SAFETY DATA SHEET

ROYCO 555 DOD-PRF-85734

Version	Revision Date:	SDS Number:	Date of last issue: 09/27/2021
3.0	08/19/2022	203000016192	Country / Language: US / EN

SECTION 1. IDENTIFICATION

Product name : ROYCO 555 DOD-PRF-85734

Product code : 000000000058322877

Manufacturer or supplier's details

Company : LANXESS Corporation
Product Safety & Regulatory Affairs
111 RIDC Park West Drive
Pittsburgh, Pennsylvania 15275-1112

Responsible Department : (800) LANXESS
(412) 809-1000

Emergency telephone : CHEMTREC (800) 424-9300 or
(703) 527-3887 (Outside U.S.A) and mention CCN12916.
Lanxess Emergency Phone (800) 410-3063.

Recommended use of the chemical and restrictions on use

Recommended use : Lubricant

Restrictions on use : Reserved for industrial and professional use.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Reproductive toxicity : Category 2

GHS label elements

Hazard pictograms :

Signal Word : Warning

Hazard Statements : Suspected of damaging fertility or the unborn child.

Precautionary Statements : **Prevention:**
Obtain special instructions before use.

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

Response:

IF exposed or concerned: Get medical advice/ attention.

Storage:

Store locked up.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	>= 1 - < 5
tris(methylphenyl) phosphate	1330-78-5	>= 0.1 - < 1

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

SECTION 4. FIRST AID MEASURES

If inhaled : If inhaled, remove to fresh air.
Get medical attention if symptoms occur.

In case of skin contact : Wash off with soap and water.
Get medical attention if symptoms occur.

In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Get medical attention if symptoms appear.

If swallowed : Rinse mouth with water.
Do not induce vomiting unless directed to do by medical personnel.
Get medical attention if symptoms occur.

Most important symptoms and effects, both acute and delayed

Symptoms	:	Adverse symptoms sometimes include the following: Effects on fertility.
Effects	:	Suspected of damaging fertility or the unborn child.
Protection of first-aiders	:	If potential for exposure exists refer to Section 8 for specific personal protective equipment.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during fire fighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Carbon dioxide (CO2) Carbon monoxide Nitrogen oxides (NOx) Sulfur oxides Oxides of phosphorus Halogenated compounds Metal oxides
Special protective equipment for fire-fighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	No action shall be taken involving any personal risk or without suitable training. Put on appropriate personal protection equipment. Do not touch or walk through spilled material. Evacuate personnel to safe areas. Keep unnecessary and unprotected personnel from entering.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Stop leak if safe to do so. Wash spillages into an effluent treatment plant or proceed as follows. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite)

and transfer to a container for disposal according to local / national regulations (see section 13).
Dispose of wastes in an approved waste disposal facility.
Do not allow into the sewerage system, surface waters or groundwater or into the soil.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	Remove contaminated clothing and protective equipment before entering eating areas. Workers should wash hands and face before eating, drinking and smoking. Put on appropriate personal protection equipment. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Avoid exposure during pregnancy.
Conditions for safe storage	:	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. Keep container closed when not in use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate container to avoid environmental contamination.
Further information on storage stability	:	No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures	:	Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal protective equipment

Respiratory protection	:	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.
Hand protection		
Material	:	Neoprene
Remarks	:	Gloves should be discarded and replaced if there is any indi-

cation of degradation or chemical breakthrough.

Eye protection	:	Safety glasses with side-shields
Skin and body protection	:	Impervious clothing
Hygiene measures	:	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Physical state	:	liquid
Color	:	amber
Odor	:	mild
Odor Threshold	:	No data available
pH	:	No data available
Melting point/range	:	Not applicable
Boiling point/boiling range	:	No data available
Flash point	:	> 475 °F / 246 °C Method: ASTM D 92
Evaporation rate	:	No data available
Self-ignition	:	No data available
Burning number	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available

Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	0.99
Density	:	No data available
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Decomposition temperature	:	No data available
Self-Accelerating decomposition temperature (SADT)	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Strong acids and strong bases
Hazardous decomposition products	:	No decomposition if stored normally.

