SAFETY DATA SHEET

Sikaflex NP 1 black Formerly MSeal NP 1 Black

Version	Revision Date:	SDS Number:	Date of last issue: 01/06/2021
1.4	10/28/2021	000000680503	Date of first issue: 05/04/2020

SECTION 1. IDENTIFICATION

Product name : Sikaflex NP 1 black Formerly MSeal NP 1 Black

Product code : 000000000050426524

Manufacturer or supplier's details

Company name of supplier : Sika MBCC US LLC

Address : 201 POLITO AVE
Lyndhurst NJ 07071

Emergency telephone : ChemTel: +1-813-248-0585

Recommended use of the chemical and restrictions on use

Recommended use : Product for construction chemicals

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)

Acute toxicity (Inhalation - vapour) : Category 4

Serious eye damage/eye irritation : Category 2A

Respiratory sensitization : Category 1

Skin sensitization : Category 1

Carcinogenicity : Category 2

Specific target organ toxicity - repeated exposure : Category 1 (Central nervous system)

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H319 Causes serious eye irritation.

H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H372 Causes damage to organs (Central nervous system) through prolonged or repeated exposure.

Precautionary Statements :

Prevention:

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P271 Use only outdoors or in a well-ventilated area.
P260 Do not breathe dusts or mists.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P284 In case of inadequate ventilation wear respiratory protection.
P270 Do not eat, drink or smoke when using this product.
P264 Wash face, hands and any exposed skin thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.

Response:

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P314 Get medical advice/ attention if you feel unwell.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/container to appropriate hazardous waste collection point.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Sealant

Components

Chemical name	CAS-No.	Concentration (% w/w)
Stoddard solvent	8052-41-3	>= 1 - < 3
calcium oxide	1305-78-8	>= 1 - < 3
Bis[2-[2-(1-methylethyl)-3-oxazolidinyl]ethyl] hexan-1,2-diylbiscarbamate	59719-67-4	>= 1 - < 3
trimethoxy(3-(oxiranylmethoxy)propyl)silane	2530-83-8	>= 0.3 - < 1
toluene-2,6-diisocyanate	91-08-7	>= 0.3 - < 1
Limestone	1317-65-3	>= 15 - < 20
talc	14807-96-6	>= 1 - < 3

SECTION 4. FIRST AID MEASURES

General advice : Remove contaminated clothing.

Move out of dangerous area.
Show this material safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : Remove the affected individual into fresh air and keep the person calm.
Assist in breathing if necessary.
Immediate medical attention required.

Call a physician or poison control center immediately.
If unconscious, place in recovery position and seek medical advice.

In case of skin contact : Wash affected areas thoroughly with soap and water.
If irritation develops, seek medical attention.

If on skin, rinse well with water.

In case of eye contact : In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water.
Immediate medical attention required.

Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Rinse mouth and then drink 200-300 ml of water.
Do NOT induce vomiting.
Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.
Immediate medical attention required.

Induce vomiting immediately and call a physician.
Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

Most important symptoms and effects, both acute and delayed : May cause an allergic skin reaction.
Causes serious eye irritation.
Harmful if inhaled.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Suspected of causing cancer.
Causes damage to organs through prolonged or repeated exposure.

Notes to physician : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Foam
Water spray
Dry powder
Carbon dioxide (CO2)

Unsuitable extinguishing media : water jet

Hazardous combustion products : nitrous gases
fumes/smoke
isocyanate
vapor

Further information : Keep containers cool by spraying with water if exposed to fire.
Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Standard procedure for chemical fires.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special protective equipment for fire-fighters : Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Clear area.
Ensure adequate ventilation.
Wear suitable personal protective clothing and equipment.

Use personal protective equipment.
Avoid dust formation.
Avoid breathing dust.
Ensure adequate ventilation.

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 : Dike spillage.

If temporary control of isocyanate vapor is required, a blanket of protein foam or other suitable foam (available from most fire departments) may be placed over the spill. Transfer as much liquid as possible via pump or vacuum device into closed but not sealed containers for disposal.
Absorb isocyanate with suitable absorbent material (see § 40 CFR, sections 260, 264 and 265 for further information).
Do not make container pressure tight.
Move container to a well-ventilated area (outside).
Add at a 10 to 1 ratio.
Mixture of 90 % water, 5-8 % household ammonia, 2-5 % detergent.
Allow to stand for at least 48 hours to allow escape of evolved carbon dioxide.
Wash down spill area with decontamination solution.

Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Keep away from sources of ignition - No smoking.
The relevant fire protection measures should be noted.

Avoid dust formation.
Provide appropriate exhaust ventilation at places where dust is formed.

