SAFETY DATA SHEET
according to the OSHA Hazard Communication Standard

BAYFERROX 645 T

Version	Revision Date:	SDS Number:	Date of last issue: 08/07/2025
4.0	08/19/2025	203000000026	Country / Language: US / EN

SECTION 1. IDENTIFICATION

Product name : BAYFERROX 645 T

Product code : 000000000002388727

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
lanxesshes@lanxess.com

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 : Colorants (pigments and dyestuffs), inorganic

SECTION 2. HAZARDS IDENTIFICATION

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

Hazards for the product as supplied

Specific target organ toxicity - repeated exposure (Inhalation) : Category 2 (Central nervous system)

Other hazards

None known.

GHS label elements

Hazard pictograms :

Signal Word : Warning

Hazard Statements : H373 May cause damage to organs (Central nervous system) through prolonged or repeated exposure if inhaled.

Precautionary Statements :

Prevention:

P260 Do not breathe dust.

Response:

P314 Get medical advice/ attention if you feel unwell.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Chemical nature : FeMnO3

Components

Chemical name	CAS No./Unique ID	Concentration (% w/w)
Manganese Ferrite Spinel	68186-94-7*	>= 80 - <= 100

* Indicates that the identifier is a CAS No.
Any concentration shown as a range is to protect confidentiality or is due to batch variation.

SECTION 4. FIRST AID MEASURES

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

Get medical attention immediately.
Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If unconscious, place in recovery position and get medical attention immediately.
Maintain open airway.
If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

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

In case of eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids.
Remove contact lenses.
Get medical attention if symptoms appear.

If swallowed : Rinse mouth with water.
Do NOT induce vomiting.
Get medical attention if symptoms occur.

Most important symptoms and effects, both acute and delayed

Symptoms	:	May cause irritation with symptoms of reddening and itching. Eye: May cause irritation with symptoms of reddening, tearing and stinging.
Effects	:	May cause mechanical irritation (abrasion). May cause damage to organs through prolonged or repeated exposure if inhaled.
Protection of first-aiders	:	No action shall be taken involving any personal risk or without suitable training. If potential for exposure exists refer to Section 8 for specific personal protective equipment. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.
Notes to physician	:	Treat symptomatically. The exposed person may need to be kept under medical surveillance for 48 hours.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	In case of fire, use water spray (fog), foam, dry chemical or CO_2.
Unsuitable extinguishing media	:	None known.
Specific hazards during fire fighting	:	Do not allow run-off from fire fighting to enter drains or water courses. Toxic and irritating gases/fumes may be given off during burning or thermal decomposition.
Hazardous combustion products	:	No hazardous combustion products are known
Further information	:	Standard procedure for chemical fires. 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. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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 : No action shall be taken involving any personal risk or without suitable training.
Keep unnecessary and unprotected personnel from entering.
Do not touch or walk through spilled material.
Avoid breathing dust.
Provide adequate ventilation.
Avoid dust formation.
In case of inadequate ventilation wear respiratory protection.
Use personal protective equipment.

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Move containers from spill area.
Vacuum or sweep up material and place in a designated, labeled waste container.
Dispose of wastes in an approved waste disposal facility.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : For personal protection see section 8.
Avoid contact with skin and eyes.
Provide sufficient air exchange and/or exhaust in work rooms.
In case of insufficient ventilation, wear suitable respiratory equipment.
Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use.
Dispose of rinse water in accordance with local and national regulations.

Workers should wash hands and face before eating, drinking and smoking.

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 containers tightly closed in a dry, cool and well-ventilated place.
Containers that have been opened must be carefully resealed and kept upright to prevent leakage.
Electrical installations / working materials must comply with the technological safety standards.

Do not store near sources of heat (furnaces, kilns, boilers, etc.).
Exposure to excessive heat may cause this product to become unstable (slowly auto-oxidize) which generates additional heat. Under certain circumstances this heat generation may be sufficient to cause combustible materials to ignite. Do not store near strong oxidizers, sources of heat, or near flammable or combustible materials.

Further information on storage stability : Keep in a dry place.
No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

inert or nuisance dust

50 Million particles per cubic foot
Value type (Form of exposure): TWA (total dust)
Basis: OSHA Z-3

15 mg/m3
Value type (Form of exposure): TWA (total dust)
Basis: OSHA Z-3

5 mg/m3
Value type (Form of exposure): TWA (respirable fraction)
Basis: OSHA Z-3

15 Million particles per cubic foot
Value type (Form of exposure): TWA (respirable fraction)
Basis: OSHA Z-3

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Manganese Ferrite Spinel	68186-94-7	C	5 mg/m3 (Manganese)	OSHA Z-1
		TWA (Inhalable particulate matter)	0.1 mg/m3 (Manganese)	ACGIH
		TWA (Respirable par-	0.02 mg/m3 (Manganese)	ACGIH

		ticulate matter)		

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

Personal protective equipment

Respiratory protection : Dust-protection mask if there is a risk of dust formation.

