History

Date of issue/Date of revision : 01/28/2022
Date of previous issue : 07/21/2021
Version : 2
Prepared by : KMK Regulatory Services Inc.
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)
 N/A = Not available
 SGG = Segregation Group
 UN = United Nations

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.



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