Substance key: 000000025931	Revision Date: 07/18/2025
Version : 6 - 0 / USA	Date of printing :09/09/2025

SECTION 1. IDENTIFICATION

Identification of the company:	Clariant Corporation 500 East Morehead Street Charlotte, NC, 28202 Telephone No.: +1 704 331 7000 **Information of the substance/preparation:** Product Stewardship, +1-704-331-7710 e-mail: SDS.NORAM@clariant.com **Emergency tel. number:** +1 800-424-9300 CHEMTREC

Trade name:	**Exolit IFR 36**
Material number:	155901
Primary product use:	Flame retardants
Chemical family:	Mixture of flame retardants

SECTION 2. HAZARDS IDENTIFICATION

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

Hazards for the product as supplied

Combustible dust

Carcinogenicity	:	Category 2
Reproductive toxicity	:	Category 2

Other hazards

No additional hazards are known except those derived from the labelling.

GHS label elements

Hazard pictograms :

Signal word	:	Warning
Hazard statements	:	May form combustible dust concentrations in air. H351 Suspected of causing cancer. H361f Suspected of damaging fertility.
Precautionary statements	:	**Prevention:** P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P243 Take action to prevent static discharges.
Prevent dust accumulations to minimize explosion hazard.
P280 Wear protective gloves, protective clothing, eye protection and face protection.

Response:

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Storage:

P405 Store locked up.

Disposal:

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

Hazards resulting from a reaction with other chemicals under normal conditions of use:

Conditions	Chemicals formed	Hazards
Reacts with Strong bases	Ammonium hydroxide	Harmful if swallowed. Causes severe skin burns and eye damage.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS No./Unique ID	Concentration (% w/w)	Trade secret
Silica gel, precipitated, crystalline free	112926-00-8*	>= 0.1 - <= 1	TSC
Melamine	108-78-1*	>= 0.1 - <= 1	TSC

* Indicates that the identifier is a CAS No.
TSC- the actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : Move to fresh air.

If unconscious, place in recovery position and seek medical advice.
Never give anything by mouth to an unconscious person.
Get immediate medical advice/ attention.

Give oxygen or artificial respiration if needed.

In case of skin contact : If on skin, rinse well with water.
Take off all contaminated clothing immediately.
If skin irritation occurs, seek medical advice/attention.

In case of eye contact : Immediately flush eye(s) with plenty of water.
If easy to do, remove contact lens, if worn.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Rinse mouth with water.
Do NOT induce vomiting.
Never give anything by mouth to an unconscious person.
Take victim immediately to hospital.

Most important symptoms and effects, both acute and delayed : The possible health hazards known are those derived from the labelling (see corresponding section) and/or provided in this section.
The possible symptoms known are those derived from the labelling (see section 2).
Suspected of causing cancer.
Suspected of damaging fertility.

Notes to physician : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Water spray jet
Alcohol-resistant foam
Dry powder
Carbon dioxide (CO2)
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : High volume water jet

Hazardous combustion products : Carbon oxides
Nitrogen oxides (NOx)
Hydrocarbons
Phosphorus compounds
Ammonia

Further information	:	In the event of fire and/or explosion do not breathe fumes. Do not allow run-off from fire fighting to enter drains or water courses. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for firefighters	:	Wear full protective clothing and self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Evacuate personnel to safe areas. Remove all sources of ignition. Use personal protective equipment. Refer to protective measures listed in sections 7 and 8. Avoid breathing dust. Avoid dust formation. Wearing appropriate personal protective equipment, contain spill and collect into a suitable container. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.
Environmental precautions	:	The product should not be allowed to enter drains, water courses or the soil.
Methods and materials for containment and cleaning up	:	Avoid dust formation. Non-sparking tools should be used. Take measures to prevent the build up of electrostatic charge. Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly. Treat recovered material as described in the section "Disposal considerations".

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Keep away from heat and sources of ignition. Observe the general rules of industrial fire protection Take precautionary measures against build-up of electrostatic charges, e.g earthing during loading and off-loading operations. Dust can form an explosive mixture in air. Electrical equipment should be protected to the appropriate standard. Cool endangered containers with water spray jet.
Advice on safe handling	:	Use only with adequate ventilation/personal protection.

For personal protection see section 8.
Avoid contact with skin, eyes and clothing.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Avoid dust formation.
Take measures to prevent the build up of electrostatic charge.
Ensure all equipment is electrically grounded before beginning transfer operations.
Use only non-sparking tools.

Conditions for safe storage : Keep containers tightly closed in a dry, cool and well-ventilated place.
Handle and open container with care.
Keep away from sources of ignition - No smoking.