SECTION 11. TOXICOLOGICAL INFORMATION

The most important known symptoms and effects are described in Section 2 and/or Section 4.

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Components:

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 401
GLP: no

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: no
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Dosage caused no mortality

tris(methylphenyl) phosphate:

Acute oral toxicity : LD50 (Rat, male and female): > 20,000 mg/kg
Method: Standard acute method
GLP: no

Acute inhalation toxicity : LC50 (Rat, male and female): > 11.1 mg/l
Exposure time: 1 h
Test atmosphere: dust/mist
Method: Standard acute method
GLP: no
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Dosage caused no mortality

Acute dermal toxicity : LD50 (Rabbit, male and female): 3,700 mg/kg
Method: Standard acute method
GLP: no

Skin corrosion/irritation

Not classified based on available information.

Components:

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Species	:	Rabbit
Exposure time	:	4 h
Method	:	OECD Test Guideline 404
Result	:	Mild skin irritation
GLP	:	no

tris(methylphenyl) phosphate:

Species	:	Rabbit
Exposure time	:	24 h
Method	:	Draize Test
GLP	:	no
Remarks	:	Mild skin irritation (not subject to classification)

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Species	:	Rabbit
Result	:	No eye irritation
Method	:	OECD Test Guideline 405
GLP	:	no

tris(methylphenyl) phosphate:

Species	:	Rabbit
Result	:	No eye irritation
Exposure time	:	24 h
GLP	:	no

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Components:

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Test Type	:	Maximization Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406

Result	:	Not a skin sensitizer.
GLP	:	yes

tris(methylphenyl) phosphate:

Test Type	:	Local lymph node assay (LLNA)
Routes of exposure	:	Skin contact
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	Not a skin sensitizer.
GLP	:	yes
Remarks	:	Not classified due to inconclusive data.

Germ cell mutagenicity

Not classified based on available information.

Components:

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Genotoxicity in vitro : Test Type: Micronucleus test
Test system: Human lymphocytes
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 487
Result: negative
GLP: yes
Remarks: Test results on an analogous product

Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes
Remarks: Test results on an analogous product

Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes
Remarks: Test results on an analogous product

Test Type: Ames test
Test system: Escherichia coli
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes
Remarks: Test results on an analogous product

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster lung cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes
Remarks: Test results on an analogous product

Genotoxicity in vivo : Test Type: dominant lethal test
Species: Mouse (male)
Application Route: Oral
Method: OECD Test Guideline 478
Result: negative
GLP: no
Remarks: Test results on an analogous product

tris(methylphenyl) phosphate:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: no

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster lung cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes

Test Type: Chromosome aberration test in vitro
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Result: negative
GLP: no

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (female)
Cell type: In red blood cells
Application Route: Oral
Result: negative
GLP: no

Test Type: sister chromatid exchange assay
Species: Chinese hamster (male and female)
Cell type: Bone marrow
Application Route: Oral
Result: negative

GLP: yes

Carcinogenicity

Not classified based on available information.

IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Suspected of damaging fertility or the unborn child.

Components:

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Effects on fertility	:	Test Type: Fertility/early embryonic development Species: Rat, male and female Application Route: Oral Dose: 25-75-225 milligram per kilogram General Toxicity Parent: NOAEL: 25 mg/kg bw/day Fertility: NOEL: 225 mg/kg bw/day Method: OECD Test Guideline 422 Result: Animal testing did not show any effects on fertility. GLP: yes
Effects on fetal development	:	Test Type: Embryo-fetal development Species: Rabbit, female Application Route: Oral Dose: 10-30-100 milligram per kilogram General Toxicity Maternal: NOAEL: 30 mg/kg bw/day Teratogenicity: NOAEL: 100 mg/kg bw/day Developmental Toxicity: NOEL: 30 mg/kg bw/day Method: OECD Test Guideline 414 Result: Embryotoxic effects and adverse effects on the off-spring were detected only at high maternally toxic doses GLP: yes
Reproductive toxicity - Assessment	:	Some evidence of adverse effects on sexual function and fertility, based on animal experiments.

