

Red 8328
 (Product type: Water Soluble Dye)

Version number GHS 1.0

Date of compilation 2022-04-13
 Date format: yyyy-mm-dd

SECTION 1: Identification

1.1 Product Identifier(s)

Trade name Red 8328
Former trade name(s) N/A
Item code(s) D8328

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses Dye
 Industrial use
 Professional use

Uses advised against Do not use for products which come into contact with food-stuffs. Do not use for private purposes (household). Not for use with foodstuffs, pharmaceutical products or cosmetics. This product is for industrial and professional use only; it is not intended for household use.

1.3 Details of the supplier of the safety data sheet

Robert Koch Industries, Inc.
 4770 N. Harback Road
 Bennett, CO 80102
 United States
 Telephone. +1 303.644.3763
 Fax. +1 303.644.3045
 Normal business hours: 0800 - 1700 MST/DST (UTC-7)
 e-mail: sales@kochcolor.com.
 Website. www.kochcolor.com.

e-mail (competent person) sales@kochcolor.com
 (Mark Koch)

**1.4 Emergency telephone number
 Emergency information service**

1.800.535.5053 Infotrac (24 hours) USA and Canada
 Outside of USA or Canada, call +1 352.323.3500

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Section	Hazard class	Category	Hazard class and category	Hazard statement
A.1O	Acute toxicity (oral).	4	Acute Tox. 4	H302
A.2	Skin corrosion/irritation.	2	Skin Irrit. 2	H315
A.3	Serious eye damage/eye irritation.	1	Eye Dam. 1	H318
A.8R	Specific target organ toxicity - single exposure (respiratory tract irritation).	3	STOT SE 3	H335
B.cD	Combustible dust.	Comb. Dust	CD	OSHA003

Supplemental hazard information	
Code	Supplemental hazard information
HNOC009	Toxic to aquatic life with long lasting effects (GHS category 2: aquatic toxicity - acute and/or chronic)

For full text of abbreviations: see SECTION 16.

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Signal word **Danger**

Pictograms

GHS05, GHS07



Hazard statements

H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
OSHA003	May form combustible dust concentrations in air.
Precautionary statements	
P261	Avoid breathing dust, mist, spray.
P264	Wash ... thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P312	IF SWALLOWED: Rinse mouth and call a POISON CENTER/doctor if you feel unwell.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P304+P340	If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a poison center/doctor/...
P312	Call a poison center/doctor/.../ if you feel unwell.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container according to applicable federal, state, and local regulations.

Hazardous ingredients for labelling

C.I. Basic Red 15, sulfate salt
C.I. Basic Yellow 28, methyl sulfate salt

2.3 Other hazards

Dust explosion hazards.

Hazards not otherwise classified

Toxic to aquatic life with long lasting effects (GHS category 2: aquatic toxicity - acute and/or chronic).

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture).

3.2 Mixtures

Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS
Sodium Sulphate Anhydrous	CAS No 7757-82-6 EC No 231-820-9 RTECS No WE165000	50 - < 75	Eye Irrit. 2A / H319
C.I. Basic Red 15, sulfate salt	CAS No 74398-70-2	10 - < 25	Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Dam. 1 / H318 STOT SE 3 / H335 CD / OSHA003
C.I. Basic Yellow 28, methyl sulfate salt	CAS No 54060-92-3 EC No 258-946-7	10 - < 25	Acute Tox. 3 / H301 Acute Tox. 4 / H312 Eye Dam. 1 / H318 STOT SE 3 / H335 CD / OSHA003

For full text of abbreviations: see SECTION 16.

SECTION 4: First-aid measures**4.1 Description of first-aid measures****General notes**

If irritation or symptoms occur from any route of exposure, remove the affected individual from the area. Remove contaminated clothing and laundry before reuse. In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

If inhalation causes irritation, move to fresh air. If symptoms develop or person does not feel well, get medical advice/attention.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Get immediate medical attention. Immediately flush eyes with plenty of clean water. Remove contact lenses if present and easy to do so. Continue flushing eyes with water for an extended time, not less than fifteen (15) minutes. Flush longer if there is any indication of residual chemical in the eye. Ensure adequate flushing of the eyes by separating the eyelids with fingers and roll eyes in a circular motion. .

