



1 Identification Product identifier Product name: 2,2'-Dihydroxybiphenyl Stock number: A14800, L06323 CAS Number: 1806-29-7 EC number: 217-303-0 Relevant identified uses of the substance or mixture and uses advised against. Identified use: SU24 Scientific research and development Details of the supplier of the safety data sheet Details of the supplier of the safety da Manufacturer/Supplier: Alfa Aesar Thermo Fisher Scientific Chemicals, Inc. 30 Bond Street Ward Hill, MA 01835-8099 Tel: 800-343-0660 Fax: 800-322-4757 Email: tech@alfa.com www.alfa.com www.alfa.com Information Department: Health, Safety and Environmental Department Emergency telephone number: During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789. 2 Hazard(s) identification Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS) S. GHS06 Skull and crossbones Acute Tox. 3 H301 Toxic if swallowed. ! GHS07 Eve Irrit. 2A H319 Causes serious eye irritation. Hazards not otherwise classified No information known. Label elements GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) Hazard pictograms R GHS06 Signal word Danger Hazard statements H301 Toxic if swallowed. H319 Causes serious eye irritation. Precautionary statements P280 Wear protective gloves/protective clothing/eye protection/face protection. P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor/... P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P321 Specific treatment (see on this label). P405 Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations. WHMIS classification D1B - Toxic material causing immediate and serious toxic effects D2B - Toxic material causing other toxic effects Se. T Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System)
 HEALTH
 Image: Constraint of the sector of Other hazards Results of PBT and vPvB assessment **PBT:** Not applicable. **vPvB:** Not applicable. 3 Composition/information on ingredients Chemical characterization: Substances CAS# Description: 1806-29-7 2,2'-Dihydroxybiphenyl Identification number(s): EC number: 217-303-0 4 First-aid measures Description of first aid measures

After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice.

(Contd. of page 1)

Product name: 2,2'-Dihydroxybiphenyl

After skin contact

After skin contact Immediately wash with water and soap and rinse thoroughly. Seek immediate medical advice. After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor. After swallowing Seek medical treatment. Information for doctor Mect important symptoms and effects, both acute and delayed No further relevant information ave

154 °C (309 °F)

Most important symptoms and effects, both acute and delayed No further relevant information available. Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

Extinguishing media Suitable extinguishing agents Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Special hazards arising from the substance or mixture If this product is involved in a fire, the following can be released: Carbon monoxide and carbon dioxide Advice for firefighters Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation Environmental precautions: Do not allow material to be released to the environment without proper governmental permits. Methods and material for containment and cleaning up: Dispose of contaminated material as waste according to section 13. Prevention of secondary hazards: No special measures required. Reference to other sections See Section 7 for information on safe handling See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

7 Handling and storage

Handling

Flash point:

	Conditions for safe storage, including Storage Requirements to be met by storeroon	<i>explosions and fires:</i> No information known. g any incompatibilities ns and receptacles: No special requirements. nmon storage facility: Store away from oxidizing agents. nditions: ed containers.		
8	B Exposure controls/personal prote	ection		
	Additional information about design of technical systems: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.			
	Control parameters Components with limit values that require monitoring at the workplace: Not required. Additional information: No data			
	Exposure controls Personal protective equipment General protective and hygienic measures The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before breaks and at the end of work. Avoid contact with the eyes. Avoid contact with the eyes and skin. Maintain an ergonomically appropriate working environment. Breathing equipment: Use suitable respirator when high concentrations are present. Protection of hands: Impervious gloves Check protective gloves prior to each use for their proper condition. The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer. Eye protection: Safety glasses Body protection: Protective work clothing.			
ç	Physical and chemical properties			
	Information on basic physical and che General Information Appearance: Form: Color: Odor: Odor: Odor threshold:	emical properties Crystalline Off-white Not determined Not determined.		
	pH-value:	Not applicable.		
	Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature / start:	108-110 °C (226-230 °F) Not determined Not determined		