Hand protection
Material : Gloves

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves. After contamination with product change the gloves immediately and dispose of them according to relevant national and local regulations

Eye protection : Safety glasses with side-shields

Skin and body protection : Wear suitable protective clothing.

Hygiene measures : General industrial hygiene practice.
When using do not eat, drink or smoke.
Wash face, hands and any exposed skin thoroughly after handling.
Wash contaminated clothing before reusing.
Remove contaminated clothing and protective equipment before entering eating areas.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : powder

Physical state : solid

Color : brown

Odor : odorless

Odor Threshold : No data available

pH : substance/mixture is non-soluble (in water)

Melting point/ range : > 1,832 °F / > 1,000 °C

Boiling point/boiling range : No data available

Flash point	:	Not applicable
Evaporation rate	:	No data available
Flammability (solid, gas)	:	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	:	Not applicable
Relative vapor density	:	No data available
Relative density	:	No data available
Density	:	4.5 g/cm3 (68 °F / 20 °C)
Bulk density	:	300 - 1,000 kg/m3
Solubility(ies)		
Water solubility	:	insoluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Ignition temperature	:	No data available
Decomposition temperature	:	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 specific test data related to reactivity available for this

product or its ingredients.

Chemical stability	:	The product is chemically stable.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	No specific data.
Incompatible materials	:	No specific data.
Hazardous decomposition products	:	No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation
Eye contact
Skin contact

Acute toxicity

Not classified due to lack of data.

Components:

Manganese Ferrite Spinel:

Acute oral toxicity	:	LD50 (Rat, male): > 10,000 mg/kg Method: Standard acute method GLP: No information available. Remarks: Dosage caused no mortality
Acute inhalation toxicity	:	LC50 (Rat, male and female): > 5.05 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 GLP: Yes Assessment: The substance or mixture has no acute inhalation toxicity Remarks: Dosage caused no mortality Test results on an analogous substance/product.

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Components:

Manganese Ferrite Spinel:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation
GLP	:	No information available.

Serious eye damage/eye irritation

Based on available data, the classification criteria are not met.

Components:

Manganese Ferrite Spinel:

Species	:	Rabbit
Result	:	No eye irritation
Method	:	OECD Test Guideline 405
GLP	:	No information available.

Respiratory or skin sensitization

Skin sensitization

Based on available data, the classification criteria are not met.

Respiratory sensitization

Not classified due to lack of data.

Components:

Manganese Ferrite Spinel:

Test Type	:	Maurer optimisation test
Routes of exposure	:	Intradermal
Species	:	Guinea pig
Result	:	Did not cause sensitization on laboratory animals.
GLP	:	No
Remarks	:	Test results on an analogous substance/product.

Germ cell mutagenicity

Not classified due to lack of data.

Components:

Manganese Ferrite Spinel:

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: Yes

Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: Yes
Remarks: Test results on an analogous substance/product.

Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster fibroblasts
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476

Result: negative
GLP: Yes
Remarks: Test results on an analogous substance/product.

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster fibroblasts
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: Yes
Remarks: Test results on an analogous substance/product.

Test Type: Micronucleus test
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 487
Result: negative
GLP: Yes
Remarks: Test results on an analogous substance/product.

Genotoxicity in vivo : Test Type: In vivo mammalian alkaline comet assay
Species: Rat (male)
Application Route: Oral
Method: OECD Test Guideline 489
Result: negative
GLP: Yes
Remarks: Test results on an analogous substance/product.

Carcinogenicity

Not classified due to lack of data.

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

Not classified due to lack of data.

Components:

Manganese Ferrite Spinel:

Effects on fertility : Test Type: Fertility/early embryonic development
Species: Rat, male and female
Application Route: Oral
Dose: 500 - 1000 - 2000 mg/kg bw/day
General Toxicity Parent: NOAEL: 500 mg/kg bw/day
Fertility: NOAEL: >= 2,000 mg/kg bw/day
Method: OECD Test Guideline 422
GLP: Yes

Remarks: Test results on an analogous substance/product.

Test Type: Fertility/early embryonic development
Species: Rat, male and female
Application Route: Oral
Dose: 30 - 100 - 300 - 1000 mg/kg bw/day
General Toxicity Parent: NOAEL: 300 mg/kg bw/day
Fertility: NOAEL: >= 1,000 mg/kg bw/day
Method: OECD Test Guideline 422
GLP: Yes
Remarks: Test results on an analogous substance/product.

STOT-single exposure

Not classified due to lack of data.

STOT-repeated exposure

May cause damage to organs (Central nervous system) through prolonged or repeated exposure if inhaled.