Following ingestion

Rinse mouth with water. Do NOT induce vomiting unless instructed to do so by medical personnel. Get medical advice/attention. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Dermal contact may temporarily discolor skin due to dye characteristics.

4.3 Indication of any immediate medical attention and special treatment needed

None known. Treat symptomatically.

SECTION 5: Fire-fighting measures**5.1 Extinguishing media****Suitable extinguishing media**

In case of fire use water fog, foam, carbon dioxide (CO₂), dry chemical.

Unsuitable extinguishing media

Avoid water jet, hose streams, or any method which will create dust clouds.

5.2 Special hazards arising from the substance or mixture

Danger of dust explosion. Deposited combustible dust has considerable explosion potential. As with all organic dusts, fine particles suspended in air in critical proportions and in the presence of an ignition source may ignite and/or explode. Concentrated dust/air combinations may produce explosive conditions under certain parameters. Dust may be sensitive to ignition by electrostatic discharge, electrical arcs, sparks, welding torches, cigarettes, open flame, or other significant heat sources. As a precaution, implement standard safety measures for handling finely divided organic powders. Refer to Section 7.1.

Hazardous combustion products

Nitrogen oxides (NOx). Carbon monoxide (CO). Carbon dioxide (CO₂). Sulfur oxides (SOx). Irritating or toxic substances may be emitted upon burning, combustion or decomposition.

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Remove persons to safety. Follow emergency procedures such as the need to evacuate the area, notify authorities or to consult an expert. Keep unnecessary personnel away. Wear personal protective equipment to prevent injury. See section 8 of this SDS. Ensure adequate ventilation.

6.2 Environmental precautions

Do not flush product down drains that discharge into public sewer systems. Do not pour onto the ground. Do not release into surface waters such as lakes, rivers and streams. Dispose of unusable product, wash water, and contaminated materials properly. See section 13 for disposal considerations.

6.3 Methods and materials for containment and cleanup

Take up mechanically.

Cover floor drains. Prevent spilled material from leaving the area if safe to do so. Use care to avoid dust generation. vacuum or carefully sweep into a closed container for reuse or disposal. Only use an approved industrial vacuum cleaner.

Suitable absorbent material(s) include:

Collect spilled material and place into suitable container(s) for reuse or disposal. Label containers appropriately.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage**7.1 Precautions for safe handling****Recommendations****Measures to prevent fire as well as aerosol and dust generation**

Use local and general ventilation. Take precautionary measures against static discharge. Use only in well-ventilated areas. Only vacuum cleaners containing no ignition sources may be used for combustible dusts. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools.

Specific notes/details

There is a risk of a dust explosion if powdered combustible dust is present in high-enough concentrations. Dust deposits can accumulate on surfaces in working area. Dust deposits have the potential to form an explosive dust-air mixture if disturbed. Carefully remove accumulated dust from surface areas on a regular basis. Only vacuum cleaners containing no ignition sources may be used for combustible dusts.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities**Managing of associated risks****Explosive atmospheres**

Avoid generation of dust. Removal of dust deposits. Only vacuum cleaners containing no ignition sources may be used for combustible dusts.

Ventilation requirements

Use local and general ventilation. Ground/bond container and receiving equipment.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters**

Country	Name of agent	Identifier	TWA [ppm]	TWA [mg/m ³]	Notation	Source
US	Particulates not otherwise classified	REL			Appx-D	NIOSH REL
US	Particulates not otherwise classified (PNOC)	PEL	1,766	15	Partml, i, dust	29 CFR 1910.1000
US	Particulates not otherwise classified (PNOC)	PEL	529.5	5	Partml, r, dust	29 CFR 1910.1000
US	Particulates not otherwise regulated	PEL (CA)		10	Dust	Cal/OSHA PEL
US	Particulates not otherwise regulated	PEL (CA)		5	R	Cal/OSHA PEL

Notation

appx-D	See Appendix D - Substances with No Established RELs.
dust	As dust.
i	Inhalable fraction.
partml	Particles/ml.
r	Respirable fraction.
TWA	Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified).