tris(methylphenyl) phosphate:

Effects on fertility	:	Species: Mouse, male and female Application Route: Oral Dose: 62,5 - 124 - 250 milligram per kilogram General Toxicity Parent: LOAEL: 62.5 mg/kg body weight

General Toxicity F1: LOAEL: 62.5 mg/kg body weight
Target Organs: Testes
GLP: no

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat, female
Application Route: Oral
Dose: 20 - 100 - 400 - 750 milligram per kilogram
Duration of Single Treatment: 28 d
General Toxicity Maternal: NOEL: 20 mg/kg body weight
Developmental Toxicity: LOAEL: 20 mg/kg body weight
Method: OPPTS 870.3700
GLP: yes

Reproductive toxicity - Assessment : Suspected of damaging fertility. (Causing atrophy of the testes), Suspected of damaging the unborn child.

Routes of exposure, oral

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

Components:

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Species	:	Rat, male and female
NOAEL	:	25 mg/kg
Application Route	:	Oral
Exposure time	:	28 d
Number of exposures	:	daily
Dose	:	25-75-225 mg/kg bw/d
Method	:	OECD Test Guideline 422
GLP	:	yes
Remarks	:	Subacute toxicity

tris(methylphenyl) phosphate:

Species	:	Rat, male and female
LOAEL	:	50 mg/kg
Application Route	:	Oral
Exposure time	:	91 d
Number of exposures	:	5 days/week
Dose	:	50 - 100 - 200 - 400 - 800 mg/kg bw/day
GLP	:	yes
Remarks	:	Subchronic toxicity

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l
End point: mortality
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: no
Remarks: Fresh water
nominal concentration

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 51 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 202
GLP: yes
Remarks: Fresh water
nominal concentration

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: no
Method: OECD Test Guideline 201
GLP: no
Remarks: Fresh water
nominal concentration

NOEC (Desmodesmus subspicatus (green algae)): > 10 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: no
Method: OECD Test Guideline 201

GLP: no
Remarks: Fresh water
nominal concentration

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EL10 (Daphnia magna (Water flea)): 1.69 mg/l
End point: Reproduction
Exposure time: 21 Days
Analytical monitoring: no
Method: OECD Test Guideline 211
GLP: yes
Remarks: Fresh water
nominal concentration
water extractable fraction

Toxicity to microorganisms : EC50 (activated sludge): > 100 mg/l
End point: Respiration inhibition
Exposure time: 3 h
Test Type: static test
Analytical monitoring: no
Method: OECD Test Guideline 209
GLP: no
Remarks: Fresh water
nominal concentration

tris(methylphenyl) phosphate:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.6 mg/l
Exposure time: 96 h
Test Type: static test
Analytical monitoring: no
GLP: no
Remarks: Fresh water
nominal concentration

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.146 mg/l
Exposure time: 48 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 202
GLP: yes
Remarks: Fresh water

Toxicity to algae/aquatic plants : EL50 (Pseudokirchneriella subcapitata (green algae)): > 2.5 mg/l
End point: Growth rate
Exposure time: 72 h
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes
Remarks: Fresh water
nominal concentration

water extractable fraction

NOEC (Pseudokirchneriella subcapitata (green algae)): > 2.5 mg/l
End point: Growth rate
Exposure time: 72 h
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes
Remarks: Fresh water
nominal concentration
water extractable fraction

Toxicity to fish (Chronic toxicity) : NOEC (Jordanella floridae (flagfish)): 0.01 mg/l
Exposure time: 28 d
Analytical monitoring: yes
GLP: no
Remarks: Fresh water