Advice on safe handling : Provide suitable exhaust ventilation at the processing machines.
Ensure thorough ventilation of stores and work areas.
Avoid aerosol formation.
When handling heated product, vapours of the product should be ventilated, and respiratory protection used.
Wear respiratory protection when spraying.
Danger of bursting when sealed gastight.
Protect against moisture.
If bulging of drum occurs, transfer to well ventilated area, puncture to relieve pressure, open vent and let stand for 48 hours before resealing.

Avoid formation of respirable particles.
Do not breathe vapors/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Provide sufficient air exchange and/or exhaust in work rooms.
Dispose of rinse water in accordance with local and national regulations.
Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.

Further information on storage conditions : Keep only in the original container in a cool, well-ventilated place.
Protect from direct sunlight.
Store protected against freezing.

Materials to avoid : Observe TRGS 509/510 storage rules.

Recommended storage temperature : 41 - 90 °F / 5 - 32 °C

Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
toluene-2,6-diisocyanate	91-08-7	STEL value (Inhalable fraction and vapor)	0.005 ppm	ACGIHTLV
		Skin Designation (Inhalable fraction and vapor)		ACGIHTLV
		TWA value (Inhalable fraction and	0.001 ppm	ACGIHTLV

		vapor)		
		C	0.02 ppm 0.14 mg/m3	OSHA Z-1
		TWA (Inhalable fraction and vapor)	0.001 ppm	ACGIH
		STEL (Inhalable fraction and vapor)	0.005 ppm	ACGIH
		TWA	0.005 ppm 0.04 mg/m3	OSHA P0
		STEL	0.02 ppm 0.15 mg/m3	OSHA P0
calcium oxide	1305-78-8	TWA	2 mg/m3	ACGIH
		TWA	2 mg/m3	NIOSH REL
		TWA	5 mg/m3	OSHA Z-1
		TWA	5 mg/m3	OSHA P0
Limestone	1317-65-3	TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (Total dust)	15 mg/m3	OSHA P0
		TWA (respirable dust fraction)	5 mg/m3	OSHA P0
		TWA (Respirable)	5 mg/m3 (Calcium carbonate)	NIOSH REL
		TWA (total)	10 mg/m3 (Calcium carbonate)	NIOSH REL
talc	14807-96-6	TWA (Dust)	20 Million particles per cubic foot	OSHA Z-3
		TWA (respirable dust fraction)	2 mg/m3	OSHA P0
		TWA (Respirable)	2 mg/m3	NIOSH REL
		TWA	0.1 fibres per cubic centimeter	ACGIH
		TWA (Respirable particulate matter)	2 mg/m3	ACGIH
Stoddard solvent	8052-41-3	TWA value	100 ppm	ACGIHTLV
		REL value	350 mg/m3	NIOSH
		Ceil_Time	1,800 mg/m3	NIOSH
		PEL	500 ppm 2,900 mg/m3	29 CFR 1910.1000 (Table Z-1)
		TWA value	100 ppm	29 CFR

			525 mg/m3	1910.1000 (Table Z-1-A)
		TWA	100 ppm	ACGIH
		TWA	350 mg/m3	NIOSH REL
		C	1,800 mg/m3	NIOSH REL
		TWA	500 ppm 2,900 mg/m3	OSHA Z-1
		TWA	100 ppm 525 mg/m3	OSHA P0

Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parame-ters / Permissible concentration	Basis
Carbon monoxide	630-08-0	TWA value	25 ppm	ACGIHTLV
		REL value	35 ppm 40 mg/m3	NIOSH
		Ceil_Time	200 ppm 229 mg/m3	NIOSH
		PEL	50 ppm 55 mg/m3	29 CFR 1910.1000 (Table Z-1)
		TWA value	35 ppm 40 mg/m3	29 CFR 1910.1000 (Table Z-1-A)
		CLV	200 ppm 229 mg/m3	29 CFR 1910.1000 (Table Z-1-A)
		TWA	25 ppm	ACGIH
		TWA	35 ppm 40 mg/m3	NIOSH REL
		C	200 ppm 229 mg/m3	NIOSH REL
		TWA	50 ppm 55 mg/m3	OSHA Z-1
		TWA	35 ppm 40 mg/m3	OSHA P0
		C	200 ppm 229 mg/m3	OSHA P0
Carbon dioxide	124-38-9	TWA value	5,000 ppm	ACGIHTLV
		STEL value	30,000 ppm	ACGIHTLV
		REL value	5,000 ppm 9,000 mg/m3	NIOSH
		STEL value	30,000 ppm 54,000 mg/m3	NIOSH
		PEL	5,000 ppm 9,000 mg/m3	29 CFR 1910.1000 (Table Z-1)
		TWA value	10,000 ppm 18,000 mg/m3	29 CFR 1910.1000

