Safety Data Sheet

BOSS® 334 Minimal Expanding Foam Gun Grade

Section 1. Identification

Product Identifier	BOSS® 334 Minimal Expanding Foam Gun Grade
Synonyms	33424
Manufacturer Stock Numbers	142498; 146818
Recommended use	Refer to Technical Information
Uses advised against	Refer to Technical Information

Manufacturer Contact

Address

Soudal
350 Ring Road
Elizabethtown, KY, 42701
USA

Phone	Emergency Phone	Fax
(270) 769-3385	(800) 424-9300 CHEMTREC	(270) 765-2412

Section 2. Hazards Identification

Classification

CARCINOGENICITY - Category 2
EYE DAMAGE/IRRITATION - Category 2A
FLAMMABLE AEROSOLS - Category 1
GASES UNDER PRESSURE - Liquefied gas
SENSITIZATION - RESPIRATORY - Category 1
SENSITIZATION - SKIN - Category 1
SKIN CORROSION/IRRITATION - Category 2
SPECIFIC TARGET ORGAN TOXICITY (Repeated Exposure) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (Single Exposure) - Category 3

Signal Word: Danger

Pictogram

Hazard Statements

Causes serious eye irritation
Causes skin irritation
Contains gas under pressure; may explode if heated
Extremely flammable aerosol
May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause an allergic skin reaction
May cause damage to organs through prolonged or repeated exposure (respiratory tract).
May cause respiratory irritation.
Suspected of causing cancer.

Precautionary Statements

Response

Call a poison center/doctor if you feel unwell.
Get medical advice/attention if you feel unwell.
If experiencing respiratory symptoms: Call a poison center/doctor
If exposed or concerned: Get medical advice/attention.
If eye irritation persists: 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 inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
If on skin: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Read label before use. If medical advice is needed, have product container or label at hand.
Wash contaminated clothing before reuse.

Prevention

Avoid breathing dust/fume/gas/mist/ vapors/spray.
Contaminated work clothing must not be allowed out of the workplace.
Do not handle until all safety precautions have been read and understood.
Do not spray on an open flame or other ignition source.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Obtain special instructions before use.
Pressurized container: Do not pierce or burn, even after use.
Use only outdoors or in a well-ventilated area.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.

Storage

Protect from sunlight. Do not expose to temperatures exceeding 50C/122F.
Protect from sunlight. Store in a well-ventilated place.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

Disposal

Dispose of contents/container to in accordance with local/regional/national /international regulations.

Ingredients of unknown toxicity	0%
Hazards not Otherwise Classified	
Other Hazards	Gas/vapor spreads at floor level: Ignition hazard.

Section 3. Ingredients

CAS	Ingredient Name	Weight %
115-10-6	Dimethyl ether	5% - 15%
8001-79-4	Caster Oil	5% - 15%
75-28-5	Isobutane	5% - 10%
9016-87-9	Polymeric diphenylmethane diisocyanate	40% - 50%
13674-84-5	2-Propanol, 1-chloro-, phosphate (3:1)	20% - 30%
74-98-6	Propane	1% - 5%

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-Aid Measures

Inhalation	Remove person to fresh air and keep comfortable for breathing. If breathing is difficult, oxygen should be administered by qualified personnel. If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
Skin	Wash with plenty of soap and water. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention.
Ingestion	Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.
Eyes	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER or doctor/physician.
Most Important Symptoms/Effects	Acute Causes skin irritation. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction. May cause respiratory irritation. May cause drowsiness or dizziness. Delayed Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure: thyroid gland, liver.
Indication of any immediate medical attention and special treatment needed	Treat symptomatically and supportively.

Section 5. Fire Fighting Measures

Suitable Extinguishing Media	Small fires: Quick-acting ABC-powder extinguisher, Quick-acting BC-powder extinguisher.
Unsuitable Extinguishing Media	Small fires: Quick-acting CO2 extinguisher, Water (water can be used to control jet flame), foam. In case of major fire and large quantities: Water (water can be used to control jet flame), foam.
Special Hazards Arising from the Chemical	Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Pressurized container: Do not pierce or burn, even after use. May polymerize with evolution of heat.
Hazardous Combustion Products	On burning: Irritating and toxic gases or fumes may be released during a fire: oxides of carbon, phosphorus, hydrogen chloride, nitrous vapors. On heating: May release toxic gases and combustible. gases: hydrogen cyanide.
Advice for firefighters	Eliminate all sources of ignition. Do not spray on an open flame or other ignition sources. If safe to do so, move undamaged containers from the fire area. Keep unnecessary people away, isolate hazard area and deny entry. Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. Let the fire burn. Stay away from the ends of tanks. Prevent entry into sewers, drains, ditches, underground or confined spaces and waterways. Avoid inhalation of material or combustion by-products.
Special Protective Equipment and Precautions for Firefighters	Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

Section 6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures	Wear personal protective clothing and equipment, see Section 8.
Methods and Materials for Containment and Cleaning Up	Eliminate all ignition sources if safe to do so. Stop leak if safe to do so. Reduce vapors with water spray. Small spills: Absorb spill with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Large spills: Dike for later disposal. Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.
Environmental Precautions	Avoid release to the environment.