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.1 mg/l
Exposure time: 21 d
Analytical monitoring: yes
GLP: no
Remarks: Fresh water

Toxicity to microorganisms : EC50 (activated sludge): > 1,000 mg/l
End point: Respiration inhibition
Exposure time: 3 h
Analytical monitoring: no
Method: OECD Test Guideline 209
GLP: yes
Remarks: Fresh water
nominal concentration

Persistence and degradability

Product:

Biodegradability : Result: No data available

Components:

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Biodegradability : aerobic
Inoculum: activated sludge, non-adapted
Concentration: 20.1 mg/l
Result: Not readily biodegradable.
Biodegradation: 1 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

GLP: yes

tris(methylphenyl) phosphate:

Biodegradability	:	aerobic Inoculum: activated sludge, adapted Concentration: 30 mg/l Result: Inherently biodegradable. Biodegradation: 100 % Exposure time: 28 d Method: OECD Test Guideline 302C GLP: No information available.

Bioaccumulative potential

Components:

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:

Partition coefficient: n-octanol/water	:	log Pow: 6.66 (73 °F / 23 °C) pH: 6.67 Method: OECD Test Guideline 123 GLP: yes Remarks: Based on data from similar materials

tris(methylphenyl) phosphate:

Partition coefficient: n-octanol/water	:	log Pow: 5.93 (77 °F / 25 °C) Method: measured

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

RCRA - Resource Conservation and Recovery Authorization Act	:	If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)
Waste from residues	:	The generation of waste should be avoided or minimized wherever possible. This material and its container must be disposed of in a safe way.

Empty containers retain product residue; observe all precautions for product.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Waste disposal should be in accordance with existing federal, state, provincial and/or local environmental controls.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

Domestic regulation

49 CFR
Not regulated as a dangerous good

Hazard and Handling Notes.
Not dangerous cargo, Keep separated from foodstuffs

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
amitrole	61-82-5	10	50000

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity
This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Reproductive toxicity

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Massachusetts Right To Know

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	68411-46-1	1 - 5

amitrole	61-82-5	< 0.1

Pennsylvania Right To Know

Fatty acids, C5-9, tetraesters with pentaerythritol	67762-53-2	> 1
Fatty acids, C5-9, hexaesters with dipentaerythritol	67762-52-1	> 1
amitrole	61-82-5	< 0.1

California Prop. 65

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

TSCA inventory

TSCA : All substances listed as active on the TSCA inventory

TSCA list

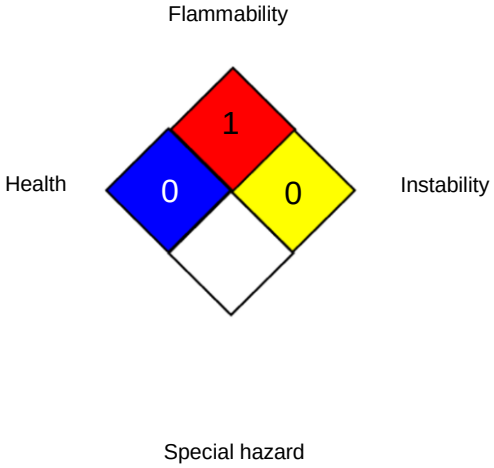
No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

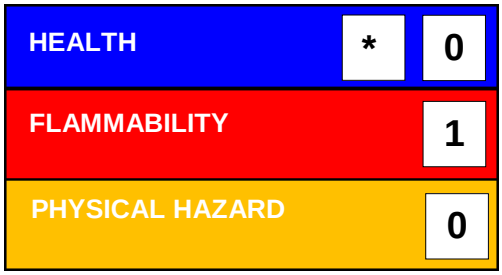
SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German In-

stitute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date : 08/19/2022

The data contained in this Safety Data Sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered to be a guidance for processing and does not contain any warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. It is the responsibility of the recipient of the product to ensure that any proprietary rights and existing laws and legislation are observed.