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SAFETY DATA SHEET

Classified in accordance 29 CFR 1910.1200

1. Identification

Product No.:	Product name:	Common name(s), synonym(s)
212527	BOTTLE GRAM DECOLORIZER 250ML	No data available

Recommended restrictions

Recommended use: Laboratory Chemicals
Restrictions on use: None known.

Manufacturer/Importer/Distributor Information

Manufacturer

Company Name:	BD, Integrated Diagnostic Solutions
Address:	7 Loveton Circle Sparks, MD 21152 USA
Telephone:	1 844 823 5433
Fax:	not available
Contact Person:	Business Unit Product Stewardship Team
E-mail:	IDS_SDS@bd.com

Emergency telephone number: CHEMTREC 1 800 424 9300

2. Hazard(s) identification

Hazard Classification

Physical Hazards

Flammable liquids	Category 2

Health Hazards

Serious Eye Damage/Eye Irritation	Category 2A
Specific Target Organ Toxicity - Single Exposure	Category 3

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Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement:
H225: Highly flammable liquid and vapor.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.

Precautionary Statements

Prevention:
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233: Keep container tightly closed.
P240: Ground and bond container and receiving equipment.
P241: Use explosion-proof electrical, ventilating and lighting equipment.
P242: Use non-sparking tools.
P243: Take action to prevent static discharges.
P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P312: Call a POISON CENTER or doctor/ physician if you feel unwell.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical advice/attention.
P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage:
P403+P233: Store in a well-ventilated place. Keep container tightly closed.

Disposal:
P501: Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

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Other hazards which do not result in GHS classification:

FK: Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment.
Spark: Sparks may ignite liquid and vapor.
H241: May cause flash fire or explosion.

3. Composition/information on ingredients

Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
2-Propanol	No data available.	67-63-0	75%
2-Propanone	No data available.	67-64-1	25%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Description of first aid measures

General information: Get medical attention if symptoms occur. Causes serious eye irritation. May cause drowsiness or dizziness.

Inhalation: Provide fresh air, warmth and rest, preferably in comfortable upright sitting position. Get medical attention if any discomfort continues.

Skin Contact: Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.

Ingestion: If swallowed, rinse mouth with water (only if the person is conscious). DO NOT induce vomiting. Get medical attention immediately.

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Personal Protection for First-aid Responders:	No data available.

Most important symptoms and effects, both acute and delayed

Symptoms:	Symptoms may be delayed.
Hazards:	Causes serious eye irritation. May cause drowsiness or dizziness.

Indication of immediate medical attention and special treatment needed

Treatment:	Get medical attention if symptoms occur.

5. Fire-fighting measures

General Fire Hazards:	Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Use water to keep fire exposed containers cool and disperse vapors. In case of fire: Evacuate area.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Water spray, foam, dry powder or carbon dioxide. Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media:	Avoid water in straight hose stream; will scatter and spread fire.
Special hazards arising from the substance or mixture:	Fire or excessive heat may produce hazardous decomposition products.

Special protective equipment and precautions for fire-fighters

Special fire-fighting procedures:	May explode when heated or when exposed to flames or sparks.
Special protective equipment for fire-fighters:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

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Personal precautions, protective equipment and emergency procedures:	Contact local authorities in case of spillage to drain/aquatic environment. Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area.
Accidental release measures:	No data available.
Methods and material for containment and cleaning up:	All equipment used when handling the product must be grounded. Eliminate sources of ignition. Prevent spreading of vapors through sewers, ventilation systems and confined areas. Absorb spillage with suitable absorbent material. Prevent runoff from entering drains, sewers, or streams. See Section 8 of the SDS for Personal Protective Equipment. For waste disposal, see section 13 of the SDS.
Environmental Precautions:	Avoid release to the environment.

7. Handling and storage

Handling

Technical measures:	No data available.
Local/Total ventilation:	No data available.
Safe handling advice:	When using do not eat, drink or smoke. Use personal protective equipment as required. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes. Read and follow manufacturer's recommendations. Use spark-proof tools and explosion-proof equipment.
Contact avoidance measures:	No data available.

Storage

Safe storage conditions:	Store in a cool, dry place. Keep container tightly closed. Keep from contact with oxidizing materials.
Safe packaging materials:	No data available.

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8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values		Source
2-Propanol	TWA	400 ppm	980 mg/m3	OSHA Z1A
	STEL	500 ppm	1,225 mg/m3	OSHA Z1A
	TWA	400 ppm	980 mg/m3	TN OEL
	STEL	500 ppm	1,225 mg/m3	TN OEL
	AN ESL		200 ppb	TX ESL
	ST ESL		2,000 ppb	TX ESL
	AN ESL		492 µg/m3	TX ESL
	ST ESL		4,920 µg/m3	TX ESL
	TWA PEL	400 ppm	980 mg/m3	US CA OEL
	STEL	500 ppm	1,225 mg/m3	US CA OEL
	TWA	200 ppm		ACGIH
	STEL	400 ppm		ACGIH
	STEL	500 ppm	1,225 mg/m3	NIOSH
	REL	400 ppm	980 mg/m3	NIOSH
	IDLH	2,000 ppm		NIOSH IDLH
	LEL		2.0 %	NIOSH IDLH
	PEL	400 ppm	980 mg/m3	OSHA Z1

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2-Propanone	STEL	500 ppm		ACGIH NIC
	TWA	200 ppm		ACGIH NIC
	TWA	750 ppm	1,800 mg/m3	OSHA Z1A
	STEL	1,000 ppm	2,400 mg/m3	OSHA Z1A
	STEL	1,000 ppm	2,400 mg/m3	TN OEL
	TWA	750 ppm	1,800 mg/m3	TN OEL
	ST ESL		2,500 ppb	TX ESL
	AN ESL		250 ppb	TX ESL
	ST ESL		5,900 µg/m3	TX ESL
	AN ESL		590 µg/m3	TX ESL
	TWA PEL	500 ppm	1,200 mg/m3	US CA OEL
	STEL	750 ppm	1,780 mg/m3	US CA OEL
	Ceiling	3,000 ppm		US CA OEL
	TWA	250 ppm		ACGIH
	STEL	500 ppm		ACGIH
	REL	250 ppm	590 mg/m3	NIOSH
	PEL	1,000 ppm	2,400 mg/m3	OSHA Z1
	LEL		2.5 %	NIOSH IDLH
	IDLH	2,500 ppm		NIOSH IDLH

Please refer to the latest edition of the appropriate source text and consult an industrial hygienist or similar professional, or local agencies, for further information.

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Biological Limit Values

Chemical name	Parameters / Sampling Time	Exposure Limit Values	Source
2-Propanol	acetone Sampling time: End of shift at end of work week.	40 mg/l (Urine)	ACGIH BEI
2-Propanone	acetone Sampling time: End of shift.	25 mg/l (Urine)	ACGIH BEI

Appropriate Engineering Controls Use explosion-proof ventilation equipment to stay below exposure limits. Adequate ventilation should be provided so that exposure limits are not exceeded.

Individual protection measures, such as personal protective equipment

Eye/face protection: Wear safety glasses with side shields (or goggles).

Skin Protection

Hand Protection: Material: Chemical resistant gloves

Additional Information: Wash hands after contact.Material: Suitable gloves can be recommended by the glove supplier.

Skin and Body Protection: Wear a lab coat or similar protective clothing.

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Respiratory Protection:	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Hygiene measures:	Observe good industrial hygiene practices.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance	
Physical state:	liquid
Form:	liquid
Color:	According to product specification.
Odor:	Characteristic
Odor Threshold:	No data available.
Freezing point:	No data available.
Boiling Point:	133.0 - 179.6 °F/56.1 - 82.0 °C
Flammability:	No data available.
Upper/lower limit on flammability or explosive limits	
Explosive limit - upper:	18.0 %(V)
Explosive limit - lower:	3.5 %(V)
Flash Point:	19.9 °F/-6.7 °C
Self-ignition:	No data available.
Decomposition Temperature:	No data available.
pH:	No data available.
Viscosity	
Dynamic viscosity:	Not determined.
Kinematic viscosity:	Not determined.

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Flow Time:	No data available.
Solubility(ies)	
Solubility in Water:	Completely Soluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Vapor pressure:	186.0 hPa
Relative density:	No data available.
Density:	No data available.
Bulk density:	No data available.
Relative vapor density:	No data available.
Other information	
Auto-ignition temperature:	797.0 °F/425.0 °C
Metal Corrosion:	Non-corrosive per US Department of Transportation testing protocol.

10. Stability and reactivity

Reactivity:	Material is stable under normal conditions.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Material is stable under normal conditions.
Conditions to avoid:	Avoid exposure to high temperatures or direct sunlight. Flammable/combustible - Keep away from oxidizers, heat and flames. Keep away from sources of ignition - No smoking.
Incompatible Materials:	Water reactive material.
Hazardous Decomposition Products:	Stable; however, may decompose if heated.

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11. Toxicological information

General information: May cause central nervous system effects.

Information on likely routes of exposure

Inhalation: Breathing of high vapor concentrations may cause dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness.

Skin Contact: Negligible irritation to skin at ambient temperatures.

Eye contact: Avoid contact with eyes.

Ingestion: Ingestion may cause severe irritation of the mouth, the esophagus and the gastrointestinal tract.

Acute toxicity (list all possible routes of exposure)

Oral

Product:	ATEmix, 12,000 mg/kg
Components:	
2-Propanol	LD 50, Rat, 5,045 mg/kg
2-Propanone	LD 50, Mouse, 5.2 g/kg LD 50, Rat, 5,800 mg/kg LD 50, Rabbit, 5,340 mg/kg LD 50, Mouse, 3,000 mg/kg LD 50, Rat, 9,800 mg/kg

Dermal

Product:	Not classified for acute toxicity based on available data.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Inhalation

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Repeated dose toxicity

Product:	No data available.
Components:	
2-Propanol	NOAEL Rat, Inhalation, >= 104 Weeks, 5,000 ppm(m), Experimental

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	result, Key study Inhalation
2-Propanone	NOAEL Rat, Male, Inhalation, 2 - 8 Weeks, 19,000 ppm(m), Experimental result, Weight of Evidence study Inhalation

Skin Corrosion/Irritation

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Serious Eye Damage/Eye Irritation

Product:	Causes serious eye irritation.
Components:	
2-Propanol	No data available.
2-Propanone	Irritating, Exposure for 15 minutes to 1660 ppm causes irritation of eyes

Respiratory or Skin Sensitization

Product:	No data available.
Components:	
2-Propanol	Skin sensitization:, in vivo, Guinea pig, Non sensitising
2-Propanone	Skin sensitization:, in vivo, Guinea pig, Non sensitising Skin sensitization:, in vivo, Mouse, Non sensitising

Carcinogenicity

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogens present or none present in regulated quantities

ACGIH: US.ACGIH Threshold Limit Values:
No carcinogens present or none present in regulated quantities

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogens present or none present in regulated quantities

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053), as amended:
No carcinogens present or none present in regulated quantities

Germ Cell Mutagenicity
In vitro

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

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In vivo

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Reproductive toxicity

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Specific Target Organ Toxicity - Single Exposure

Product:	May cause drowsiness or dizziness.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Aspiration Hazard

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Information on health hazards

Other hazards

Product:	No data available.

12. Ecological information

General information: This material has not been tested for environmental effects.

Ecotoxicity:

Acute hazards to the aquatic environment:

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Fish

Product:	No data available.
Components:	
2-Propanol	LC 50, Pimephales promelas, 96 h, 8,680 mg/lAcute toxicity LC 50, Fathead minnow (Pimephales promelas), 24 h, 11,160 mg/lStatic, Mortality LC 50, Fathead minnow (Pimephales promelas), 96 h, 9,230 - 10,000 mg/lFlow through, Mortality LC 50, Bluegill (Lepomis macrochirus), 24 h, > 1,400 mg/lStatic, Mortality LC 50, Fathead minnow (Pimephales promelas), 24 h, 10,600 mg/lFlow through, Mortality
2-Propanone	LC 50, Pimephales promelas, 96 h, 7,160 mg/lAcute toxicity NOAEL, Pimephales promelas, 48 h, 12,000 mg/lStatic, Experimental result, Supporting study LC 50, Fathead minnow (Pimephales promelas), 168 h, 6,705 - 7,650 mg/lFlow through, Mortality LC 50, Carp (Leuciscus idus melanotus), 48 h, 11,300 mg/l, Mortality LC 50, Oryzias latipes, 48 h, 14,300 mg/lStatic, Experimental result, Supporting study

Aquatic Invertebrates

Product:	No data available.
Components:	
2-Propanol	LC 50, Water flea (Daphnia magna), 24 h, > 10,000 mg/lStatic, Mortality LC 50, Brine shrimp (Artemia salina), 24 h, > 10,000 mg/lStatic, Mortality LC 50, Common shrimp, sand shrimp (Crangon crangon), 96 h, 750 - 1,650 mg/lRenewal, Mortality LC 50, Common shrimp, sand shrimp (Crangon crangon), 48 h, 900 - 1,950 mg/lRenewal, Mortality
2-Propanone	LC 50, Oligochaete, worm (Lumbriculus variegatus), 96 h, > 100 mg/lStatic, Mortality LC 50, Water flea (Daphnia magna), 96 h, > 100 mg/lStatic, Mortality LC 50, Asiatic clam (Corbicula manilensis), 96 h, > 20,000 mg/lStatic, Mortality EC 50, Water flea (Daphnia magna), 48 h, 10,294 - 17,704 mg/lStatic, Intoxication LC 50, Ramshorn snail (Helisoma trivolvis), 96 h, > 100 mg/lStatic, Mortality

Toxicity to Aquatic Plants

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Toxicity to microorganisms

Product:	No data available.

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Components:	
2-Propanol	No data available.
2-Propanone	LC 50, Diatom (Nitzschia linearis), 5 d, 11.493 - 11.727 mg/l, Mortality LC 50, Turbellarian, flatworm (Dugesia tigrina), 96 h, > 100 mg/l, Mortality

Chronic hazards to the aquatic environment:

Fish

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Aquatic Invertebrates

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Toxicity to microorganisms

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	LC 50, Diatom (Nitzschia linearis), 5 d, 11.493 - 11.727 mg/l, Mortality LC 50, Turbellarian, flatworm (Dugesia tigrina), 96 h, > 100 mg/l, Mortality

Persistence and Degradability

Biodegradation

Product:	No data available.
Components:	
2-Propanol	53 %, 5 d, Experimental result, Key study Detected in water.
2-Propanone	76 %, Experimental result, Supporting study Detected in water. 76 %, Experimental result, Supporting study Detected in water. 75 %, 4 h, Experimental result, Not specified Detected in water. 100 %, 4 d, Experimental result, Key study Detected in water. 25.5 - 36.7 %, 281 d, Experimental result, Key study Soil

BOD/COD Ratio

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

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Bioaccumulative potential

Bioconcentration Factor (BCF)

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Partition Coefficient n-octanol / water (log Kow)

Product:	, No data available.
Components:	
2-Propanol	No data available.
2-Propanone	-0.24

Mobility in soil:

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Results of PBT and vPvB assessment:

Product:	No data available.
Components:	
2-Propanol	No data available.
2-Propanone	No data available.

Other adverse effects:

Other hazards

Product:	The dangerous properties of the product cannot be evaluated from the available data.

13. Disposal considerations

General information:	Dispose of waste and residues in accordance with local authority requirements. This product is highly flammable. Don't use fire to cut empty container after use.
Disposal methods:	Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

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Contaminated Packaging: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

14. Transport information

Environmental Hazards

Environmentally Hazardous:	No
Marine Pollutant:	No

IATA

UN number or ID number:	UN 1993
UN Proper Shipping Name:	FLAMMABLE LIQUID, N.O.S.(isopropanol, acetone)
Transport Hazard Class(es)	
Class:	3
Label(s):	3
Packing Group:	II
Passenger and cargo aircraft :	353
Limited quantity	None.

Environmental Hazards

Environmentally Hazardous:	No
Marine Pollutant:	No

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Special precautions for user:

PG

Passenger and cargo aircraft:	Allowed. 353
Cargo aircraft only :	Allowed. 364

IMDG

UN number or ID number:	UN 1993
UN Proper Shipping Name:	FLAMMABLE LIQUID, N.O.S.(isopropanol, acetone)
Transport Hazard Class(es)	
Class:	3
Label(s):	3
EmS No.:	F-E, S-E
Packing Group:	II
Limited quantity	1.00L

Environmental Hazards

Environmentally Hazardous:	No
Marine Pollutant:	No

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Special precautions for user:

PG

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Proposed Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)

None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053), as amended

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

Chemical Identity

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RCRA HAZARDOUS WASTE NO. D001

2-PROPANONE

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Flammable (gases, aerosols, liquids, or solids), Serious eye damage or eye irritation, Specific target organ toxicity (single or repeated exposure), Hazards Not Otherwise Classified (HNOC)

US. EPCRA (SARA Title III) Section 304 Extremely Hazardous Substances Reporting Quantities and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances

None present or none present in regulated quantities.

US. EPCRA (SARA Title III Section 313 Toxic Chemical Release Inventory (TRI) Reporting

Chemical Identity	% by weight
Isopropyl alcohol (Isopropanol) (only persons who manufacture by the strong acid process are subject, no supplier notification)	1.0%

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

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None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

No ingredient requiring a warning under CA Prop 65.

International regulations

Montreal protocol
Not applicable

Stockholm convention
Not applicable

Rotterdam convention
Not applicable

Kyoto protocol
Not applicable

16.Other information, including date of preparation or last revision

Version #:	2.5
Generation date:	04/12/2024
Date of first report version:	04/18/2014

Abbreviations and acronyms:

:	US. California Code of Regulations, Title 8, Section 5155.

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	Airborne Contaminants
:	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A
ACGIH:	US. ACGIH Threshold Limit Values, as amended
ACGIH BEI:	US. ACGIH. BEIs. Biological Exposure Indices, as amended
ACGIHLIS_P:	US. ACGIH Notice of Intended Changes (NIC) to Threshold Limit Values, as amended
NIOSH IDLH:	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended
NIOSH/GUIDE:	US. NIOSH: Pocket Guide to Chemical Hazards, as amended
OSHA_TRANS:	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended
TN OEL:	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A, as amended
TX ESL:	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended
US CA OEL:	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended
Z1A:	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
/ STEL:	Short Term Exposure Limit (STEL):
/ TWA PEL:	Time Weighted Average (TWA) Permissible Exposure Limit (PEL):
/ STEL:	Short Term Exposure Limit (STEL):
/ TWA:	Time Weighted Average (TWA):
ACGIH / STEL:	Short Term Exposure Limit (STEL):
ACGIH / TWA:	Time Weighted Average (TWA):
ACGIHLIS_P / STEL:	Short Term Exposure Limit (STEL):
ACGIHLIS_P / TWA:	Time Weighted Average (TWA):
NIOSH IDLH / LEL:	Lower Explosive Limit (LEL):

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NIOSH IDLH / IDLH:	Immediately dangerous to life or health (IDLH) concentration:
NIOSH/GUIDE / REL:	Recommended exposure limit (REL):
NIOSH/GUIDE / STEL:	Short Term Exposure Limit (STEL):
OSHA_TRANS / PEL:	Permissible exposure limit:
TN OEL / STEL:	Short Term Exposure Limit (STEL):
TN OEL / TWA:	Time Weighted Average (TWA):
TX ESL / ST ESL:	Short-Term ESL:
TX ESL / AN ESL:	Annual ESL:
US CA OEL / Ceiling:	Ceiling Limit Value:
US CA OEL / STEL:	Short Term Exposure Limit (STEL):
US CA OEL / TWA PEL:	Time Weighted Average (TWA) Permissible Exposure Limit (PEL):
Z1A / STEL:	Short Term Exposure Limit (STEL):
Z1A / TWA:	Time Weighted Average (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 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

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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

Source of information: European Chemicals Agency (ECHA): Information on Chemicals.

Further Information: No data available.

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