				(Table Z-1-A)
		STEL value	30,000 ppm 54,000 mg/m3	29 CFR 1910.1000 (Table Z-1-A)
		TWA	5,000 ppm	ACGIH
		STEL	30,000 ppm	ACGIH
		TWA	5,000 ppm 9,000 mg/m3	NIOSH REL
		ST	30,000 ppm 54,000 mg/m3	NIOSH REL
		TWA	5,000 ppm 9,000 mg/m3	OSHA Z-1
		TWA	10,000 ppm 18,000 mg/m3	OSHA P0
		STEL	30,000 ppm 54,000 mg/m3	OSHA P0
Hydrocyanic acid	74-90-8	CLV	4.7 ppm (CN)	ACGIHTLV
		C	4.7 ppm (Cyanide)	ACGIH
		ST	4.7 ppm 5 mg/m3	NIOSH REL
		TWA	10 ppm 11 mg/m3	OSHA Z-1
		STEL	4.7 ppm 5 mg/m3	OSHA P0

Engineering measures : No applicable information available.

Personal protective equipment

Respiratory protection : When workers are facing concentrations above the occupational exposure limits they must use appropriate certified respirators.
When atmospheric levels may exceed the occupational exposure limit (PEL or TLV) NIOSH-certified air-purifying respirators equipped with an organic vapor sorbent and particulate filter can be used as long as appropriate precautions and change out schedules are in place.
For emergency or non-routine, high exposure situations, including confined space entry, use a NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection

Remarks : Chemical resistant protective gloves should be worn to prevent all skin contact. Suitable materials may include chloroprene rubber (Neoprene) nitrile rubber (Buna N) chlorinated polyethylene polyvinylchloride (Pylox) butyl rubber depending upon conditions of use.
The suitability for a specific workplace should be discussed

with the producers of the protective gloves.

Eye protection	:	Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists. Eye wash bottle with pure water Tightly fitting safety goggles Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection	:	Cover as much of the exposed skin as possible to prevent all skin contact. Suitable materials may include saran-coated material depending upon conditions of use. Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Protective measures	:	Wear protective clothing as necessary to prevent contact. Eye wash fountains and safety showers must be easily accessible. Observe the appropriate PEL or TLV value.
Hygiene measures	:	Wash soiled clothing immediately. Remove contaminated clothing immediately and clean before re-use or dispose it if necessary. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	paste
Color	:	black
Odor	:	mild
pH	:	No data available
Melting point	:	No applicable information available.
Boiling point	:	No applicable information available.
Flash point	:	does not flash
Evaporation rate	:	No applicable information available.
Flammability (solid, gas)	:	not flammable Method: Manual of tests and criteria. Test N.1 (United Nations

Recommendations on the Transport of Dangerous Goods).

Self-ignition	:	not self-igniting
Upper explosion limit / Upper flammability limit	:	No applicable information available.
Lower explosion limit / Lower flammability limit	:	No applicable information available.
Vapor pressure	:	No applicable information available.
Relative vapor density	:	No applicable information available.
Relative density	:	No applicable information available.
Density	:	10.1 lb/USg (77 °F / 25 °C)
Solubility(ies)		
Water solubility	:	insoluble (59 °F / 15 °C)
Solubility in other solvents	:	No applicable information available.
Partition coefficient: n-octanol/water	:	No applicable information available.
Autoignition temperature	:	No applicable information available.
Decomposition temperature	:	No decomposition if stored and handled as prescribed/indicated.
Viscosity		
Viscosity, dynamic	:	No applicable information available.
Viscosity, kinematic	:	No applicable information available.
Explosive properties	:	Not explosive
Oxidizing properties	:	Not an oxidizer.
Self-heating substances	:	No data available
Sublimation point	:	No applicable information available.
Molecular weight	:	No data available.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No hazardous reactions if stored and handled as prescribed/indicated. No decomposition if stored and applied as directed.

Chemical stability	:	The product is stable if stored and handled as prescribed/indicated. No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	Reacts with water, with formation of carbon dioxide. Risk of bursting. Reacts with alcohols. Reacts with acids. Reacts with alkalies. Reacts with amines. Risk of exothermic reaction. Risk of polymerization. Contact with certain rubbers and plastics can cause brittleness of the substance/product with subsequent loss in strength. No decomposition if stored and applied as directed.
Conditions to avoid	:	Avoid moisture. See SDS section 7 - Handling and storage.
Incompatible materials	:	Acids Amines Alcohols Water Alkalines Strong bases Substances/products that react with isocyanates.
Hazardous decomposition products	:	nitrogen oxides Aromatic isocyanates gases/vapours

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if inhaled.

Product:

Acute oral toxicity	:	Remarks: No applicable information available.
Acute inhalation toxicity	:	ATE: 14.8 mg/l Remarks: Determined for vapor
Acute dermal toxicity	:	Remarks: No applicable information available.