Section 7. Handling and Storage

Precautions for Safe Handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Pressurized container: Do not pierce or burn, even after use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only outdoors or in a well-ventilated area. Do not spray on an open flame or other ignition sources. Ground/Bond container and receiving equipment. Use explosion-proof electrical/ventilating /lighting equipment. Take action to prevent static discharges. Do not breathe vapor or spray. Use non-sparking tools. Contaminated work clothing must not be allowed out of the workplace. Do not eat, drink, or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling.

Conditions for Safe Storage, Including any Incompatibilities	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Incompatible Materials	strong acids, strong bases, amines

Section 8. Exposure Controls/Personal Protection

Occupational Exposure Limits

Ingredient Name	ACGIH TLV	OSHA PEL	STEL
Dimethyl ether	N/A	400 ppm	N/A
Caster Oil	N/A	N/A	N/A
Isobutane	1000 ppm	N/A	1000 ppm
Polymeric diphenylmethane diisocyanate	0.005 ppm	0.02 mg/m≈	N/A
2-Propanol, 1-chloro-, phosphate (3:1)	N/A	N/A	N/A
Propane	1000 ppm TWA	1000 ppm PEL	N/A

Personal Protective Equipment

Goggles, Gloves

ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)

There are no biological limit values for any of this product's components.

Engineering Controls

Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection
Wear splash resistant safety goggles with a faceshield.

Skin Protection
Wear fire/flame resistant/retardant clothing. Refer to NFPA 2112, Standard on Flame-Resistant Garments for Protection of Industrial Personnel Against Flash Fire and NFPA 2113, Standard on the Selection, Use, Care and Maintenance of Flame-Resistant Garments for Protection of Industrial Personnel Against Short-duration Thermal Exposures from Fire (2015).

Respiratory Protection
If airborne contaminant levels may exceed recommended exposure limits, NIOSH approved respiratory protection appropriate for employee exposure levels is recommended. Consult with a health and safety professional for specific respirators appropriate for your use.

Glove Recommendations
Wear appropriate chemical resistant gloves.

Section 9. Physical and Chemical Properties

Physical State	Aerosol
Color	Champagne
Odor	Characteristic
Odor Threshold	Not available
Solubility	Soluble in organic solvents
Partition coefficient Water/n-octanol	Not available
VOC%	20% (by wt) 189 g/L
Viscosity	Not available
Specific Gravity	0.95
Density lbs/Gal	7.928
Pounds per Cubic Foot	59.307
Flash Point	Not available
FP Method	N/A
pH	Not available
Melting Point	Not available
Boiling Point	Not available
Boiling Range	Not available
LEL	N/A
UEL	N/A
Evaporation Rate	Not available
Flammability	Not available
Decomposition Temperature	Not available
Auto-ignition Temperature	Not available
Vapor Pressure	Not available
Vapor Density	Not available

Note	The above information is not intended for use in preparing product specifications. Contact Soudal before writing specifications.

Section 10. Stability and Reactivity

Reactivity	Reacts violently with acids bases. May be ignited by heat, sparks or flames. Gas/vapor spreads at floor level: Ignition hazard.
Chemical Stability	Stable under normal conditions of storage and handling.
Possibility of Hazardous Reactions	May polymerize: strong bases, amines.
Conditions to Avoid	Keep away from heat, sparks and naked flames. Keep away from ignition sources - No smoking. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Avoid contact with incompatible materials.
Incompatible Materials	strong acids, strong bases, amines

Hazardous decomposition products	On heating. May release toxic gases, combustible gases, vapors: hydrogen cyanide. On burning: Irritating and toxic gases or fumes may be released during a fire: oxides of carbon, phosphorus, hydrogen chloride, nitrous vapors.

Section 11. Toxicological Information

Information on Likely Routes of Exposure

Inhalation
May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation.

Skin Contact
Causes skin irritation. May cause allergic skin reaction.

Eye Contact
Causes serious eye irritation. May cause redness, pain, and tearing.

Ingestion
No information on significant adverse effects.