8.2 Exposure controls**Appropriate engineering controls**

General ventilation. The use of approved dust collection equipment is recommended in high dust environments.

Individual protection measures (personal protective equipment)**Eye/face protection**

Wear eye/face protection.

Hand protection

Wear chemical resistant protective gloves.

Other protection measures

Wear protective clothing (coveralls with hood) to reduce the possibility of stains to skin and clothing. Wash thoroughly after handling. An eyewash station and/or safety shower is recommended in the work area.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. If inhalation of dust, mist, or vapor is possible, wear an approved respirator in accordance with manufacturer's use limitations and OSHA standard 1910.134 (29CFR).

Environmental exposure controls

Protect against release into the environment using preventative containment measures. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties****Appearance****Physical state**

Solid
Powder

Color

Lavender - (Color of powder)

Odor

Unpleasant

Other safety parameters**pH (value)**

Not applicable

Melting point/freezing point

Not determined

Initial boiling point and boiling range

Not determined

Flash point

Not applicable

Evaporation rate

Not determined

Flammability (solid, gas)

This material is combustible, but will not ignite readily

Explosion limits of dust clouds

not determined

Vapor pressure	0 hPa at 20 °C
Density	Not determined
Vapor density	This information is not available
Bulk density	0.6 – 0.8 g/cm ³
Relative density	Information on this property is not available
Solubility(ies)	
Water solubility	>30 g/l Easily soluble
Partition coefficient - n-octanol/water (log KOW)	This information is not available
Auto-ignition temperature	180 °C, 356 K, Relative self-ignition temperature for solids
Viscosity	Not relevant Solid matter
Explosive properties	Dust explosion hazards
Oxidizing properties	None
9.2 Other information	
Temperature class (USA, acc. to NEC 500)	T3B Maximum permissible surface temperature on the equipment: 165 °C

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Avoid conditions that create dust.

10.5 Incompatible materials

Strong oxidizers.

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Acute toxicity

Harmful if swallowed.

Acute toxicity estimate (ATE)

Oral 1,935 mg/kg

Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	ATE
C.I. Basic Red 15, sulfate salt	74398-70-2	Oral	<2,000 mg/kg
C.I. Basic Yellow 28, methyl sulfate salt	54060-92-3	Oral	≥300 mg/kg
C.I. Basic Yellow 28, methyl sulfate salt	54060-92-3	Dermal	2,000 mg/kg

Name of substance	CAS No	Exposure route	Endpoint	Value	Species	Source
Sodium Sulphate Anhydrous	7757-82-6	Oral	LD50	5,989 mg/kg	Mouse	Shokuhin Eiseigaku Zasshi. Food Hygiene Journal. Vol. 4, Pg. 15, 1963.
C.I. Basic Red 15, sulfate salt	74398-70-2	Oral	LD50	<2,000 mg/kg	Rat	M. Dohmen USA product 2431083
C.I. Basic Yellow 28, methyl sulfate salt	54060-92-3	Oral	LD50	≥300 – ≤400 mg/kg	Rat	European Chemicals Agency, http://echa.europa.eu/
C.I. Basic Yellow 28, methyl sulfate salt	54060-92-3	Dermal	LD50	2,000 mg/kg	Rat	European Chemicals Agency, http://echa.europa.eu/

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information**12.1 Toxicity**

Toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Source	Exposure time
Sodium Sulphate Anhydrous	7757-82-6	LC50	7,960 mg/l	Fish	European Chemicals Agency, http://echa.europa.eu/	96 h
Sodium Sulphate Anhydrous	7757-82-6	LC50	>8,080 mg/l	Fish	European Chemicals Agency, http://echa.europa.eu/	24 h
Sodium Sulphate Anhydrous	7757-82-6	LC50	2,311 mg/l	Aquatic invertebrates	European Chemicals Agency, http://echa.europa.eu/	48 h
Sodium Sulphate Anhydrous	7757-82-6	LC50	5,631 mg/l	Aquatic invertebrates	European Chemicals Agency, http://echa.europa.eu/	48 h
Sodium Sulphate Anhydrous	7757-82-6	LC50	6,290 mg/l	Aquatic invertebrates	European Chemicals Agency, http://echa.europa.eu/	24 h