Components:

Manganese Ferrite Spinel:

Routes of exposure	:	Inhalation
Target Organs	:	Central nervous system
Assessment	:	May cause damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

Manganese Ferrite Spinel:

Species	:	Rat, male and female
NOAEL	:	>= 1,000 mg/kg
Application Route	:	Oral
Exposure time	:	90 d
Number of exposures	:	daily
Dose	:	100 - 300 - 1000 mg/kg bw/day
Method	:	OECD Test Guideline 408
GLP	:	Yes
Remarks	:	Subchronic toxicity Test results on an analogous substance/product.

Species	:	Rat, male
NOAEL	:	10,1 mg/m³
Application Route	:	inhalation (dust/mist/fume)
Exposure time	:	28 d
Number of exposures	:	6 hours/day, 5 days/week
Dose	:	10,1 - 19,7 - 45,6 - 95,8 mg/m³
Method	:	OECD Test Guideline 412
GLP	:	Yes
Remarks	:	Subacute toxicity Test results on an analogous substance/product.

Species	:	Rat, male and female
NOAEL	:	4,7 mg/m³
Application Route	:	inhalation (dust/mist/fume)
Exposure time	:	91 d
Number of exposures	:	6 hours/day, 5 days/week
Dose	:	4,7 - 16,6 - 52,1 mg/m³
Method	:	OECD Test Guideline 413
GLP	:	Yes
Remarks	:	Subchronic toxicity Test results on an analogous substance/product.

Aspiration toxicity

Not classified due to lack of data.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Manganese Ferrite Spinel:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): > 100,000 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)): > 10,000 mg/l End point: Immobilization Exposure time: 48 h Test Type: static test Analytical monitoring: No Method: Regulation (EC) No. 440/2008, Annex, C.2 GLP: No Remarks: Fresh water nominal concentration
Toxicity to algae/aquatic plants	:	ErC50 (Raphidocelis subcapitata (freshwater green alga)): > 20 mg/l End point: Growth rate Exposure time: 72 h Test Type: static test Analytical monitoring: Yes Method: OECD Test Guideline 201 GLP: No information available. Remarks: Fresh water nominal concentration No toxicity at the limit of solubility. Test results on an analogous substance/product.

NOEC (Raphidocelis subcapitata (freshwater green alga)): >= 20 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: Yes
Method: OECD Test Guideline 201
GLP: No information available.
Remarks: Fresh water
nominal concentration
Test results on an analogous substance/product.

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): >= 20 mg/l
End point: reproduction rate
Exposure time: 21 d
Test Type: semi-static test
Analytical monitoring: Yes
Method: OECD Test Guideline 211
GLP: No information available.
Remarks: Fresh water
nominal concentration
Test results on an analogous substance/product.

Toxicity to microorganisms : EC50 (activated sludge): >= 10,000 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

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information : Ecotoxicological data are not available.
No known significant effects or critical hazards.

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
This material does not contain any components with a CERCLA RQ.

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 : Specific target organ toxicity (single or repeated exposure)

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

Manganese Ferrite Spinel	68186-94-7	>= 90 - <= 100 %

US State Regulations

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

Manganese Ferrite Spinel	68186-94-7
sodium sulphate	7757-82-6

California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.
Potential exposure to some or all of the California Proposition 65 chemicals in this product have been determined to be below the No Significant Risk Level (NSRL).

TSCA inventory

TSCA : All substances listed as active on the TSCA inventory

TSCA list

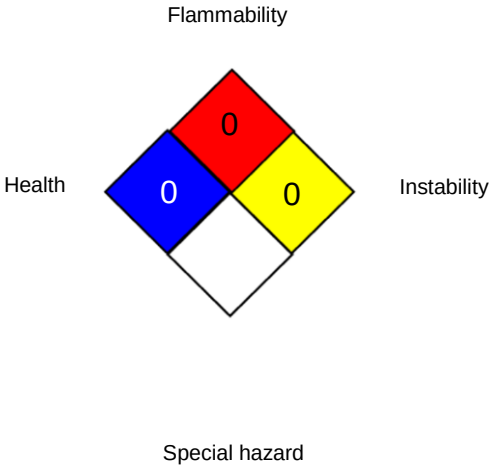
No substances are subject to a Significant New Use Rule.

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

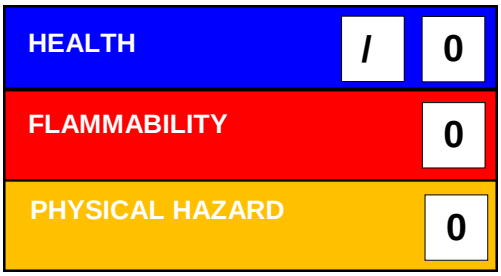
SECTION 16. OTHER INFORMATION

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

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-3	:	USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
ACGIH / TWA	:	8-hour, time-weighted average
OSHA Z-1 / C	:	Ceiling
OSHA Z-3 / TWA	:	8-hour time weighted average

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 Institute for Standardization; 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 Organization 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, Bioaccumu-

lative 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, Authorization 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 : 08/19/2025

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.

Relevant changes from the previous version are marked on the left side of the Safety Data Sheet with a black double bar in appropriate places.

US / EN