Product name: 2,2'-Dihydroxybiphenyl

Plance of explosion: Not determined. We determined. Not determined. No	Product name: 2,2'-Dihydroxybipher	Product name: 2,2'-Dihydroxybiphenyl				
In public entropherature in the entropherature in the entropherature is the entropheratu			(Contd. of page 2)			
Auto gandaria: Net determined Denge of explosion: Product does not present an explosion hazard. Dense of explosion: Not explosion: Mitter Soluble Resolution: Not explosion: Mitter Soluble Operative: Not explosion: Operative:	Flammability (solid, gaseous) Ignition temperature:					
Description Product does not present an explosion hazard. Departments::::::::::::::::::::::::::::::::::::	Decomposition temperature: Auto ianiting:	Not determined				
Lighter: More determined with a 20 to 68 'F): I 3:84 gum? I'I 100 basgal) Verdor pressure: We get a 20 to 68 'F): I 3:84 gum? I'I 100 basgal) Verdor density with a 20 to 68 'F): I 3:84 gum? I'I 100 basgal) Verdor density with a 20 to 68 'F): I 3:84 gum? I'I 100 basgal) Verdor density with a 20 to 68 'F): I 3:84 gum? I'I 100 basgal) Verdor density with a 20 to 68 'F): I 3:84 gum? I'I 100 basgal) Verdor density with a 20 to 68 'F): I 3:84 gum? I'I 100 basgal) Verdor density with a 20 to 68 'F): I 3:84 gum? I'I 100 basgal) Verdor density with a 20 to 68 'F): I 3:84 gum? I'I 100 basgal) Verdor density with a 20 to 68 'F): I 3:84 gum? I'II 100 basgal) Verdor density with a 20 to 68 'F): I 3:84 gum? I'II 100 basgal) Verdor density with a 20 to 68 'F): I 3:84 gum? I'II 100 basgal) Verdor density with a 20 to 68 'F): I 3:84 gum? I'II 100 basgal) Verdor density with a 20 to 68 'F): I 3:84 gum? I'II 100 basgal) Verdor density with a 20 to 70 to	Danger of explosion:					
Work pressure Relative density Very dansity Work delay in Machine Work delay in Machine	Lower:					
Density at 20 (rg 0F): [1:32] gum (11:00 basga) Vespor density in the chain with the special basga in the special basga in the special base in the special baspecial base in the special base in the special base		Not applicable.				
Webperdamsity Settimized in the stack of the start of the st	Density at 20 °C (68 °F):	1.342 g/cm ³ (11.199 lbs/gal)				
Solutions of Maschelluy with Solutions with the solution model with the solution of the soluti	Vapor density	Not applicable.				
Perturban coefficient (n-cetanol/water): Koi determined. We applicable Mer a	Solubility in / Miscibility with					
optimization Multiple and rescriving 20 Stability and rescriving Rescriving No information known: Chemical Stability and rescriving Rescriving No information known: Chemical Stability and rescriving Rescriving No information known: Chemical Stability of Integrations Known: Rescriving No information known: Chemical Stability of Integrations Known: Rescriving No information known: Conditions to avoid No kutther recommended storage conditions: Rescriving No information If Toxicological Information Information on toxicological effects Information on toxicological effects Rescriving No information avoidable. Stim Infradem on concological effects Rescriving No information avoidable for a rescriving reflects known: Stim Infradem on concological effects Rescriving No information information avoidable form the EPA, IARC, NTP, OSHA or ACGH. Sensitization: No sensitizing effects known: Rescriving No information avoidable information avoidable information avoidable form the EPA, IARC, NTP, OSHA or ACGH. Sensitization Rescriving Rescrivents (No defects known: Rescriving No information avoidable information avoidable. Subscrute Origic Toris No infore stoperformation informati	Partition coefficient (n-octanol/water):					
Other information No fulther relevant information available. 10 Stability and reactivity Reactivity No information rown Reactivity No information rown The information information rown Contract Stability S	dynamic:	Not applicable.				
Rescriving Noi information known. Chemical Subject Subject on Carditions to be avoided: Decomposition will not accur if used and stored according to specifications: Conditions to avoid Noi Information 11 Toxicological information Information or consolonic classification: Noi avoid Noi Information available: Programmer Subject		Not applicable. No further relevant information available.				
Rescriving Noi information known. Chemical Subject Subject on Carditions to be avoided: Decomposition will not accur if used and stored according to specifications: Conditions to avoid Noi Information 11 Toxicological information Information or consolonic classification: Noi avoid Noi Information available: Programmer Subject	10 Stability and reactivity		i			
Thermal decomposition / conditions to be availed. Decomposition will not occur if used and stored according to specifications. Conditions to world Mo. Number behave informations available. Inconclusions on world Mo. Number behave informations available. Inconclusions on toxological information Information on toxological information Information or consolor: Infant to skin and muccus membranes. Skin Infration or consolor: Infant to skin and muccus membranes. Skin Infration or consolor: Infant to skin and muccus membranes. Service State state are devices that are relevant for classification: No data Carcinogenicity: No selficits frown. Garningenicity: No selficits frown. Garningenicity: No selficits frown. Specific target organ system toxicity - repeated exposure: No flects known. Specific target organ system toxicity - repeated exposure: No flects known. Specific target organ system toxicity - repeated exposure: No flects known. Specific target organ system toxicity - repeated exposure: No flects known. Specific target organ system toxicity - selficits known. Specific target organ system toxicity - repeated exposure: No flects known. Specific target organ system toxicity - repeated exposure information Auditional toxicological information The Regity of Toxic Effects of Chenical Sublem	Reactivity No information known.					
