SAFETY DATA SHEET

ARADUR® HY 8877 US

Section 1. Identification

GHS product identifier : **ARADUR® HY 8877 US**

Product code : 00066745

Other means of identification : Not available.

Product type : Liquid.

Material uses : Polyol for adhesive systems

Supplier's details : Huntsman Advanced Materials Americas LLC
P.O. Box 4980
The Woodlands, TX 77387

Non-Emergency phone: (800) 257-5547

e-mail address of person responsible for this SDS : MSDS@huntsman.com

Emergency telephone number (24h/7day) : Chemtrec: (800) 424-9300 or (703) 527-3887

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 : SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 2
TOXIC TO REPRODUCTION (Fertility) - Category 1B
TOXIC TO REPRODUCTION (Unborn child) - Category 1B
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
AQUATIC HAZARD (ACUTE) - Category 3
AQUATIC HAZARD (LONG-TERM) - Category 3

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Causes serious eye damage.
May cause an allergic skin reaction.
May damage fertility or the unborn child.
Suspected of causing cancer.
May cause damage to organs through prolonged or repeated exposure.
Harmful to aquatic life with long lasting effects.

Section 2. Hazards identification

Precautionary statements : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Avoid release to the environment. Do not breathe vapor. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. 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 physician. Store locked up. Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
DI-(2-ETHYLHEXYL) PHTHALATE (DEHP)	30 - 60	117-81-7
1,1'-phenyliminodipropan-2-ol	7 - 13	3077-13-2
Carbon black	0.1 - 1	1333-86-4
Dibutyltindilaurate	0.1 - 1	77-58-7

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

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 10 minutes. Chemical burns must be treated promptly by a physician.

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. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 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.

Section 4. First aid measures

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : May cause an allergic skin reaction.

Ingestion : May cause burns to mouth, throat and stomach.

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

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

Notes to physician : Symptomatic and supportive therapy as needed. Following severe exposure medical follow-up should be monitored for at least 48 hours.

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

Flash point : Closed cup: >94°C (>201.2°F) [Estimated]

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 : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful 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 specialised 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.

Methods and materials for containment and cleaning up : 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. 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 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.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
DI-(2-ETHYLHEXYL) PHTHALATE (DEHP)	**ACGIH TLV (United States, 6/2013).** TWA: 5 mg/m³ 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 5 mg/m³ 8 hours.
Carbon black	**ACGIH TLV (United States, 6/2013).** TWA: 3 mg/m³ 8 hours. Form: Inhalable fraction **OSHA PEL (United States, 2/2013).** TWA: 3.5 mg/m³ 8 hours.
Dibutyltindilaurate	**ACGIH TLV (United States, 6/2013).** **Absorbed through skin. Notes: as Sn** STEL: 0.2 mg/m³, (as Sn) 15 minutes. TWA: 0.1 mg/m³, (as Sn) 8 hours. **OSHA PEL (United States, 2/2013). Notes: as Sn** TWA: 0.1 mg/m³, (as Sn) 8 hours.

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 :

Section 8. Exposure controls/personal protection

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. 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.

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 : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Thermal hazards : Not available.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Black.

Odor : Not available.

Odor threshold : Not available.

pH : Not available.

Melting point/Freezing point : Not available.

Boiling/condensation point : Not available.

Flash point : Closed cup: >94°C (>201.2°F) [Estimated]

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Section 9. Physical and chemical properties

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 0.96

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

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 : No specific data.

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	Endpoint	Species	Result
DI-(2-ETHYLHEXYL) PHTHALATE (DEHP)	OECD 403 Acute Inhalation Toxicity	LC50 Inhalation Dusts and mists	Rat - Male, Female	>10620 mg/m³
	Unknown guidelines	LD50 Dermal	Rabbit	19800 mg/kg
	OECD 401 Acute Oral Toxicity	LD50 Oral	Rat - Male, Female	>20000 mg/kg
1,1'-phenyliminodipropan-2-ol	-	LD50 Dermal	Rabbit	>2000 mg/kg
	-	LD50 Oral	Rat	3800 mg/kg
Carbon black	-	LC50 Inhalation Dusts and mists	Rat	>4.6 mg/m³
	Unknown guidelines	LD50 Oral	Rat	>8000 mg/kg
	Not known			
Dibutyltindilaurate	OECD 402 Acute Dermal Toxicity	LD50 Dermal	Rabbit	>2000 mg/kg
	OECD 401 Acute Oral Toxicity	LD50 Oral	Rat	2071 mg/kg

Section 11. Toxicological information

Irritation/Corrosion

Product/ingredient name	Test	Species	Result
DI-(2-ETHYLHEXYL) PHTHALATE (DEHP)	OECD 404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Mild irritant
	OECD 405 Acute Eye Irritation/ Corrosion	Rabbit	Eyes - Non-irritant.
1,1'-phenyliminodipropan-2-ol	-	Not known	Eyes - Severe irritant
	-	Not known	Skin - Mild irritant
Carbon black	OECD 405 Acute Eye Irritation/ Corrosion	Rabbit	Eyes - Non-irritant.
	OECD 404 Acute Dermal Irritation/Corrosion	Rabbit	Skin - Non-irritant.
Dibutyltindilaurate	OECD 402 Acute Dermal Toxicity	Rat	Skin - Corrosive
	OECD 405 Acute Eye Irritation/ Corrosion	Rabbit	Eyes - Severe irritant

Conclusion/Summary

Skin	:	DI-(2-ETHYLHEXYL) PHTHALATE (DEHP)	Slightly irritating to the skin.
		1,1'-phenyliminodipropan-2-ol	Slightly irritating to the skin.
		Carbon black	Non-irritating to the skin.
		Dibutyltindilaurate	Corrosive to the skin.
Eyes	:	DI-(2-ETHYLHEXYL) PHTHALATE (DEHP)	Non-irritating to the eyes.
		1,1'-phenyliminodipropan-2-ol	Severely irritating to eyes.
		Carbon black	Non-irritating to the eyes.
		Dibutyltindilaurate	Severely irritating to eyes.
Respiratory	:	DI-(2-ETHYLHEXYL) PHTHALATE (DEHP)	No additional information.
		1,1'-phenyliminodipropan-2-ol	No additional information.
		Carbon black	No additional information.
		Dibutyltindilaurate	No additional information.

Sensitization

Product/ingredient name	Test	Route of exposure	Species	Result
DI-(2-ETHYLHEXYL) PHTHALATE (DEHP)	-	skin	Guinea pig	Not sensitizing
Carbon black	-	skin	Guinea pig	Not sensitizing
		Respiratory	Mouse	Not sensitizing
Dibutyltindilaurate	-	skin	Guinea pig	Sensitizing

Mutagenicity

Section 11. Toxicological information

Product/ingredient name	Test	Result
DI-(2-ETHYLHEXYL) PHTHALATE (DEHP)	Experiment: In vitro Subject: Bacteria Metabolic activation: +/-	Negative
	Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic Metabolic activation: +/-	Negative
	Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic Metabolic activation: +/-	Negative
	Experiment: In vivo Subject: Mammalian-Animal	Negative
Carbon black	Experiment: In vivo Subject: Mammalian-Animal Cell: Somatic	Positive
	Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic Metabolic activation: +/-	Negative
	Experiment: In vivo Subject: Mammalian-Animal	Negative
Dibutyltindilaurate	Experiment: In vitro Subject: Mammalian-Human Metabolic activation: +/-	Positive
	Experiment: In vivo Subject: Mammalian-Animal	Positive
	Experiment: In vitro Subject: Bacteria Metabolic activation: +/-	Negative
	Experiment: In vitro Subject: Mammalian-Animal Metabolic activation: +/-	Negative

Carcinogenicity

Product/ingredient name	Test	Species	Dose	Exposure	Result/Result type
DI-(2-ETHYLHEXYL) PHTHALATE (DEHP)	-	Rat - Male, Female	28.9 to 36.1 mg/kg	104 weeks; 7 days per week	Positive - Other - NOAEL
Carbon black	OECD 451 Carcinogenicity Studies	Rat - Male, Female	2.5 mg/m³	2 years; 5 days per week	Positive - Inhalation - LOAEL
	-	Rat - Female	52 mg/kg	2 years; 7 days per week	Negative - Oral - NOEL
	-	Mouse - Male, Female	-	18 months; 3 days per week	Negative - Dermal - NOAEL

Carcinogenic class

Product/ingredient name	IARC	OSHA
DI-(2-ETHYLHEXYL) PHTHALATE (DEHP)	2B	-
Carbon black	2B	-

Reproductive toxicity

Section 11. Toxicological information

Product/ingredient name	Test	Species	Maternal toxicity	Fertility	Developmental effects
DI-(2-ETHYLHEXYL) PHTHALATE (DEHP)	OECD 416 Two-Generation Reproduction Toxicity Study	Rat - Male, Female	Positive	Positive	Positive
Dibutyltindilaurate	OECD 421 Reproduction/ Developmental Toxicity Screening Test	Rat - Male, Female	Negative	-	-

Conclusion/Summary :

DI-(2-ETHYLHEXYL) PHTHALATE (DEHP) Reproductive toxin

Teratogenicity

Product/ingredient name	Test	Species	Result/Result type
DI-(2-ETHYLHEXYL) PHTHALATE (DEHP)	OECD 414 Prenatal Developmental Toxicity Study	Rat	Positive - Oral
	OECD 416 Two-Generation Reproduction Toxicity Study	Rat	Positive - Oral
Dibutyltindilaurate	OECD 414 Prenatal Developmental Toxicity Study	Rat	Positive - Oral

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Dibutyltindilaurate	Category 1	Not determined	Not determined

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
DI-(2-ETHYLHEXYL) PHTHALATE (DEHP)	Category 2	Not determined	kidneys and testes
Carbon black	Category 1	Inhalation	lungs
Dibutyltindilaurate	Category 1	Not determined	Not determined

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : May cause an allergic skin reaction.

Ingestion : May cause burns to mouth, throat and stomach.

Section 11. Toxicological information

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

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 : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Product/ingredient name	Test	Endpoint	Species	Result
DI-(2-ETHYLHEXYL) PHTHALATE (DEHP)	-	Chronic NOAEL Oral	Rat - Male, Female	29 to 36 mg/kg
Carbon black	-	Chronic NOEL Oral	Rat - Female	52 mg/kg
	OECD 452 Chronic Toxicity Studies	Chronic LOEC Inhalation Dusts and mists	Rat - Male, Female	2.5 mg/m³
	-	Sub-chronic NOEC Inhalation Dusts and mists	Rat - Female	1 mg/m³
	OECD 413 Subchronic Inhalation Toxicity: 90-day Study	Sub-chronic NOEC Inhalation Dusts and mists	Rat - Male	1 mg/m³
	-	Sub-chronic NOEC Inhalation Dusts and mists	Rat	1 mg/m³
Dibutyltindilaurate	OECD 421 Reproduction/	Sub-chronic NOAEL Oral	Rat - Male, Female	0.3 to 0.4 mg/kg/d

Section 11. Toxicological information

	Developmental Toxicity Screening Test OECD 408 Repeated Dose 90-Day Oral Toxicity Study in Rodents	Sub-chronic NOAEL Oral	Rat - Male, Female	40 ppm

General : May cause damage to organs through prolonged or repeated exposure.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : May damage the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : May damage fertility.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	53385.3 mg/kg

Other information : Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Test	Endpoint		Exposure	Species	Result	
DI-(2-ETHYLHEXYL) PHTHALATE (DEHP)	OECD 201 Alga, Growth Inhibition Test	Acute	EC50	72 hours	Algae	>0.003	mg/l
	-	Acute	EC50	48 hours Static	Daphnia	>0.003	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	96 hours	Fish	>0.16	mg/l
	OECD 201 Alga, Growth Inhibition Test	Chronic	EC10	72 hours	Algae	>0.003	mg/l
	OECD 209 Activated Sludge, Respiration Inhibition Test	Chronic	NOEC	3 hours Static	Bacteria	1000 to 2007	mg/l
Carbon black	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	24 hours	Daphnia	>5600	mg/l
	-	Acute	ErC50 (growth rate)	72 hours	Algae	>10000	mg/l
	Unknown guidelines	Acute	IC0	3 hours	Bacteria	>800	mg/l
	Not known						
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	96 hours	Fish	>1000	mg/l
	-	Chronic	LOAEL	72 hours	Algae	>10000	mg/l
Dibutyltindilaurate	OECD 209	Acute	EC50	3 hours	Bacteria	>1000	mg/l

Section 12. Ecological information

	Activated Sludge, Respiration Inhibition Test			Static			
	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours Static	Daphnia	<1	mg/l
	OECD 201 Alga, Growth Inhibition Test	Acute	ErC50 (growth rate)	72 hours Static	Algae	>1	mg/l
	No official guidelines	Acute	LC50	96 hours	Fish	>3	mg/l
	OECD 209 Activated Sludge, Respiration Inhibition Test	Chronic	NOEC	3 hours Static	Bacteria	1000	mg/l

Conclusion/Summary : DI-(2-ETHYLHEXYL) PHTHALATE (DEHP) The toxicity of the substance is above the water solubility limit.

Persistence and degradability

Product/ingredient name	Test	Period	Result
DI-(2-ETHYLHEXYL) PHTHALATE (DEHP)	OECD	28 days	100 %
	OECD 301B Ready Biodegradability - CO_2 Evolution Test	29 days	82 %
	No official guidelines	60 days	71.2 %
	-	28 days	>60 %
Carbon black	-	28 days	<60 %
Dibutyltindilaurate	No official guidelines	28 days	<60 %
	OECD 301F Ready Biodegradability - Manometric Respirometry Test	39 days	23 %

Conclusion/Summary :
- DI-(2-ETHYLHEXYL) PHTHALATE (DEHP): Readily biodegradable
- Carbon black: Not applicable, inorganic substance / preparation.
- Dibutyltindilaurate: Not readily biodegradable.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
DI-(2-ETHYLHEXYL) PHTHALATE (DEHP)	-	-	Readily
Carbon black	-	-	Not readily
Dibutyltindilaurate	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
DI-(2-ETHYLHEXYL) PHTHALATE (DEHP)	7.5	<1	low
Carbon black	-	1	low
Dibutyltindilaurate	4.44	30.9 to 812.8	low

Mobility in soil

Not available.

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

Section 12. Ecological information

Other ecological information

BOD5 : Not determined.

COD : Not determined.

TOC : Not determined.

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 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 residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14. Transport information

Proper shipping name

DOT : Not regulated.

TDG : Not regulated.

IMDG : Not regulated.

IATA : Not regulated.

Regulatory information	UN number	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-		**Reportable quantity** 259.02 lbs / 117.6 kg [32.36 gal / 122.5 L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
TDG Classification	Not regulated.	-	-		-
IMDG Classification	Not regulated.	-	-		-

Section 14. Transport information

IATA Classification	Not regulated.	-	-		-

PG* : Packing group

Section 15. Regulatory information

Safety, health and environmental regulations specific for the product

United States Regulations

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

TSCA 5(a)2 final significant new use rule (SNUR) : No ingredients listed.

TSCA 5(e) substance consent order : No ingredients listed.

TSCA 12(b) export notification : No ingredients listed.

SARA 311/312 : Immediate (acute) health hazard
Delayed (chronic) health hazard

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

Product name	Concentration %
DI-(2-ETHYLHEXYL) PHTHALATE (DEHP)	38.414 - 38.607

Clean Air Act - Ozone Depleting Substances (ODS) : This product does not contain nor is it manufactured with ozone depleting substances.

SARA 313 Form R - Reporting requirements :

Product name	Concentration %
DI-(2-ETHYLHEXYL) PHTHALATE (DEHP)	38.414 - 38.607

CERCLA Hazardous substances :

Ingredient name	%	Section 304 CERCLA Hazardous Substance	CERCLA Reportable Quantity (Lbs)	Product Reportable Quantity (Lbs)
DI-(2-ETHYLHEXYL) PHTHALATE (DEHP)	38.607	Listed	100	259
1,3-butadiene	0.000346644	Listed	10	2884804

State regulations

PENNSYLVANIA - RTK : DI-(2-ETHYLHEXYL) PHTHALATE (DEHP), Carbon black

California Prop 65 : **WARNING:** This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 15. Regulatory information

Ingredient name	Cancer	Reproductive
DI-(2-ETHYLHEXYL) PHTHALATE (DEHP)	Yes.	Yes.
Carbon black	Yes.	No.
4-vinylcyclohexene	Yes.	Yes.
1,3-butadiene	Yes.	Yes.

Canadian regulations

CEPA DSL : All components are listed or exempted.

WHMIS Classes : Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).

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

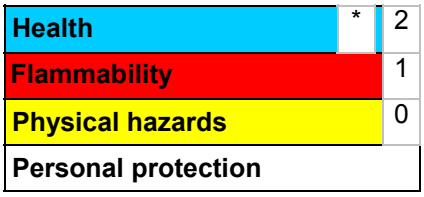
Brazil Regulations

Classification system used : **Norma ABNT-NBR 14725-2:2012**

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

Section 16. Other information

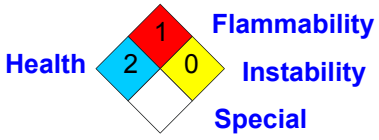
Hazardous Material Information System (U.S.A.) :



The customer is responsible for determining the PPE code for this material.

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 are not required on SDSs 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 mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

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



Section 16. Other information

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