

SAFETY DATA SHEET

Voice Coil Bonder 360

SECTION 1: IDENTIFICATION

1.1. Product identifier

Trade name: Voice Coil Bonder 360
Product no.: MS-360

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

Relevant identified uses of the substance or mixture: Adhesive
Restricted to professional users.
Uses advised against : None known.

1.3. Details of the supplier of the safety data sheet

Company and address: **Hernon Manufacturing Inc**
121 Tech Drive
FL 32771 Sanford
USA
T: +1-407-322-4000
www.hernon.com

Contact person: Hernon SDS Coordinator
E-mail: customerservice@hernon.com

SDS date: 6/24/2024

SDS Version: 1.0

1.4. Emergency telephone number

Contact the poison control at 1-800-222-1222 (24/7) or use the webpoisoncontrol (triage.webpoisoncontrol.org) to get specific guidance for your case.

VelocityEHS:

+1-800-255-3924 (USA)

+1-813-248-0585 (International)

1-300-954-583 (Australia)

0-800-591-6042 (Brazil)

400-120-0751 (China)

000-800-100-4086 (India)

800-099-0731 (Mexico)

Contract #: (MIS0002665)

SECTION 2: HAZARD(S) IDENTIFICATION

OSHA/HCS status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

2.1. Classification of the substance or mixture

Flam. Liq. 2; H225, Highly flammable liquid and vapour.
Skin Irrit. 2; H315, Causes skin irritation.
Eye Irrit. 2; H319, Causes serious eye irritation.
STOT SE 3; H335, May cause respiratory irritation.
STOT SE 3; H336, May cause drowsiness or dizziness.
Muta. 2; H341, Suspected of causing genetic defects.
STOT RE 2; H373, May cause damage to organs through prolonged or repeated exposure.

2.2. Label elements

Hazard pictogram(s):



Signal word:

Danger

Hazard statement(s):

Highly flammable liquid and vapour. (H225)
Causes skin irritation. (H315)
Causes serious eye irritation. (H319)
May cause respiratory irritation. (H335)
May cause drowsiness or dizziness. (H336)
Suspected of causing genetic defects. (H341)
May cause damage to organs through prolonged or repeated exposure. (H373)

Precautionary statement(s):

General:

-

Prevention:

Obtain special instructions before use. (P201)
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)
Keep container tightly closed. (P233)
Do not breathe vapour/mist. (P260)
Wash hands thoroughly after handling. (P264)
Wear eye protection/protective clothing. (P280)

Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338)
IF exposed or concerned: Get medical advice/attention. (P308+P313)
Call a POISON CENTER/doctor if you feel unwell. (P312)
Get medical advice/attention if you feel unwell. (P314)
If eye irritation persists: Get medical advice/attention. (P337+P313)
In case of fire: Use water mist/carbon dioxide/alcohol-resistant foam to extinguish. (P370+P378)

Storage:

Store in a well-ventilated place. Keep container tightly closed. (P403+P233)
Store in a well-ventilated place. Keep cool. (P403+P235)

Disposal:

Dispose of contents/container in accordance with local regulation (P501)

Additional labelling:

Not applicable.

2.3. Other hazards

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable. This product is a mixture.

3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
ethyl methyl ketone	CAS No.: 78-93-3	30-60%	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319 STOT SE 3, H336 Carc. 1A, H350 1, HHNOC066	
Isopropanol	CAS No.: 67-63-0	10-30%	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	
Phenolic Resin	CAS No.: 9039-25-2	10-30%	Skin Sens. 1B, H317	
Cashew Liquid	CAS No.: 67700-42-9	5-10%	Skin Sens. 1B, H317	[19]
phenol	CAS No.: 108-95-2	1-5%	Acute Tox. 3, H301 Acute Tox. 3, H311 Skin Corr. 1B, H314 (SCL: 3.00 %) Acute Tox. 3, H331 Muta. 2, H341 STOT RE 2, H373	
Carbon black	CAS No.: 1333-86-4	1-5%		[19]

Where the concentration of an ingredient is expressed as a range the exact concentration has been withheld as a trade secret.

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

[19] UVCB = Unknown or variable composition, complex reaction products or of biological materials

SECTION 4: FIRST-AID MEASURES

4.1. Description of first aid measures

General information:

If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 911 and give immediate treatment (first

	aid).
	Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.
<i>Inhalation:</i>	Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.
<i>Skin contact:</i>	Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners. If skin irritation occurs: Get medical advice/attention.
<i>Eye contact:</i>	If in eyes: Flush eyes immediately with plenty of water or isotonic water (20-30 °C) for at least 5 minutes and continue until irritation stops. Remove contact lenses. Make sure to flush under upper and lower eyelids. If irritation continues, contact a doctor. Continue flushing during transport.
<i>Ingestion:</i>	If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink. In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.
<i>Burns:</i>	Rinse with water until pain stops then continue to rinse for 30 minutes.