Possibility of hazardous reactions known memory of hazardous reactions who dangenous reactions known memory of hazardous reactions who dangenous reactions known memory of hazardous decomposition products: Carbon monoxide and carbon dioxide 11 Toxicological information Information on toxicological effects LDL CSD values that are relevant for classification: No data Exhi infration or corrositor. There is a single apposition properties of this metarial is available from the EPA, IARC, NTP, OSHA or ACGIH. See milliation or corrositor. Unless the single apposition properties of this metarial is available from the EPA, IARC, NTP, OSHA or ACGIH. See milliation of corrositor in Calces in the single apposition properties of this metarial is available from the EPA, IARC, NTP, OSHA or ACGIH. Specific larget organ system toxicity - regeted exposure: No effects known. Specific larget organ system toxicity - regeted exposure: No effects known. Specific larget organ system toxicity - regeted exposure: No effects known. Specific larget organ system toxicity - regeted exposure: No effects known. Specific larget organ system toxicity - regeted exposure: No effects known. Specific larget organ system toxicity - regeted exposure: No effects known. Specific larget organ system toxicity - regeted exposure: No effects known. Specific larget organ system toxicity - regeted exposure: No effects known. Specific larget organ system toxicity - regeted exposure: No effects known. Additional exterological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. 12 Ecological information Toxicity Define information Evene and other relevant information available. Hookiny in soil No kinther relevant information available. Hookiny in soil No kinther relevant information available. Modelling in soil No kinther relevant information available. Modelling in the soll of a relivant information available. Modelling in soil No kinther relevant information available. Mo	Thermal decomposition / conditions to	to be avoided: Decomposition will not occur if used and stored according to specifications.				
Incompatible materials: Oxidizing agents: Hazardous decomposition products: Canhon monoxide and carbon dioxide 11 Toxicological information Information on toxicological effects Acute toxicity: Harmit of swillowed. LOV.CGV values that are relevant for classification: No deta Shin inflation or corrosion: Inflat to Shin and muccus membranes. Shin inflation or corrosion: Inflat to Shin and muccus membranes. Shin inflation or corrosion: Inflat to Shin and muccus membranes. Shin inflation or corrosion: Inflat to Shin and muccus membranes. Shin inflation or corrosion: Inflat to Shin and muccus membranes. Shin inflation or corrosion: Inflat to Shin and muccus membranes. Shin inflation or corrosion: Inflat to Shin and muccus membranes. Shin inflation or corrosion: Inflat to Shin and muccus membranes. Shin inflation or corrosion: Inflat to Shin and muccus membranes. Shin inflation or corrosion: Inflat to Shin and muccus membranes. Shin inflation or corrosion: Inflat to Shin and muccus membranes. Shin inflation of corrosion: Inflat to Shin and muccus membranes. Shin inflation or corrosion: Inflat to Shin and muccus membranes. Shin inflation of corrosion: Inflat to Shin and muccus membranes. Shin inflation of corrosion: Inflat to Shin and muccus membranes. Muclingenic diffects have been observed on tests with buonant //minsls. Bood - charges in bone marrow (not otherwise specified). Additional corricological information: Bood - charges in bone marrow (not otherwise specified). Additional corricological information: Bood - charges in bone marrow (not otherwise specified). Additional corricological information: Bood - charges in bone marrow (not otherwise specified). Additional corricological information: Bood and wire disclates and the environment without proper governmental permits. Do not allow unditide product or large quantities to reach ground water, water course or sewage system. Additional corrosin formation: Boo not allow unditide product or large quantities	Possibility of hazardous reactions No Conditions to avoid No further relevant	o dangerous reactions known nt information available.				
11 Toxicological information Information on toxicological effects Acure oxic(try) Harmuil a valuewed. Link C20 values that are relevant for class affection: No data Link C20 values that are relevant for class affection: No data Eye initiation or consolis. Clauses serious eye initiation. Sensitization: No sensitizing effects known. Germ cell mutgenicity: No effects known. Specific target organ system toxicity - repeated exposure: No effects known. Specific target organ system toxicity - sepated exposure: No effects known. Specific target organ system toxicity - sepated exposure: No effects known. Specific target organ system toxicity - sepated exposure: No effects known. Specific target organ system toxicity - sepated exposure: No effects known. Specific target organ system toxicity - sepated exposure: No effects known. Specific target organ system toxicity - sepated exposure: No effects known. Specific target organ system toxicity - sepated exposure: No effects hnown. Additional toxicological information. The Registry of Toxic Effects of Chemical Substances (RTECS) reports the following effects in laboratory animals: Blood - charges in bore matrons wallable. Persistence and degradability No further relevant information available. Modelity in soli No further relevant information available.	Incompatible materials: Oxidizing agen	ents				