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:
Polymethylene polyphenylene isocyanate (9016-87-9)
Oral LD50 Rat 49 g/kg
Dermal LD50 Rabbit >9.4 g/kg
Inhalation LC50 Rat 11 mg/L 4 h

Isobutane (75-28-5)
Inhalation LC50 Rat 658 mg/L 4 h

Dimethyl ether (115-10-6)
Inhalation LC50 Rat 164000 ppm 4 h

2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)
Oral LD50 Rat 1500 mg/kg
Dermal LD50 Rabbit >5000 mg/kg (no deaths occurred)
Inhalation LC50 Rat >5.05 mg/L 4 h

Propane (74-98-6)
Inhalation LC50 Rat >800000 ppm 15 min

Acute and Chronic Toxicity

Immediate Effects
Causes skin irritation. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. May cause respiratory irritation. May cause drowsiness or dizziness.

Delayed Effects
Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure: thyroid gland, liver.

Irritation/Corrosivity Data
eye irritation, skin irritation, respiratory tract irritation

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

Dermal Sensitization
May cause an allergic skin reaction

Germ Cell Mutagenicity
No information available for the product.

Tumorigenic Data
No information available for the product.

Reproductive Toxicity
No information available for the product.

Specific Target Organ Toxicity - Single Exposure
No target organs identified.

Specific Target Organ Toxicity - Repeated Exposure
liver, thyroid gland

Aspiration hazard
Not expected to be an aspiration hazard.

Medical Conditions Aggravated by Exposure
No information available for the product.

Product Toxicity Data

Acute Toxicity Estimate
Dermal > 2000 mg/kg
Oral > 2000 mg/kg

Component Carcinogenicity

Polymethylene polyphenylene isocyanate 9016-87-9
IARC: Supplement 7 [1987] ; Monograph 19 [1979] (Group 3 (not classifiable))
DFG: Category 4 (no significant contribution to human cancer)

Suspected of causing cancer.

Section 12. Ecological Information

Component Analysis - Aquatic Toxicity

2-Propanol, 1-chloro-, phosphate (3:1) (13674-84-5)
Fish:
LC50 96 h Brachydanio rerio 56.2 mg/L [static]
LC50 96 h Pimephales promelas 98 mg/L [static]
LC50 96 h Poecilia reticulata 30 mg/L [static]

Algae:
EC50 72 h Desmodesmus subspicatus 45 mg/L IUCLID
EC50 96 h Pseudokirchneriella subcapitata 4 mg/L IUCLID

Invertebrate:
EC50 48 h Daphnia magna 63 mg/L IUCLID

Mobility in Soil

No information available for the product.

Bioaccumulative Potential	No information available for the product.
Persistence and Degradability	Not readily biodegradable (according to OECD criteria).
Bioconcentration	No information available for the product.
Other Toxicity	No additional information available for the product.

Section 13. Disposal

Disposal Methods	Dispose of contents/container in accordance with local/regional/national /international regulations.
Component Waste Numbers	The U.S. EPA has not published waste numbers for this product's components.

Section 14. Transport Information

UN Number	1950
UN Proper Shipping Name	AEROSOLS, FLAMMABLE
DOT Classification	Hazard Class: 2 Required Label: 2.1
Packing Group	N/A
IATA Information	Shipping Name: AEROSOLS, FLAMMABLE Hazard Class: 2.1 UN#: UN1950 Required Label(s): 2.1
ICAO Information	Shipping Name: AEROSOLS, FLAMMABLE Hazard Class: 2.1 UN#: UN1950 Required Label(s): 2.1
International Bulk Chemical Code	This material contains one or more of the following chemicals required by the IBC Code to be identified as dangerous chemicals in bulk. Polymethylene polyphenylene isocyanate (9016-87-9) IBC Code: Category Y Castor Oil (8001-79-4) IBC Code: Category Y

Section 15. Regulatory Information

U.S. Federal Regulations	This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan. Polymethylene polyphenylene isocyanate (9016-87-9) SARA 313: 1 % de minimis concentration SARA Section 311/312 (40 CFR 370 Subparts B and C) reporting categories Flammable; Gas Under Pressure; Carcinogenicity; Skin Corrosion/Irritation; Respiratory/Skin Sensitization; Serious Eye Damage/Eye Irritation; Specific Target Organ Toxicity

U.S. State Regulations	The following components appear on one or more of the following state hazardous substances lists: Polymethylene polyphenylene isocyanate (9016-87-9) NJ Isobutane (75-28-5) MA, NJ, PA Dimethyl ether (115-10-6) MA, MN, NJ, PA Propane (74-98-6) MA, MN, NJ, PA
California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)	Not listed under California Proposition 65.

Section 16. Other Information

Revision Date	11/14/2019
HMIS and NFPA Rating	HMIS Health: 2* Fire: 3 Reactivity: 0 NFPA Health: 2 Fire: 3 Reactivity: 0 Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard
Disclaimer	The data contained herein is based upon information that Soudal believes to be reliable. Users of this product have the responsibility to determine that suitability of use and to adopt all necessary precautions to ensure the safety and protection of property and persons involved in said use. All statements or suggestions are made without warranty, expressed or implied, regarding the accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof.