HERNON®
Formulating Solutions

SAFETY DATA SHEET

Issue Date 24-Apr-2015 **Revision Date** 22-Mar-2022 **Version** 1

1. IDENTIFICATION

Product identifier

Product Name Voice Coil Bonder 360

Other means of identification

Product Code MS-360
UN/ID no. UN 1133
Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Adhesives.
Uses advised against None known

Details of the supplier of the safety data sheet

Manufacturer Address
Hernon Manufacturing Inc.
121 Tech Drive
Sanford, FL 32771
800-527-0004

Emergency telephone number

Company Phone Number 407-322-4000
Emergency Telephone Chemtel 800-255-3924

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1
Germ cell mutagenicity	Category 2
Carcinogenicity	Category 1A
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2
Flammable liquids	Category 2

Label elements

Emergency Overview

Danger

Hazard statements
Harmful if swallowed
Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction
Suspected of causing genetic defects

May cause cancer
May cause drowsiness or dizziness
May cause damage to organs through prolonged or repeated exposure
Highly flammable liquid and vapor

Appearance No information available **Physical state** Liquid **Odor** Solvent

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves
Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Use explosion-proof electrical/ ventilating / lighting / equipment
Keep cool

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
If skin irritation or rash occurs: Get medical advice/attention
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
In case of fire: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
May be harmful in contact with skin.
Harmful to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance
Not applicable

Mixture

Chemical Name	CAS No.	Weight-%	Trade Secret
Methyl ethyl ketone	78-93-3	30 - 60	*
ISOPROPYL ALCOHOL	67-63-0	10 - 30	*
CARBON BLACK	1333-86-4	1 - 5	*
Phenol	108-95-2	1 - 5	*
Formaldehyde	50-00-0	0.1 - 1	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact Wash with soap and water. Flush skin with water for several minutes. Remove contaminated clothing and shoes. If irritation develops, seek medical attention. Wash clothing before reuse.

Inhalation Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately.

Ingestion Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a POISON CENTER or doctor/physician if you feel unwell.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use CO2, dry chemical, or foam.

Unsuitable extinguishing media No information available.

Specific hazards arising from the chemical
No information available.

Hazardous combustion products Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions Do not allow into any sewer, on the ground or into any body of water. See section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Soak up with inert absorbent material. Take up mechanically, placing in appropriate containers for disposal. Use clean non-sparking tools to collect absorbed material.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Avoid breathing vapors or mists. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation, especially in confined areas.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep at temperatures between 40°F and 60°F (4°C and 16°C).

Incompatible materials Strong acids. Strong bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Methyl ethyl ketone 78-93-3	STEL: 300 ppm TWA: 200 ppm	TWA: 200 ppm TWA: 590 mg/m^3 (vacated) TWA: 200 ppm (vacated) TWA: 590 mg/m^3 (vacated) STEL: 300 ppm (vacated) STEL: 885 mg/m^3	IDLH: 3000 ppm TWA: 200 ppm TWA: 590 mg/m^3 STEL: 300 ppm STEL: 885 mg/m^3
ISOPROPYL ALCOHOL 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m^3 (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m^3 (vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m^3	IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m^3 STEL: 500 ppm STEL: 1225 mg/m^3
CARBON BLACK 1333-86-4	TWA: 3 mg/m^3 inhalable particulate matter	TWA: 3.5 mg/m^3 (vacated) TWA: 3.5 mg/m^3	IDLH: 1750 mg/m^3 TWA: 3.5 mg/m^3 TWA: 0.1 mg/m^3 Carbon black in presence of Polycyclic aromatic hydrocarbons PAH
Phenol 108-95-2	TWA: 5 ppm S*	TWA: 5 ppm TWA: 19 mg/m^3 (vacated) TWA: 5 ppm (vacated) TWA: 19 mg/m^3	IDLH: 250 ppm Ceiling: 15.6 ppm 15 min Ceiling: 60 mg/m^3 15 min TWA: 5 ppm

		(vacated) S* S*	TWA: 19 mg/m^3
Formaldehyde 50-00-0	STEL: 0.3 ppm TWA: 0.1 ppm	TWA: 0.75 ppm (vacated) TWA: 3 ppm unless specified in 1910.1048 (vacated) STEL: 10 ppm 30 min unless specified in 1910.1048 (vacated) Ceiling: 5 ppm unless specified in 1910.1048 STEL: 2 ppm see 29 CFR 1910.1048	IDLH: 20 ppm Ceiling: 0.1 ppm 15 min TWA: 0.016 ppm

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

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

Skin and body protection Wear protective gloves and protective clothing. Use rubber or plastic gloves.

Respiratory protection 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.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid
Appearance No information available
Color Black
Odor Solvent
Odor threshold No information available

Property	Values	Remarks • Method
pH	Does not apply	
Melting point / freezing point	No information available	
Boiling point / boiling range	> 79 °C / 174 °F	
Flash point	-7 °C / 20 °F	
Evaporation rate	Slower	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	11.5% (based on solvent)	
Lower flammability limit:	1.8% (based on solvent)	
Vapor pressure	No information available	
Vapor density	Heavier than air	
Relative density	0.94	
Water solubility	Soluble in water	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	574 g/L 800-527-0004
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
Incompatible materials. Excessive heat.

Incompatible materials
Strong acids. Strong bases.

Hazardous Decomposition Products
Carbon monoxide. Carbon dioxide (CO2). Hydrocarbons.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	No data available.
Eye contact	No data available.
Skin contact	No data available.
Ingestion	No data available.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Methyl ethyl ketone 78-93-3	= 2483 mg/kg (Rat) = 2737 mg/kg (Rat)	= 6480 mg/kg (Rabbit) = 5000 mg/kg (Rabbit)	= 11700 ppm (Rat) 4 h
ISOPROPYL ALCOHOL 67-63-0	= 1870 mg/kg (Rat)	= 4059 mg/kg (Rabbit)	= 72600 mg/m^3 (Rat) 4 h
CARBON BLACK 1333-86-4	> 15400 mg/kg (Rat)	> 3 g/kg (Rabbit)	-
Phenol 108-95-2	= 340 mg/kg (Rat) = 317 mg/kg (Rat)	= 630 mg/kg (Rabbit)	= 316 mg/m^3 (Rat) 4 h
Formaldehyde 50-00-0	= 100 mg/kg (Rat)	= 270 mg/kg (Rabbit)	= 0.578 mg/L (Rat) 4 h

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	No information available.
Germ cell mutagenicity	No information available.

Carcinogenicity

Chemical Name	ACGIH	IARC	NTP	OSHA
ISOPROPYL ALCOHOL 67-63-0	-	Group 3	-	X
CARBON BLACK 1333-86-4	A3	Group 2B	-	X
Phenol 108-95-2	-	Group 3	-	-
Formaldehyde 50-00-0	A1	Group 1	Known	X

Reproductive toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 1,180.00 mg/kg
ATEmix (dermal) 3,359.00 mg/kg mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Methyl ethyl ketone 78-93-3	-	3130 - 3320: 96 h Pimephales promelas mg/L LC50 flow-through	4025 - 6440: 48 h Daphnia magna mg/L EC50 Static 5091: 48 h Daphnia magna mg/L EC50 520: 48 h Daphnia magna mg/L EC50
ISOPROPYL ALCOHOL 67-63-0	1000: 72 h Desmodesmus subspicatus mg/L EC50 1000: 96 h Desmodesmus subspicatus mg/L EC50	11130: 96 h Pimephales promelas mg/L LC50 static 9640: 96 h Pimephales promelas mg/L LC50 flow-through 1400000: 96 h Lepomis macrochirus µg/L LC50	13299: 48 h Daphnia magna mg/L EC50
CARBON BLACK 1333-86-4	-	-	5600: 24 h Daphnia magna mg/L EC50
Phenol 108-95-2	0.0188 - 0.1044: 96 h Pseudokirchneriella subcapitata mg/L EC50 static 46.42: 96 h Pseudokirchneriella subcapitata mg/L EC50 187 - 279: 72 h Desmodesmus subspicatus mg/L EC50 static	11.9 - 25.3: 96 h Lepomis macrochirus mg/L LC50 flow-through 11.9 - 50.5: 96 h Pimephales promelas mg/L LC50 flow-through 20.5 - 25.6: 96 h Pimephales promelas mg/L LC50 static 23.4 - 36.6: 96 h Oryzias latipes mg/L LC50 static 33.9 - 43.3: 96 h Oryzias latipes mg/L LC50 flow-through 34.09 - 47.64: 96 h Poecilia reticulata mg/L LC50 static 4.23 - 7.49: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 5.0 - 12.0: 96 h Oncorhynchus mykiss mg/L LC50 5.449 - 6.789: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 7.5 - 14: 96 h Oncorhynchus mykiss mg/L LC50 static 0.00175: 96 h Cyprinus carpio mg/L LC50 semi-static 11.5: 96 h Lepomis macrochirus mg/L LC50 semi-static 13.5: 96 h Lepomis macrochirus mg/L LC50 static 27.8: 96 h Brachydanio rerio mg/L LC50 31: 96 h Poecilia reticulata mg/L LC50 semi-static 32: 96 h Pimephales promelas mg/L LC50	10.2 - 15.5: 48 h Daphnia magna mg/L EC50 4.24 - 10.7: 48 h Daphnia magna mg/L EC50 Static
Formaldehyde 50-00-0	-	0.032 - 0.226: 96 h Oncorhynchus mykiss mL/L LC50 flow-through 100	11.3 - 18: 48 h Daphnia magna mg/L EC50 Static 2: 48 h Daphnia

		- 136: 96 h Oncorhynchus mykiss mg/L LC50 static 22.6 - 25.7: 96 h Pimephales promelas mg/L LC50 flow-through 23.2 - 29.7: 96 h Pimephales promelas mg/L LC50 static 1510: 96 h Lepomis macrochirus µg/L LC50 static 41: 96 h Brachydanio rerio mg/L LC50 static	magna mg/L LC50

Persistence and degradability
No information available.

Bioaccumulation

Chemical Name	Partition coefficient
Methyl ethyl ketone 78-93-3	0.3
ISOPROPYL ALCOHOL 67-63-0	0.05
Phenol 108-95-2	1.5
Formaldehyde 50-00-0	0.35

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Methyl ethyl ketone 78-93-3	U159	Included in waste streams: F005, F039	200.0 mg/L regulatory level	U159
Phenol 108-95-2	U188	Included in waste streams: F039, K001, K022, K087 Included in waste stream: K060	-	U188
Formaldehyde 50-00-0	U122	Included in waste streams: K009, K010, K038, K040, K156, K157	-	U122

Chemical Name	California Hazardous Waste Status
Methyl ethyl ketone 78-93-3	Toxic mixture of acetone, methyl acetate, and methyl alcohol Ignitable mixture of acetone, methyl acetate, and methyl alcohol
ISOPROPYL ALCOHOL 67-63-0	Toxic Ignitable
Phenol 108-95-2	Toxic Corrosive
Formaldehyde 50-00-0	Toxic Ignitable

14. TRANSPORT INFORMATION

DOT
UN/ID no. UN 1133
Proper shipping name Adhesives

Hazard Class	3
Packing Group	II
Special Provisions	None

IATA

UN/ID no.	UN 1133
Proper shipping name	Adhesives
Hazard Class	3
Packing Group	II
Special Provisions	None

IMDG

UN/ID no.	UN 1133
Proper shipping name	Adhesives
Hazard Class	3
Packing Group	II
Special Provisions	None

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

All ingredients are on the inventory or are exempt from listing.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
METHYL ETHYL KETONE - 78-93-9	1.0
ISOPROPYL ALCOHOL - 67-63-0	1.0
Phenol - 108-95-2	1.0
Formaldehyde - 50-00-0	0.1

SARA 311/312 Hazard Categories

Acute health hazard	-
Chronic Health Hazard	-
Fire hazard	-
Sudden release of pressure hazard	-
Reactive Hazard	-

CWA (Clean Water Act)
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Phenol 108-95-2	1000 lb	X	X	X
Formaldehyde 50-00-0	100 lb	-	-	X

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Methyl ethyl ketone 78-93-3	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ
Phenol 108-95-2	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ
Formaldehyde 50-00-0	100 lb	100 lb	RQ 100 lb final RQ RQ 45.4 kg final RQ

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65
CARBON BLACK - 1333-86-4	Carcinogen
Formaldehyde - 50-00-0	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Methyl ethyl ketone 78-93-3	X	X	X
ISOPROPYL ALCOHOL 67-63-0	X	X	X
CARBON BLACK 1333-86-4	X	X	X
Phenol 108-95-2	X	X	X
Formaldehyde 50-00-0	X	X	X

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	**Health hazards** -	**Flammability** -	**Instability** -	**Physical and Chemical Properties** -
HMIS	**Health hazards** -	**Flammability** -	**Physical hazards** -	**Personal protection** -

Prepared By SDS coordinator
Issue Date 24-Apr-2015
Revision Date 22-Mar-2022
Revision Note No information available

Disclaimer
The information provided in this Material 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.

End of Safety Data Sheet