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Name of substance	CAS No	Endpoint	Value	Species	Source	Exposure time
Sodium Sulphate Anhydrous	7757-82-6	EC50	3,150 mg/l	Aquatic invertebrates	European Chemicals Agency, http://echa.europa.eu/	48 h
C.I. Basic Red 15, sulfate salt	74398-70-2	LC50	10 – 100 mg/l	Rainbow trout (Oncorhynchus mykiss)	M.Dohmen.USA-SDS-Doracryl-Brill-Red-XB-200P-Jan-2011	96 h
C.I. Basic Yellow 28, methyl sulfate salt	54060-92-3	LC50	46 mg/l	Fish	European Chemicals Agency, http://echa.europa.eu/	96 h
C.I. Basic Yellow 28, methyl sulfate salt	54060-92-3	EC50	0.14 mg/l	Algae	European Chemicals Agency, http://echa.europa.eu/	72 h
C.I. Basic Yellow 28, methyl sulfate salt	54060-92-3	ErC50	0.21 mg/l	Algae	European Chemicals Agency, http://echa.europa.eu/	72 h

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Source	Exposure time
Sodium Sulphate Anhydrous	7757-82-6	EC50	1,698 mg/l	Aquatic invertebrates	European Chemicals Agency, http://echa.europa.eu/	7 d
Sodium Sulphate Anhydrous	7757-82-6	LC50	3,030 mg/l	Aquatic invertebrates	European Chemicals Agency, http://echa.europa.eu/	7 d
C.I. Basic Yellow 28, methyl sulfate salt	54060-92-3	EC50	59 mg/l	Microorganisms	European Chemicals Agency, http://echa.europa.eu/	30 min

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Endocrine disrupting properties

None of the ingredients are listed.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations**13.1 Waste Treatment Methods / Disposal Instructions**

Avoid release to the environment. Do not contaminate ponds, waterways or ditches with product or container. Dispose of contents/container in accordance with applicable local, regional, national, and international regulations.

Sewage disposal-relevant information

Do not allow this material to enter floor drains, sewer drains or storm drains.

Waste treatment of containers/packages

Containers containing product or product residue should be disposed of in the same manner as the product. Completely emptied and thoroughly cleaned containers can be recycled.

SECTION 14: Transport information

- | | |
|--|---|
| 14.1 UN number | Not subject to transport regulations |
| UN proper shipping name | Not assigned |
| 14.3 Transport hazard class(es) | Not assigned |
| 14.4 Packing group | Not assigned |
| 14.5 Environmental hazards | Non-environmentally hazardous acc. to the dangerous goods regulations |
| 14.6 Special precautions for user | There is no additional information. |
| 14.8 Information for each of the UN Model Regulations | |
| 14.8.3 Transport of dangerous goods by road or rail (49 CFR US DOT) | |
| Not subject to transport regulations. | |
| 14.8.6 International Maritime Dangerous Goods Code (IMDG) | |
| Not subject to IMDG. | |
| 14.8.7 International Civil Aviation Organization (ICAO-IATA/DGR) | |
| Not subject to ICAO-IATA. | |

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations specific for the product in question**
- National regulations (United States)**
- Toxic Substance Control Act (TSCA)** All ingredients are listed
- Superfund Amendment and Reauthorization Act (SARA TITLE III)**
- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)**
- None of the ingredients are listed.
- Specific Toxic Chemical Listings (EPCRA Section 313)**
- None of the ingredients are listed.
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)**
- List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)**
- None of the ingredients are listed.
- Clean Air Act**
- None of the ingredients are listed.
- Cleaning Product Right to Know Act Substance List (CA-RTK)**
- None of the ingredients are listed.
- Toxic or Hazardous Substance List (MA-TURA)**
- None of the ingredients are listed.
- Hazardous Substances List (MN-ERTK)**
- None of the ingredients are listed.

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Name of substance	CAS No	References	Remarks
Red 8328		A	Dust

Legend

A American Conference of Governmental Industrial Hygienists (ACGIH), "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices for 1992-93", available from ACGIH.
 dust If the substance poses an airborne particulate exposure hazard, the substance is followed by the word "dust."

Hazardous Substance List (NJ-RTK)

None of the ingredients are listed.

Hazardous Substance List (Chapter 323) (PA-RTK)

Name acc. to inventory	CAS No	Classification
SODIUM SULFATE (SOLUTION)	7757-82-6	E

Legend

E Environmental hazard.

Hazardous Substance List (RI-RTK)

None of the ingredients are listed.

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

None of the ingredients are listed.

Drug precursorsChemicals designated within the Controlled Substances Act, 21 U.S.C. § 802, paragraphs 34 (list I) and 35 (list II)

None of the ingredients are listed.

VOC content

Regulated Volatile Organic Compounds (VOC-EPA): 0 %.
 Regulated Volatile Organic Compounds (VOC-Cal ARB): 0 %.

Industry or sector specific available guidance(s)

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	2	Material that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur
Health	3	Material that, under emergency conditions, can cause serious or permanent injury
Instability	0	Material that is normally stable, even under fire conditions
Special hazard		

National inventories

Country	Inventory	Status
AU	AICS	All ingredients are listed
CA	DSL	All ingredients are listed
CN	IECSC	All ingredients are listed
EU	ECSI	Not all ingredients are listed
EU	REACH Reg.	Not all ingredients are listed
JP	CSCL-ENCS	All ingredients are listed
KR	KECI	Not all ingredients are listed
MX	INSQ	Not all ingredients are listed
NZ	NZIoC	All ingredients are listed
PH	PICCS	Not all ingredients are listed
TR	CICR	Not all ingredients are listed

Country	Inventory	Status
TW	TCSI	All ingredients are listed
US	TSCA	All ingredients are listed

Legend

AICS	Australian Inventory of Chemical Substances.
CICR	Chemical Inventory and Control Regulation.
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS).
DSL	Domestic Substances List (DSL).
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP).
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China.
INSQ	National Inventory of Chemical Substances.
KECI	Korea Existing Chemicals Inventory.
NZIoC	New Zealand Inventory of Chemicals.
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS).
REACH Reg.	REACH registered substances.
TCSI	Taiwan Chemical Substance Inventory.
TSCA	Toxic Substance Control Act.

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information, including date of preparation or last revision**Abbreviations and acronyms**

Abbr.	Descriptions of used abbreviations
29 CFR 1910.1000	29 CFR 1910.1000, Tables Z-1, Z-2, Z-3 - Occupational Safety and Health Standards: Toxic and Hazardous Substances (permissible exposure limits)
49 CFR US DOT	49 CFR U.S. Department of Transportation
Acute Tox.	Acute toxicity
ATE	Acute Toxicity Estimate
Cal/OSHA PEL	California Division of Occupational Safety and Health (Cal/OSHA): Permissible Exposure Limits (PELs)
Cal ARB	California Air Resources Board
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CD	Combustible dust
DGR	Dangerous Goods Regulations (see IATA/DGR)
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EPA	Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association

Abbr.	Descriptions of used abbreviations
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
NIOSH REL	National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs)
NLP	No-Longer Polymer
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
PEL	Permissible exposure limit
Ppm	Parts per million
RTECS	Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STOT SE	Specific target organ toxicity - single exposure
TWA	Time-weighted average
VOC	Volatile Organic Compounds
VPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties. The classification is based on tested mixture.

Health hazards. Environmental hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
OSHA003	May form combustible dust concentrations in air.

Disclaimer

This information is based upon the present state of our knowledge. As the conditions or methods of use are beyond our control, Robert Koch Industries, Inc. do not assume any responsibility and expressly disclaims any liability for any use of this product. Information contained herein is believed to be true and accurate and is made in good faith but all statements or suggestions are made without warranty, expressed or implied, regarding accuracy of the information, the hazards connected with the use of the material, or the results to be obtained from the use thereof. Compliance with all applicable federal, state, and local laws and local regulations remains the responsibility of the user.

This Safety Data Sheet (SDS) cannot cover all possible situations which the user may experience during use of this product. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers. It is your responsibility to develop appropriate work practice guidelines and employee instructional programs for your operation.