Materials to avoid : Do not store with alkalies

Further information on storage stability : Stable under recommended storage conditions.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Silica gel, precipitated, crystalline free	112926-00-8	TWA	6 mg/m3	OSHA P0
		TWA (Dust)	20 Million particles per cubic foot (Silica)	OSHA Z-3
		TWA (Dust)	80 mg/m3 / %SiO2 (Silica)	OSHA Z-3
		TWA	6 mg/m3 (Silica)	NIOSH REL
Melamine	108-78-1	TWA	3 mg/m3	US WEEL

Engineering measures : Use adequate exhaust ventilation and/or dust collection to keep dust levels below exposure limits.

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided

by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection
Remarks : Butyl Rubber, PVC Or Neoprene.

Eye protection : Wear safety glasses with side shields or goggles.

Skin and body protection : Wear protective clothing, including long sleeves and gloves, to prevent skin contact.

Protective measures : Observe the usual precautions for handling chemicals.
Avoid breathing dust or vapour.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
Use protective skin cream before handling the product.
Wash hands before breaks and at the end of workday.
Take off immediately all contaminated clothing and wash it before reuse.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : powder

Colour : white

Odour : not specified

Odour Threshold : Not tested

pH : approx. 6.5 (77 °F / 25 °C)
Concentration: 10 g/l

Decomposition temperature : > 446 °F / > 230 °C

Boiling point : no data available

Flash point : Does not apply to solids.

Flammability (solid, gas) : no data available

Self-ignition : Method: Expert judgement
The substance or mixture is not classified as pyrophoric.

Burning number	:	1 Does not catch fire
Upper explosion limit / upper flammability limit	:	Does not apply to solids.
Lower explosion limit / Lower flammability limit	:	Does not apply to solids.
Vapour pressure	:	no data available
Relative vapour density	:	Does not apply to solids.
Density	:	1.8 g/cm3 (77 °F / 25 °C)
Solubility(ies)		
Water solubility	:	<= 100 g/l (77 °F / 25 °C)
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	Does not apply to solids.
Decomposition temperature	:	> 527 °F / > 275 °C
Viscosity		
Viscosity, dynamic	:	Not applicable
Viscosity, kinematic	:	Does not apply to solids.
Explosive properties	:	Not explosive Not explosive Method: Expert judgement
Oxidizing properties	:	Method: Expert judgement not oxidizing The product does not contain organic peroxide-groups which result from either the manufacturing process or from added ingredients.
Surface tension	:	Based on chemical structure, no surface activity is expected or can be predicted.
Metal corrosion rate	:	no data available
Particle size	:	ca. 12 µm Median value

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable
Possibility of hazardous reactions	:	Contact with strong bases liberates ammonia. The substance or mixture does not emit flammable gases in contact with water. Not corrosive to metals
Conditions to avoid	:	Keep away from strong bases.
Incompatible materials	:	See under section "Conditions to avoid"
Hazardous decomposition products	:	When handled and stored appropriately, no dangerous decomposition products are known

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Skin contact
Eye contact
Ingestion
Inhalation

Acute toxicity

Not classified

Components:

Silica gel, precipitated, crystalline free:

Acute oral toxicity	:	LD50 (Rat): > 10,000 mg/kg
Acute inhalation toxicity	:	LC0 (Rat): 0.139 mg/l Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 mg/kg

Melamine:

Acute oral toxicity	:	LD50 (Rat, male and female): 3,161 - 3,828 mg/kg Method: Other GLP: No information available. Assessment: The substance or mixture has no acute oral toxicity
Acute inhalation toxicity	:	LC50 (Rat, male and female): > 5.19 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

Acute dermal toxicity : Remarks: no data available

Skin corrosion/irritation

Not classified

Components:

Silica gel, precipitated, crystalline free:

Species : Rabbit
Result : No skin irritation

Result : Product dust may be irritating to eyes, skin and respiratory system.

Melamine:

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

Serious eye damage/eye irritation

Not classified

Components:

Silica gel, precipitated, crystalline free:

Species : rabbit eye
Result : No eye irritation

Result : Product dust may be irritating to eyes, skin and respiratory system.

Melamine:

Species : Rabbit
Result : No eye irritation
Method : Other
GLP : no

Respiratory or skin sensitisation

Skin sensitisation

Not classified

Respiratory sensitisation

Not classified

Components:

Silica gel, precipitated, crystalline free:

Result : not known

Melamine:

Test Type	:	Maximisation Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Not a skin sensitizer.
GLP	:	yes

Germ cell mutagenicity

Not classified

Components:

Silica gel, precipitated, crystalline free:

Genotoxicity in vitro	:	Result: negative
Germ cell mutagenicity - Assessment	:	In vitro tests did not show mutagenic effects, In vivo tests did not show mutagenic effects

Melamine:

Genotoxicity in vitro	:	Test Type: Ames test Test system: Salmonella typhimurium Concentration: 50 - 5000 µg/plate Metabolic activation: with and without metabolic activation Method: Ames test Result: negative GLP: yes Test Type: Chromosome aberration test in vitro Test system: Chinese hamster ovary cells Concentration: 240 - 300 µg/ml Metabolic activation: with and without metabolic activation Method: Other Result: negative GLP: No information available. Test Type: In vitro gene mutation study in mammalian cells Test system: Chinese hamster ovary cells Concentration: 600 - 1000 µg/ml Metabolic activation: with and without metabolic activation Method: Other Result: negative GLP: yes
Genotoxicity in vivo	:	Test Type: Chromosome Aberration Test Species: Mouse (male and female) Strain: CD1 Cell type: Bone marrow Application Route: oral (gavage) Exposure time: 1 - 2 treatments, 24 h

Dose: 1000 - 10000 - 20000 mg/kg
Method: Other
Result: negative
GLP: yes

Germ cell mutagenicity - Assessment : In vitro tests did not show mutagenic effects, In vivo tests did not show mutagenic effects

Carcinogenicity

Suspected of causing cancer.

Components:

Silica gel, precipitated, crystalline free:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

Melamine:

Species	:	Rat, male and female
Application Route	:	oral (feed)
Exposure time	:	103 w
Control Group	:	yes
Frequency of Treatment	:	daily
	:	126 mg/kg bw/day
Method	:	Other
Result	:	equivocal
GLP	:	No information available.

Carcinogenicity - Assessment : Suspected human carcinogens

IARC Group 2B: Possibly carcinogenic to humans
Melamine 108-78-1

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 component 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.

Components:

Silica gel, precipitated, crystalline free:

Effects on fertility : Remarks: Based on available data, the classification criteria are not met.

Reproductive toxicity - Assessment : No reproductive toxicity to be expected.
No teratogenic effects to be expected.

Melamine:

Effects on fertility : Test Type: Fertility/early embryonic development
Species: Other
Method: Other
Remarks: Fertility and developmental toxicity tests did not reveal any effect on reproduction.

Effects on foetal development : Test Type: Pre-natal
Species: Rat, female
Strain: wistar
Application Route: oral (feed)
Dose: 136, 400, 1060 mg/kg bw/day
General Toxicity Maternal: NOAEL: 400 mg/kg body weight
Teratogenicity: NOAEL: 1,060 mg/kg body weight
Method: OECD Test Guideline 414
GLP: yes

Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, based on animal experiments.
Embryotoxicity classification not possible from current data.

STOT - single exposure

Not classified

Product:

Remarks : not available

Components:

Silica gel, precipitated, crystalline free:

Remarks : no data available

Melamine:

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Not classified

Product:

Remarks : not available

Components:

Silica gel, precipitated, crystalline free:

Remarks : no data available

Melamine:

Target Organs : Urinary tract

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

Repeated dose toxicity

Components:

Silica gel, precipitated, crystalline free:

Remarks : No adverse effect has been observed in chronic toxicity tests.

Melamine:

Species	:	Rat, male and female
NOAEL	:	72 mg/kg bw/day
Application Route	:	oral (feed)
Exposure time	:	13 w
Dose	:	750 - 18000 ppm nominal in die
Control Group	:	yes
Method	:	Repeated Dose Toxicity (subchronic study)
GLP	:	No information available.
Target Organs	:	Urinary system, Bladder

Application Route	:	Inhalation
Remarks	:	This information is not available.

Application Route	:	Skin contact
Remarks	:	This information is not available.

Aspiration toxicity

Not classified

Product:

no data available

Components:

Silica gel, precipitated, crystalline free:

No aspiration toxicity classification

Melamine:

No aspiration toxicity classification

Experience with human exposure

Product:

General Information : The possible symptoms known are those derived from the labelling (see section 2).

Further information

Product:

Remarks : The product has not been tested. The statements are derived from products of a similar composition.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : Remarks: no data available

Toxicity to soil dwelling organisms : Remarks: not available

Plant toxicity : Remarks: not available

Sediment toxicity : Remarks: not available

Toxicity to terrestrial organisms : Remarks: not available

Components:

Silica gel, precipitated, crystalline free:

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): > 10,000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10,000 mg/l
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : Remarks: no data available