4.2. Most important symptoms and effects, both acute and delayed

Headache, Methaemoglobinaemia (phenol)

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

4.3. Indication of any immediate medical attention and special treatment needed

IF exposed or concerned:

Get immediate medical advice/attention.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

Highly flammable liquid and vapour.

In use may form flammable/explosive vapour-air mixture.

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Carbon oxides (CO / CO₂)

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact the Poison Help Line on 1-800-222-1222 (24/7) in order to obtain further advice.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Storages not yet ignited must be cooled by water mist. Remove flammable materials if conditions allow it. Ensure sufficient ventilation.

Avoid direct contact with spilled substances.

Ensure adequate ventilation, especially in confined areas.

Avoid inhalation of vapours from spilled material.

Contaminated areas may be slippery.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc. In the event of leakage to the surroundings, contact local environmental authorities.

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Ground and bond container and receiving equipment.

Use explosion-proof [electrical/lighting/ventilating] equipment.

Use non-sparking tools.

Take action to prevent static discharges.

The product should be tested for peroxides before distillation or evaporation and tested for peroxide formation or discarded after 1 year.

Avoid direct contact with the product.

Peroxide formation may be present anywhere in the container, including the sides, bottom, exterior and threaded cap. Peroxide formation in ppm concentrations may not be visually observable and must be identified through the use of appropriate testing procedures. If any of

the following conditions exist, the material may be explosively unstable and will require stabilization prior to use:

1. Material appears to be degraded and or contaminated.
2. Material appears to be discolored.
3. Deterioration or distortion of storage container.
4. Thermal shock (sunlight).
5. Age of material exceeds recommended storage time.

Avoid contact during pregnancy and while nursing.

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers and store protected from moisture and light. Containers should be dated when opened and tested periodically for the presence of peroxides. Do not exceed storage time limits.

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Take action to prevent static discharges.

Must be stored in a cool and well-ventilated area, away from possible sources of ignition.

Recommended storage material: Always store in containers of the same material as the original container.

Liquid class: Flammable liquid / Class IB (NFPA 30)

Storage temperature: Refrigerator, 2 to 8°C

Incompatible materials: Acids
Bases

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

ethyl methyl ketone

Short term exposure limit (STEL) (ACGIH TLV) (ppm): 300

Short term exposure limit (STEL) (NIOSH REL) (ppm): 300

Long term exposure limit (OSHA Table Z-1) (mg/m³): 590

Long term exposure limit (OSHA Table Z-1) (ppm): 200

Long term exposure limit (ACGIH TLV) (ppm): 200

Isopropanol

Short term exposure limit (STEL) (ACGIH TLV) (ppm): 400

Short term exposure limit (STEL) (NIOSH REL) (ppm): 500

Long term exposure limit (OSHA Table Z-1) (mg/m³): 980

Long term exposure limit (OSHA Table Z-1) (ppm): 400

Long term exposure limit (ACGIH TLV) (ppm): 200

phenol

Long term exposure limit (OSHA Table Z-1) (mg/m³): 19

Long term exposure limit (OSHA Table Z-1) (ppm): 5

Long term exposure limit (ACGIH TLV) (ppm): 5

Ceiling value (NIOSH REL) (ppm): 15.6 [15-min]

Carbon black

Long term exposure limit (OSHA Table Z-1) (mg/m³): 3.5

Long term exposure limit (ACGIH TLV) (mg/m³): 3 (Inhalable)

Long term exposure limit (NIOSH REL) (mg/m³): 3.5 (without PAHs); when PAHs are present, NIOSH considers carbon black to be a potential occupational carcinogen.

Part 1910 - Occupational Safety and Health Standards (29 CFR 1910.1000 TABLE Z-1 - Limits for Air Contaminants)

8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations: Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios: There are no exposure scenarios implemented for this product.

Exposure limits: Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures: Do not recirculate outlet air that contain the substances. The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked. Apply standard precautions during use of the product. Avoid inhalation of vapours.

Hygiene measures: Take off contaminated clothing and wash it before reuse.

Measures to avoid environmental exposure: Keep damming materials near the workplace. If possible, collect spillage during work.


Individual protection measures, such as personal protective equipment

Generally: Wash contaminated clothing before reuse. Use only protective equipment with a recognized certification mark, e.g. the UL mark.

Respiratory Equipment:

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.


Skin protection:

Recommended	Type/Category	Standards	
-	Protective Clothing		

Hand protection:

Nitrile Rubber

Eye protection:

Type	Standards	
Safety glasses with side shields.	EN166	

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<i>Physical state:</i>	Liquid
<i>Colour:</i>	Black
<i>Odour:</i>	Solvent
<i>Odour threshold (ppm):</i>	Testing not relevant or not possible due to the nature of the product.
<i>pH:</i>	Testing not relevant or not possible due to the nature of the product.
<i>Density (g/cm³):</i>	0.94
<i>Kinematic viscosity:</i>	Testing not relevant or not possible due to the nature of the product.
<i>Particle characteristics:</i>	Does not apply to liquids.

Phase changes

<i>Melting point (°F):</i>	Testing not relevant or not possible due to the nature of the product.
<i>Softening point/range (°F):</i>	Does not apply to liquids.
<i>Boiling point (°F):</i>	174
<i>Boiling point (°C):</i>	79
<i>Vapour pressure:</i>	Testing not relevant or not possible due to the nature of the product.
<i>Relative vapour density:</i>	Testing not relevant or not possible due to the nature of the product.
<i>Decomposition temperature (°F):</i>	Testing not relevant or not possible due to the nature of the product.

Data on fire and explosion hazards

<i>Flash point (°F):</i>	-
<i>Flash point (°C):</i>	-6.7
<i>Flammability (°F):</i>	The material is ignitable.
<i>Auto-ignition temperature (°F):</i>	Testing not relevant or not possible due to the nature of the product.
<i>Explosion limits (% v/v):</i>	Testing not relevant or not possible due to the nature of the product.

Solubility

<i>Solubility in water:</i>	Testing not relevant or not possible due to the nature of
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	the product.
<i>n</i> -octanol/water coefficient (LogKow):	Testing not relevant or not possible due to the nature of the product.
<i>Solubility in fat</i> (g/L):	Testing not relevant or not possible due to the nature of the product.
9.2. Other information	
<i>VOC</i> (g/L):	574
<i>Other physical and chemical parameters:</i>	No data available.
<i>Oxidizing properties:</i>	Testing not relevant or not possible due to the nature of the product.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Do not expose to any forms of heat (e.g. solar radiation). May lead to excess pressure.

Incompatible Materials

Extremes of temperature

10.5. Incompatible materials

Acids

Bases

10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

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

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/irritation

Causes serious eye irritation.

Respiratory sensitisation

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

Skin sensitisation

May cause an allergic skin reaction.

Germ cell mutagenicity

Suspected of causing genetic defects.

Carcinogenicity

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

Reproductive toxicity

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

STOT-single exposure

May cause respiratory irritation.

May cause drowsiness or dizziness.

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

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

Long term effects

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

Other information

Isopropanol has been classified by IARC as a group 3 carcinogen.

phenol has been classified by IARC as a group 3 carcinogen.

Carbon black has been classified by IARC as a group 2B carcinogen.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

No data available.

12.2. Persistence and degradability

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

12.3. Bioaccumulative potential

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

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. Other adverse effects

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

RCRA Hazardous waste ("P" and "U" list) (40 CFR 261)




ethyl methyl ketone is listed with EPA Hazardous Waste Number: U159
phenol is listed with EPA Hazardous Waste Number: U188

Specific labelling

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: TRANSPORT INFORMATION

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
DOT	UN1133	ADHESIVES	Transport hazard class: 3 Label: 3 Classification code: F1 	II	No	Limited quantities: 5 L Tunnel restriction code: (D/E) See below for additional information.
IMDG	UN1133	ADHESIVES	Transport hazard class: 3 Label: 3 Classification code: F1 	II	No	Limited quantities: 5 L EmS: F-E S-D See below for additional information.
IATA	UN1133	ADHESIVES	Transport hazard class: 3 Label: 3 Classification code: F1 	II	No	See below for additional information.

* Packing group

** Environmental hazards

Additional information

DOT / See § 172.101 Hazardous Materials Table for any information on special provisions, requirements, or warnings in connection with transport. See § 172.602, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.
IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.

IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

This product is within scope of the regulations of transport of dangerous goods.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No data available.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.2. U.S. Federal regulations

TSCA (the non-confidential portion):

ethyl methyl ketone is listed
Isopropanol is listed
Phenolic Resin is listed
Cashew Liquid is listed
phenol is listed
Carbon black is listed

Clean Air Act:

phenol is regulated as a hazardous air pollutant (HAPS)

EPCRA Section 302:

phenol is regulated with a Treshold Planning Quantity (TPQ) of: 500/10000 pounds

EPCRA Section 304:

phenol is regulated with a Reportable Quantity (RQ) of: 1000 pounds

EPCRA section 313:

Isopropanol is listed
phenol is listed

CERCLA:

ethyl methyl ketone is regulated with a Reportable Quantity (RQ) of: 5000 pounds
phenol is regulated with a Reportable Quantity (RQ) of: 1000 pounds

State regulations

California / Prop. 65:

Carbon black is known to cause: Cancer

Massachusetts / Right To Know Act:

ethyl methyl ketone is listed
Isopropanol is listed
phenol is listed
Carbon black is listed

New Jersey / Right To Know Act:

ethyl methyl ketone / Substance number: 1258
ethyl methyl ketone is on the Special Health Hazard Substance List

—
Isopropanol / Substance number: 1076

Isopropanol is on the Special Health Hazard Substance List

—
phenol / Substance number: 1487

phenol is on the Special Health Hazard Substance List

—
Carbon black / Substance number: 0342

Carbon black is on the Special Health Hazard Substance List

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New York / Right To Know Act:

ethyl methyl ketone is listed
ethyl methyl ketone is regulated with a Reportable Quantity (RQ) of: 5000 pounds
ethyl methyl ketone is regulated with a Treshold Reporting Quantity (TRQ) of: 10 pounds

—
Isopropanol is listed
Isopropanol is regulated with a Treshold Reporting Quantity (TRQ) of: 0 pounds

—
phenol is listed
phenol is regulated with a Reportable Quantity (RQ) of: 1000 pounds
phenol is regulated with a Treshold Reporting Quantity (TRQ) of: 0 pounds
phenol is regulated with a Treshold Planning Quantity (TPQ) of: 500*/10000 pounds
*Quantity applies if the substance is present in the form of a fine powder (particle size less than 100 microns), molten or in solution, or reacts with water.

Pennsylvania / Right To Know Act:

—
ethyl methyl ketone is listed
ethyl methyl ketone is hazardous to the environment (E)

—
Isopropanol is listed
Isopropanol is hazardous to the environment (E)

—
phenol is listed
phenol is hazardous to the environment (E)

—
Carbon black is listed

15.4. Restrictions for application

Restricted to professional users.

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

15.5. Demands for specific education

No specific requirements.

15.6. Additional information

Not applicable.

15.7. Chemical safety assessment

No

15.8. Sources

OSHA Hazard Communication Standard (29 CFR 1910.1200)

SECTION 16: OTHER INFORMATION

Full text of H-phrases as mentioned in section 3

H225, Highly flammable liquid and vapour.
H301, Toxic if swallowed.
H311, Toxic in contact with skin.
H314, Causes severe skin burns and eye damage.
H315, Causes skin irritation.
H317, May cause an allergic skin reaction.
H319, Causes serious eye irritation.
H331, Toxic if inhaled.
H336, May cause drowsiness or dizziness.
H341, Suspected of causing genetic defects.
H350, May cause cancer.
H373, May cause damage to organs through prolonged or repeated exposure.
HHNOC066, Repeated exposure may cause skin dryness or cracking.

The full text of identified uses as mentioned in section 1

None known.

Abbreviations and acronyms

ACGIH = American Conference of Governmental Industrial Hygienists
ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CERCLA = Comprehensive Environmental Response Compensation and Liability Act
DOT = Department of Transportation
EINECS = European Inventory of Existing Commercial chemical Substances
EPCRA = Emergency Planning and Community Right-To-Know Act
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
HCIS = Hazardous Chemical Information System
HNOC = Hazards Not Otherwise Classified
IARC = International Agency for Research on Cancer
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
NFPA = National Fire Protection Association
NIOSH = National Institute for Occupational Safety and Health
OECD = Organisation for Economic Co-operation and Development
OSHA = Occupational Safety and Health Administration
PBT = Persistent, Bioaccumulative and Toxic
RCRA = Resource Conservation and Recovery Act
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SARA = Superfund Amendments and Reauthorization Act
SCL = A specific concentration limit.
STEL = Short-term exposure limits
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TSCA = The Toxic Substances Control Act
TWA = Time weighted average

UN = United Nations

UVBC = Unknown or variable composition, complex reaction products or of biological materials

VOC = Volatile Organic Compound

vPvB = Very Persistent and Very Bioaccumulative

Additional information

The classification of the mixture in regard of health hazards is in accordance with the calculation methods given by HCS (29 CFR 1910.1200).

The classification of the mixture in regard to physical hazards has been based on experimental data.

The safety data sheet is validated by

SDS Coordinator

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product.

Information in this safety data sheet cannot be used as a product specification.

Country-language: US-en