Skin corrosion/irritation

Not classified based on available information.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Suspected of causing cancer.

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Causes damage to organs (Central nervous system) through prolonged or repeated exposure.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks	:	The product has not been tested. The statement has been derived from the properties of the individual components.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information	:	There is a high probability that the product is not acutely harmful to aquatic organisms. The product has not been tested. The statements on ecotoxi-

cology have been derived from the properties of the individual components.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with national, state and local regulations.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Do not discharge into drains/surface waters/groundwater.

Contaminated packaging : Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

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

Special precautions for user
Not applicable

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
toluene-2,6-diisocyanate	91-08-7	100	21097

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

toluene-2,6-diisocyanate 91-08-7

US State Regulations

Pennsylvania Right To Know

calcium oxide	1305-78-8
Limestone	1317-65-3
talc	14807-96-6
Stoddard solvent	8052-41-3
4-methyl-m-phenylene diisocyanate	584-84-9

New Jersey Right To Know

calcium oxide	1305-78-8
Limestone	1317-65-3
talc	14807-96-6
Stoddard solvent	8052-41-3
toluene-2,6-diisocyanate	91-08-7
Carbon black	1333-86-4

California Prop. 65

WARNING: This product can expose you to chemicals including toluene-2,6-diisocyanate, toluene, which is/are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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

DSL : This product contains one or more components listed on the Canadian NDSL. All other components are on the Canadian DSL.

TSCA : All chemical substances in this product are either listed as active on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

TSCA list

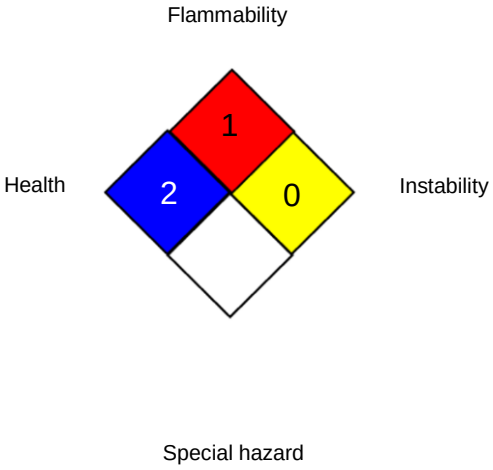
The following substance(s) is/are subject to a Significant New Use Rule:

toluene-2,6-diisocyanate	91-08-7

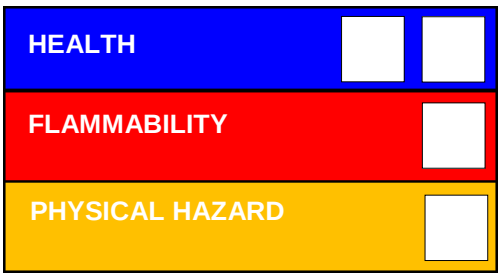
SECTION 16. OTHER INFORMATION

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

29 CFR 1910.1000 (Table Z-1-A)	:	OSHA - Table Z-1-A (29 CFR 1910.1000)
29 CFR 1910.1000 (Table Z-1)	:	OSHA - Table Z-1 (Limits for Air Contaminants) 29 CFR 1910.1000
ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
ACGIHTLV	:	American Conference of Governmental Industrial Hygienists - threshold limit values (US)
NIOSH	:	NIOSH Pocket Guide to Chemical Hazards (US)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
OSHA P0	:	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
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
29 CFR 1910.1000 (Table Z-1-A) / CLV	:	Ceiling Limit Value:
29 CFR 1910.1000 (Table Z-1-A) / STEL value	:	Short Term Exposure Limit (STEL):
29 CFR 1910.1000 (Table Z-1-A) / TWA value	:	Time Weighted Average (TWA):
29 CFR 1910.1000 (Table Z-1) / PEL	:	Permissible exposure limit
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
ACGIH / C	:	Ceiling limit
ACGIHTLV / CLV	:	Ceiling Limit Value:
ACGIHTLV / Skin Designation	:	Skin Designation:
ACGIHTLV / STEL value	:	Short Term Exposure Limit (STEL):
ACGIHTLV / TWA value	:	Time Weighted Average (TWA):
NIOSH / Ceil_Time	:	Ceiling Limit Value and Time Period (if specified):

NIOSH / REL value	:	Recommended exposure limit (REL):
NIOSH / STEL value	:	Short Term Exposure Limit (STEL):
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST	:	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
NIOSH REL / C	:	Ceiling value not be exceeded at any time.
OSHA P0 / TWA	:	8-hour time weighted average
OSHA P0 / STEL	:	Short-term exposure limit
OSHA P0 / C	:	Ceiling limit
OSHA Z-1 / 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 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 : 10/28/2021

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. 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 a 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.

US / EN