Toxicity to fish (Chronic toxicity) : Remarks: not required

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Remarks: not required

Toxicity to microorganisms : Remarks: no data available

Toxicity to soil dwelling organisms : Remarks: Not applicable

Plant toxicity : Remarks: Not applicable

Sediment toxicity : Remarks: Not applicable

Toxicity to terrestrial : Remarks: Not applicable

organisms

Melamine:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 3,000 mg/l End point: mortality Exposure time: 96 h Test Type: semi-static test Analytical monitoring: no Method: Other GLP: no Remarks: The details of the toxic effect relate to the nominal concentration.
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia sp. (water flea)): 200 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: yes Remarks: The details of the toxic effect relate to the nominal concentration.
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): 325 mg/l End point: Growth rate Exposure time: 96 h Test Type: static test Analytical monitoring: no data available Method: Other GLP: yes Remarks: The details of the toxic effect relate to the nominal concentration.
Toxicity to fish (Chronic toxicity)	:	NOEC (Pimephales promelas (fathead minnow)): >= 5.1 mg/l End point: length of young fish Exposure time: 36 d Test Type: flow-through test Analytical monitoring: yes Method: OECD Test Guideline 210 GLP: yes
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia sp. (water flea)): >= 11 mg/l End point: Reproduction rate Exposure time: 21 d Test Type: semi-static test Analytical monitoring: yes Method: OECD Test Guideline 211 GLP: yes
Toxicity to microorganisms	:	EC0 (Natural microorganism): > 100 mg/l Exposure time: 2 h

Test Type: static test
Analytical monitoring: yes
Method: Other
GLP: no

Persistence and degradability

Product:

Biodegradability : Remarks: not available

Components:

Silica gel, precipitated, crystalline free:

Biodegradability : Remarks: Not applicable

Melamine:

Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 100 mg DOC/l
Dissolved organic carbon (DOC)
Result: not rapidly degradable
Biodegradation: < 10 %
Exposure time: 28 d
Method: OECD Test Guideline 302B
GLP: No information available.

aerobic
Inoculum: activated sludge
Method: Other
GLP: No information available.
Remarks: The product is biodegradable after lengthy adaptation.

Physico-chemical removability : Remarks: Not readily eliminated from water.

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: not available

Components:

Silica gel, precipitated, crystalline free:

Bioaccumulation : Remarks: Not applicable

Melamine:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 0.38 - 3.8
Exposure time: 42 d

Concentration: 0.2 - 2 mg/l
Method: Other
GLP: No information available.

Partition coefficient: n-octanol/water : log Pow: -1.22 (72 °F / 22 °C)
pH: 8
Method: Regulation (EC) No. 440/2008, Annex, A.8
GLP: no

Mobility in soil

Product:

Distribution among environmental compartments : Remarks: not available

Components:

Silica gel, precipitated, crystalline free:

Distribution among environmental compartments : adsorption
Medium: water - soil
Remarks: After release, adsorbs onto soil.

Melamine:

Distribution among environmental compartments : Adsorption/Soil
Medium: water - soil
log Koc: 1.13 - 1.51
Method: estimated

Other adverse effects

Components:

Silica gel, precipitated, crystalline free:

Environmental fate and pathways : no data available

Additional ecological information : The product should not be allowed to enter drains, water courses or the soil.

Melamine:

Environmental fate and pathways : no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

RCRA - Resource Conservation and Recovery Authorization Act : This product, if discarded as sold, is not a Federal RCRA hazardous waste.

Waste Code	:	None
Waste from residues	:	Product should be taken to a suitable and authorized waste disposal site in accordance with relevant regulations and if necessary after consultation with the waste disposal operator and/or the competent Authorities
Contaminated packaging	:	Packaging that cannot be cleaned should be disposed of as product waste

SECTION 14. TRANSPORT INFORMATION

DOT	not restricted
IATA	not restricted
IMDG	not restricted

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

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

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS 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	:	Combustible dust Carcinogenicity 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.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307
This product does not contain any priority pollutants related to the U.S. Clean Water Act

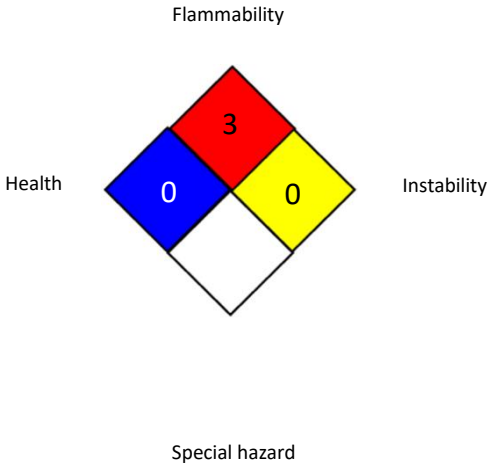
The components of this product are reported in the following inventories:

TSCA : On TSCA Inventory, All components are compliant with the TSCA Inventory Notification (Active) rule.

SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



Full text of other abbreviations

NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
OSHA P0	:	USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
OSHA Z-3	:	USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
US WEEL	:	USA. Workplace Environmental Exposure Levels (WEEL)
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
OSHA P0 / TWA	:	8-hour time weighted average
OSHA Z-3 / TWA	:	8-hour time weighted average
US WEEL / TWA	:	8-hr TWA

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 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 Harmonised 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 Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; 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 - Organisation 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

Observe national and local legal requirements
Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Revision Date : 07/18/2025

US / EN