Information on toxicological effects Acute toxicity: Haminul is valiable. Event toxicity: Haminul is valiable. Event toxicity: No sensitization: No sensitization: No data toxicological information available. Sensitization: No sensitization: No sensitization: No data toxicological properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH. Germ coll mutgenicity: No effects known. Germ coll mutgenicity: No effects known. Specific target organ system toxicity - single exposure: No effects known. Specific target organ system toxicity - single exposure: No effects known. Specific target organ system toxicity - single exposure: No effects known. Specific target organ system toxicity - single exposure: No effects known. Specific target organ system toxicity - single exposure: No effects known. Specific target organ system toxicity - single exposure: No effects known. Specific target organ system toxicity - single exposure: No effects known. Specific target organ system toxicity - single exposure: No effects known. Specific target organ system toxicity - single exposure: No effects known. Specific target organ system toxicity - single exposure: No effects known. Additional exposure: No effects known. Specific target organ system toxicity - single exposure: No effects known. Additional expolatodity. Ad	· _ ·		i			
Acute coxicity: Harmful if availowed. LDLCSO values that are relevant for classification: No data LDLCSO values that are relevant for classification: No data LDLCSO values that are relevant for classification: No data Eye initiation or corrosion: Causes serious eye initiation. Germ cell mutagencity: No effects known. Germ cell mutagencity: No effects known. Germ cell mutagencity: No effects known. Specific target organ system toxicity - repeated exposure: No effects known. Specific target organ system toxicity - repeated exposure: No effects known. Specific target organ system toxicity - repeated exposure: No effects known. Appriation flazard: No effects know been toxicology: Mutagence effects have been observed on tests with laboratory animals: Subacute to chronic toxicity: - fremical Substances (RTCCS) reports the following effects in laboratory animals: Endocrine - storpent coxicity - entry in the best of our knowledge the acute and chronic toxicity of this substance is not fully known. 12 Ecological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. 12 Ecological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. 12 Ecological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. 12 Ecological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. 12 Ecological information: To available. Mobility in sol No turber relevant information available. Mobility in sol No turber cleavant information available.	Information on toxicological effects					
Skin irritation or corrosion: Irritant to skin and mucous membranes. Eye Irritation or corrosion: Causes server. Causes server. Suggest Structures Str	Acute toxicity: Harmful if swallowed.	classification: No data				
Sensitization: No sensitizing effects known. " Germ call mutagenicity: No effects known. Componenties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH. Germ call mutagenicity: No effects known. Specific target organ system toxicity - repeated exposure: No effects known. Aspiration hazard: No effects known. Specific target organ system toxicity - single exposure: No effects known. Aspiration tests: with laborator in No effects known. Specific target organ system toxicity - single exposure: No effects known. Specific target organ system toxicity - single exposure: No effects known. Specific target organ system toxicity - single exposure: No effects known. Specific target organ system toxicity: Mutagenic effects in hew been observed on tests with laboratory animals: Subacute to chronic toxicity: The Registration toxicology: The Registration toxicology: Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. 12 Ecological information Toxicity Aquatic toxicity: No further relevant information available. Registration would have relevant information available. Registration endographility information available. Registration accord to the environment without proper governmental parmits. Do not alkow undited product or targe quantilies to reach ground water, water course or sewage system. Results of PBT and VPVB assessment PPT: River adverse effects in busing and according to ensitient available. Respirement methods Recommendation Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation Consult state, local or national regulations: Recommendation classies) Doff, ADR knop, knop, knop, knop, knop, k	Skin irritation or corrosion: Irritant to s	skin and mucous membranes.				
Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH. Reproductive toxicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH. Reproductive toxicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH. Reproductive toxicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH. Reproductive toxicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH. Reproductive toxicity: No classification desis with human lymphocytes. Mutagenic effects have been observed on tests with human lymphocytes. Mutagenic effects have been observed on tests with human lymphocytes. Mutagenic effects have been observed on tests with human lymphocytes. Biodod - changes in bone marrow (not otherwise specified). Ediodod - changes in bone marrow (not otherwise specified). Ediodod - changes in bone marrow (not otherwise specified). Ediodoc - estrogenic. Additional toxicological Information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. 12 Ecological Information: Toxicity Aquatic toxicity: No further relevant information available. Mobility in soil No transported of a relevant information available. Mobility in soil No further relevant information available. Mobility in	Sensitization: No sensitizing effects kno	nown.				
Specific target organ's ystem toxicity - repeated exposure: No effects known. Aspiration hazara! No effects known. Aspiration hazara! No effects known. Aspiration hazara! No effects known. Aspiration hazara! No effects known. Other information (about experimental toxicology): Mutagenic effects have been observed on tests with laboratory animals: Subscure to chronic toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) reports the following effects in laboratory animals: Blood - changes in bone marrow (not otherwise specified). Endportme- estrogenic: Additional toxicological information: Toxicity Additional toxicological information: Toxicity Additional toxicological information available. Against: toxicity of No: Inther relevant information available. Bioaccumuletive potential No lurther relevant information available. Bioaccumuletive potential No lurther relevant information available. Bioaccumuletive potential No lurther relevant information available. Additional ecological information: General notes: Do not allow material to be released to the environment without proper governmental permits. Do not allow material to be released to the environment without water, water course or sewage system. Avaint sublicable: Other adverse effects No further relevant information available. 13 Disposal considerations Waste treatment methods Recommended cleansing agent: Water, in necessary with cleansing agents. Horie a hazardous material for transportation. Mone UN-Number Dort, MIOG, ATA Dorg. ADR Mone (Contd. on page 4	Carcinogenicity: No classification data	a on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.				
Aspiration hazard: No effects known. Other information (about experimental toxicology): Milingenic effects have been observed on tests with haboratory animals. Subscript Other information (about experimental toxicology): The Registry of Toxic Effects of Chemical Substances (RTECS) reports the following effects in laboratory animals: Blood - charges in bone marrow (not otherwise specified). Endocrine - 6strogenic. Additional toxicological information: Toxic iff Aquiati toxicological information available. Againstit toxicological information available. Additional ecological information: Toxicity Additional ecological information: To not allow material to be released to the environment without proper governmental permits. Do not allow unditide product of large quantities to reach ground water, water course or sewage system. Againstit toxic by PET and VPVB assessment PBT: Not applicable. Other information YPVE: Wid applicable. Other and verse effects No further relevant information available. Waste treatment methods Recommendation Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation Consult state, local or national	Specific target organ system toxicity -	r - repeated exposure: No effects known.				
Other information (about experimental toxicology): Mutagenic effects have been observed on tests with laboratory animals. Subacute effects have been observed on tests with laboratory animals. Subacute is ochronic toxicity. Provide the chronic toxicity. Provide the chronic toxicity. Provide the chronic toxicity. Additional toxicological information: Toxicity Additional toxicological information available. Persistence and degradability No further relevant information available. Persistence and degradability No further relevant information available. Rescuence and degradability No further relevant information available. Additional ecological information Doot of the write relevant information available. Additional ecological information Additional ecological information available. Additional ecological information Additional ecological information Doot allow unditude product or large quantities to reach ground water, water course or sewage system. Avaid transfer into the environment. Results of PBT and VPVB assessment PPT. PBT. Not applicable. Other adverse effects No further relevant information available. 13 Disposal considerations Recommendation Co	Aspiration hazard: No effects known.					
Musigenic effects have been observed on tests with laboratory animals. Subacute to chronic toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) reports the following effects in laboratory animals: Endocrine - distrogenic: Additional toxicological information: To the best of our knows best of our knowledge the acute and chronic toxicity of this substance is not fully known. 12 Ecological information Toxicity: Additional toxicological information available. Persistence and degradability No further relevant information available. Bioaccumulative potential No further relevant information available. Mobility in soil No further relevant information available. Additional ecological information: General notes: Do not allow undifilied product or large quantities to reach ground water, water course or sewage system. Avoid transfer into the environment. Results of PBT and VPVB assessment PBT: Not applicable Other adverse effects No further relevant information available. Madeuterse effects No further relevant information available. Mobility that aboratory and the adverse effects No further relevant information available. 13 Disposal considerations Waste treatment methods Recommendation Could state, local or	Other information (about experimental toxicology):					
The Registry of Toxic Effects of Chemical Substances (RTECS) reports the following effects in laboratory animals: Blood - changes in bone marrow (not otherwise specified). Endocrine - estrogenic. Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. 12 Ecological information Toxicity Aquatic toxicity: No further relevant information available. Persistence and degradability No further relevant information available. Bioaccumulative potential No further relevant information available. Mobility in soil No further relevant information available. Do not allow specified to be released to the environment without proper governmental permits. Do not allow indikted product or large quantities to reach ground water, water course or sewage system. Avoid transfer into the environment. Results of PBT and VPVB assessment PBT: Not applicable. VPVB: Not applicable. 13 Disposal considerations Maste tradment methods Recommended cleaning: Recommended cleaning: Recommended cleaning: Recommended cleaning agent: Water, in necessary with cleansing agents. 14 Transport information Note hazardous material for transportation. UN-Number DOT, IMDS, IATA None Transport hazard class(es) DOT, MDS, IATA None (Contd. on page 4	Mutagenic effects have been observed o	on tests with laboratory animals.				
Endocrine - östrogenic. Additional toxicological information Toxicity Augustence and degradability No further relevant information available. Reading and the relevant information available. Reading addition of the relevant information available. Reading addition of the relevant information available. Reading addition material to be relevant information available. Reading and ecological information: General notes: Do not allow unditive potential to be released to the environment without proper governmental permits. Do not allow unditive potential to be released to the environment. Results of PBT and vPvB assessment PBT: Not applicable. Other adverse effects No further relevant information available. 13 Disposal considerations Waste treatment methods Recommendation Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation formation Not a hizardous material for transportation. UN-Number DOT, IMDG, IATA None UN-Number DOT, IMDG, IATA None Control no per shipping name OOT, IMDG, IATA None Control no page 4	The Registry of Toxic Effects of Chemica	The Registry of Toxic Effects of Chemical Substances (RTECS) reports the following effects in laboratory animals:				
12 Ecological information Toxicity Aquatic toxicity: No further relevant information available. Persistence and degradability No further relevant information available. Bioaccumulative potential No further relevant information available. Addition are constituted in the relevant information available. Addition are constituted information: Bondow material to be released to the environment without proper governmental permits. Do not allow material to be released to the environment without proper governmental permits. Do not allow individed product or large quantities to reach ground water, water course or sewage system. Avoid transfer into the environment. Results of PB1 and vPvB assessment PB1: Not applicable. VPvB: Not applicable. VDref adverse effects No further relevant information available. 13 Disposal considerations Recommendation Cosult state, local or national regulations.	Endocrine - estrogenic.					
Toxicity Aquatic toxicity: No further relevant information available. Presistence and degradability No further relevant information available. Bioaccumulative potential No further relevant information available. Mobility in sol No further relevant information available. Additional ecological information: Ceneral notes: Do not allow malifuled product or large quantities to reach ground water, water course or sewage system. Avoid ster into the environment. Were allow finality to be released to the environment without proper governmental permits. Do not allow finality of PBT and YPVB assessment PBT: Not applicable. VPVB: Not applicable. VPVB: Not applicable. 13 Disposal considerations Waster treatment methods Recommendation: Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommended cleansing agent: Water, if necessary with cleansing agents. 14 Transport information Not a hazardous material for transportation. UN-Number DOT, IMDG, IATA None UN-Number DOT, IMDG, IATA None Transport aclass(es) DOT, ADR, IMDG, IATA None DOT, ADR, IMDG, IATA None Transport hazard class(es) DOT, ADR, IMDG, IATA None						
Aquatic toxicity: No further relevant information available. Persistence and degradability No further relevant information available. Bioaccumulative potential No further relevant information available. Mobility in soil No further relevant information available. Additional ecological information: General notes: Do not allow material to be released to the environment without proper governmental permits. Do not allow undiluted product or large quantities to reach ground water, water course or sewage system. Avoid transfer into the environment. Results OF PT and VPVB assessment PBT: Not applicable. Other adverse effects No further relevant information available. 13 Disposal considerations Waste treatment methods Recommendation Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation: Note a hazardous metantal for transportation. WN-Number Do T, IMDG, IATA None UN proper shipping name DOT, MDG, IATA None Transport hazard class(es) DOT, MDG, IATA None Class	Toxicity					
Additional ecological information: General notes: Do not allow material to be released to the environment without proper governmental permits. Do not allow undiluted product or large quantities to reach ground water, water course or sewage system. Avoid transfer into the environment. Results of PBT and vPVB assessment PBT: Not applicable. Other adverse effects No further relevant information available. 13 Disposal considerations Waste treatment methods Recommendation: Disposal must be made according to official regulations. Recommendation: Disposal must be made according to official regulations. Recommendation: Disposal must be made according to official regulations. Recommendation: Disposal must be made according to official regulations. Recommended of clansing agent: Water, if necessary with cleansing agents. 14 Transport information Not a hazardous material for transportation. UN-Number DOT, IMDG, IATA None Transport hazard class(es) DOT, ADR, IMDG, IATA None (Contd. on page 4)	Aquatic toxicity: No further relevant info	iormation available.				
Additional ecological information: General notes: Do not allow material to be released to the environment without proper governmental permits. Do not allow undiluted product or large quantities to reach ground water, water course or sewage system. Avoid transfer into the environment. Results of PBT and vPVB assessment PBT: Not applicable. Other adverse effects No further relevant information available. 13 Disposal considerations Waste treatment methods Recommendation: Disposal must be made according to official regulations. Recommendation: Disposal must be made according to official regulations. Recommendation: Disposal must be made according to official regulations. Recommendation: Disposal must be made according to official regulations. Recommended of clansing agent: Water, if necessary with cleansing agents. 14 Transport information Not a hazardous material for transportation. UN-Number DOT, IMDG, IATA None Transport hazard class(es) DOT, ADR, IMDG, IATA None (Contd. on page 4)	Bioaccumulative potential No further relevant info	relevant information available.				
Do not allow material to be released to the environment without proper governmental permits. Do not allow undiluted product or large quantities to reach ground water, water course or sewage system. Avoid transfer into the environment. Results of PBT and vPVB assessment PBT: Not applicable. VPVB: Not applicable. Other adverse effects No further relevant information available. 13 Disposal considerations Waste treatment methods Recommendation: Disposal must be made according to official regulations. Recommendation: Disposal must be made according to official regulations. Recommendation: Disposal must be made according to official regulations. Recommendation for the relevant information. Uncleaned packagings: Recommendation for transportation. 14 Transport information Not a hazardous material for transportation. UN-Number DOT, IMDG, IATA None DOT, IMDG, IATA None DOT, ADR, IMDG, IATA None (Contd. on page 4	Additional ecological information:	mation available.				
Do not allow undiluted product or large quantities to reach ground water, water course or sewage system. Avoid transfer into the environment. Results of PBT and VPVB assessment PBT: Not applicable. VPVB: Not applicable. VPVB: Not applicable. Vaste treatment methods Recommendation Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations. Recommended cleansing agent: Water, if necessary with cleansing agents. 14 Transport information Not a hazardous material for transportation. UN-Number DOT, IMDG, IATA None UN proper shipping name DOT, IMDG, IATA None Contd. on page 4	Do not allow material to be released to the environment without proper governmental permits.					
PBT: Not applicable. vPvB: Not applicable. Other adverse effects No further relevant information available. 13 Disposal considerations Waste treatment methods Recommendation Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations. Recommended cleansing agent: Water, if necessary with cleansing agents. 14 Transport information Not a hazardous material for transportation. UN-Number DOT, IMDG, IATA None UN proper shipping name DOT, IMDG, IATA None UN transport hazard class(es) DOT, ADR, IMDG, IATA None Contd. on page 4	Do not allow undiluted product or large quantities to reach ground water, water course or sewage system. Avoid transfer into the environment.					
vPvB: Not inplicable. Other adverse effects No further relevant information available. 13 Disposal considerations Waste treatment methods Recommendation Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations. Recommended cleansing agent: Water, if necessary with cleansing agents. 14 Transport information Not a hazardous material for transportation. UN-Number DOT, IMDE, LATA None UN proper shipping name DOT, IMDE, LATA None Transport hazard class(es) DOT, ADR, IMDG, IATA None DOT, ADR, IMDG, IATA None (Contd. on page 4) None	PBT: Not applicable	t				
Waste treatment methods Recommendation Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommended cleansing agent: Water, if necessary with cleansing agents. 14 Transport information Not a hazardous material for transportation. UN-Number DOT, IMDG, IATA None UN proper shipping name DOT, IMDG, IATA None Transport hazard class(es) DOT, ADR, IMDG, IATA None (Contd. on page 4)	vPvB: Not applicable.	ant information available.				
Waste treatment methods Recommendation Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommended cleansing agent: Water, if necessary with cleansing agents. 14 Transport information Not a hazardous material for transportation. UN-Number DOT, IMDG, IATA None UN proper shipping name DOT, IMDG, IATA None Transport hazard class(es) DOT, ADR, IMDG, IATA None (Contd. on page 4)	13 Disposal considerations					
Uncleaned packagings: Recommendation: Disposal must be made according to official regulations. Recommended cleansing agent: Water, if necessary with cleansing agents. 14 Transport information Not a hazardous material for transportation. UN-Number DOT, IMDG, IATA None UN proper shipping name DOT, IMDG, IATA None Transport hazard class(es) DOT, ADR, IMDG, IATA None (Contd. on page 4)	Waste treatment methods					
Recommended cleansing agent: Disposal must be made according to official regulations. Recommended cleansing agent: Water, if necessary with cleansing agents. 14 Transport information Not a hazardous material for transportation. UN-Number DOT, IMDG, IATA None UN proper shipping name DOT, IMDG, IATA None Transport hazard class(es) None DOT, ADR, IMDG, IATA None (Contd. on page 4) None	Uncleaned packagings:					
14 Transport information Not a hazardous material for transportation. UN-Number DOT, IMDG, IATA None UN proper shipping name DOT, IMDG, IATA None Transport hazard class(es) None DOT, ADR, IMDG, IATA None (Contd. on page 4) None	Recommendation: Disposal must be ma	ade according to official regulations. er, if necessary with cleansing agents.				
UN-Number DOT, IMDG, IATA None UN proper shipping name DOT, IMDG, IATA None Transport hazard class(es) None DOT, ADR, IMDG, IATA None Class None						
UN proper shipping name DOT, IMDG, IATA None Transport hazard class(es) DOT, ADR, IMDG, IATA Class None (Contd. on page 4)	UN-Number					
Transport hazard class(es) DOT, ADR, IMDG, IATA Class None (Contd. on page 4		None				
DOT, ADR, IMDG, IATA Class None (Contd. on page 4)		None				
Class None (Contd. on page 4						
		None				
			(Contd. on page 4) USA			

Product name: 2,2'-Dihydroxybiphenyl		
	(Contd. of page 3)	
Packing group DOT, IMDG, IATA	None	
Environmental hazards:	Not applicable.	
Special precautions for user	Not applicable.	
Transport in bulk according to Annex II of MARPOL73/78	and the IBC Code Not applicable.	
Transport/Additional information:	Not dangerous according to the above specifications.	
DOT Marine Pollutant (DOT):	No	
15 Regulatory information		
Safety, health and environmental regulations/legislation s GHS label elements The product is classified and labeled in a Hazard pictograms	specific for the substance or mixture accordance with 29 CFR 1910 (OSHA HCS)	
GHS06		
Signal word Danger Hazard statements H301 Toxic if swallowed. H319 Causes serious eye irritation. Precautionary statements P280 Wear protective gloves/protective clothing/eye protection/face protection. P305+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor/ P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P305+P316 IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P305+P316 IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P305 Dispose of contents/container in accordance with local/regional/national/international regulations. Mational regulations All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory. All components of this product are listed on the Canadian Domestic Substances List (DSL). SARA Section 313 (specific toxic chemical listings) Substance is not listed. Prop 65 - Chemicals known to cause cancer Substance is not listed. Prop 65 - Developmental toxicity, Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity female Substance is		
Department issuing SDS: Global Marketing Department Date of preparation / last revision 11/23/2015 / -	to other information gathered by them, and should make independent judgement of suitability of this afety of employees. This information is furnished without warranty, and any use of the product not in ination with any other product or process, is the responsibility of the user. uses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) isociation" (IATA) ICAO)	
HMIS: Hazardous Materials Identification System (USA) WHMIS: Workplace Hazardous Materials Information System (Canada) LC50: Lethal dose, 50 percent VPUB: very Persistent and very Bioaccumulative ACGIH: American Conference of Governmental Industrial Hygienists (USA) OSHA: Occupational Safety and Health Administration (USA) NTP: National Toxicology Program (USA) IARC: International Agency for Research on Cancer EPA: Environmental Protection Agency (USA)		

USA -