

Safety Data Sheet

according to Regulation (EC) No. 2015/830

9-20351-F

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Issue Date 2017-08-16

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Version 2

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name 9-20351-F

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

Identified uses Adhesives

Uses advised against No information available

1.3 Details of the supplier of the safety data sheet

Manufacturer

Dymax Corporation
318 Industrial Lane
Torrington, CT 06790
Tel: 860-482-1010
Fax: 860-496-0608

Manufacturing Sites

Dymax Europe GmbH
Kasteler Strasse 45, Building G 359
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Contact Point

E-mail Address

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1.4 Emergency Telephone

Emergency Telephone

Chemtrec 001-703-527-3887 (24hrs)

Austria +(43)-13649237	Germany 0800-181-7059	Netherlands +(31)-858880596	Switzerland +(41)435082011
Belgium +(32)-28083237	Greece +(30)-2111768478	Norway +(47)-21930678	Ukraine +(380)-947101374
Bulgaria +(359)-32570104	Hungary +(36)-18088425	Poland +(48)-223988029	UK (London) +(44)-870-8200418
Croatia +(385)-17776920	Ireland +(353)-19014670	Portugal +(351)-308801773	
Czech Republic +(420)-228880039	Italy 800-789-767	Slovakia +(423)-233057972	Israel (IL) +(972)-37630639
Denmark +(45)-69918573	Latvia +(371)-66165504	Slovenia +(386)-18888016	Russia 8-800-100-6346
Finland	Lithuania +(370)-52140238	Spain 900-868538	Saudi Arabia +(966)-8111095861
France	Luxembourg +(352)-20202416	Sweden +(46)-852503403	Turkey +(90)-212-7055340
Australia +(61)-290372994	India 000-800-100-7141	Indonesia 001-803-017-9114	New Zealand +(64)-98010034
Malaysia +(60)-327884561	Singapore 800-101-2201	Taiwan 00801-14-8954	Thailand 001-800-13-203-9987

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture Classification of the substance or mixture

Regulation (EC) No 1272/2008

Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 1 - (H318)
Skin sensitisation	Category 1A - (H317)
Specific target organ toxicity (STOT) — single exposure	Category 3 - (H335)
Chronic aquatic toxicity	Category 3 - (H410)

Physical hazards

None

Target Organ Effects

Respiratory system, EYES, Skin.

2.2 Label elements**Signal word****Danger****Hazard statements**

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H318 - Causes serious eye damage

H335 - May cause respiratory irritation

H412 - Harmful to aquatic life with long lasting effects

Contains 2-hydroxy-3-phenoxypropyl, 2-Hydroxyethyl methacrylate, 2-(2-ethoxyethoxy)ethyl acrylate ,
3-trimethoxysilylpropylmethacrylate

Contains tert-Butyl Perbenzoate, Diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide, Phosphine oxide,
phenylbis(2,4,6-trimethylbenzoyl)- - EUH208 - May produce an allergic reaction

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling

Wear protective gloves/protective clothing/eye protection/face protection

Avoid breathing dust/fume/gas/mist/vapours/spray

Contaminated work clothing should not be allowed out of the workplace

Use only outdoors or in a well-ventilated area

Avoid release to the environment

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

IF ON SKIN: Gently wash with plenty of soap and water

Take off contaminated clothing and wash it before reuse

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

2.3 Other Information**Unknown Acute Toxicity**

0% of the mixture consists of ingredient(s) of unknown toxicity

Environmental product testing for acute and chronic aquatic effects determined classification to be Category 3

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Substances**

3.2. Mixtures**Hazardous components**

Chemical Name	EC No	CAS No	Weight-%	GHS Classification
Isobornyl Acrylate	227-561-6	5888-33-5	25 - 39	STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Aquatic Chronic 2 (H411)
2-hydroxy-3-phenoxypropyl	241-045-8	16969-10-1	10 - 24	Skin Sens. 1 (H317)
2-Hydroxyethyl methacrylate	212-782-2	868-77-9	5 - 9	Skin Irrit. 2 (H315) Eye Irrit. 2A (H319) Skin Sens. 1 (H317)
2-(2-ethoxyethoxy)ethyl acrylate	230-811-7	7328-17-8	5 - 9	Acute Tox.4 (H312) Skin Irrit. 2 (H315) Eye Irrit. 2B (H320) Skin Sens. 1 (H317)
Silica, amorphous	231-545-4	7631-86-9	1 - <3	-
Acrylic acid	201-177-9	79-10-7	1 - <3	Flam. Liq. 3 (H226) Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Skin Corr. 1A (H314) STOT SE 3 (H335) Aquatic Acute 1 (H400)
3-trimethoxysilylpropylmethacrylate	219-785-8	2530-85-0	1 - <3	Skin Sens. 1 (H317)
tert-Butyl Perbenzoate	210-382-2	614-45-9	<1	Org. Perox C (H242) Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Skin Sens. 1 (H317) Aquatic Acute 1 (H400) Aquatic Chronic 3 (H412)
Diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide	278-355-8	75980-60-8	<1	Repr. 2 (H361f) Aquatic Chronic 2 (H411)
2,2-Dimethoxy-1,2-diphenyl ethanone	246-386-6	24650-42-8	<1	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)-	423-340-5	162881-26-7	<1	Skin Sens. 1 (H317) Aquatic Chronic 4 (H413)

Remaining ingredients are not considered hazardous in accordance with the Globally Harmonized System (GHS)

Full text of H- and EUH-phrases: see section 16

Section 4: First aid measures

4.1 Description of first aid measures**General advice**

Use first aid treatment according to the nature of the injury.

Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Eye contact

Flush eyes with water for at least 15 minutes. Get medical attention if eye irritation develops or persists.

Inhalation

Remove to fresh air, If symptoms persist, call a doctor.

Ingestion

Rinse mouth, Get medical attention.

Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of

contamination.

14.2 Most important symptoms and effects, both acute and delayed

Main symptoms

Itching. Rashes.

4.3 Indication of any immediate medical attention and special treatment needed

Note to doctors

Treat symptomatically.

Section 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use CO₂, dry chemical, or foam.

Unsuitable extinguishing media

Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture.

Specific hazards arising from the chemical

Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke.

Hazardous combustion products

Hazardous decomposition products due to incomplete combustion.

5.3 Advice for firefighters

Special protective equipment for fire-fighters

Wear self-contained breathing apparatus and protective suit, Wear personal protective equipment.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions

Ensure adequate ventilation. Wear personal protective equipment.

For emergency responders

Use personal protection recommended in Section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so

Try to prevent the material from entering drains or water courses

Local authorities should be advised if significant spillages cannot be contained

See Section 12 for additional Ecological Information

6.3 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 (e.g. sand, silica gel, acid binder, universal binder, sawdust).

6.4. Reference to other sections

See section 13 for more information.

Section 7: HANDLING AND STORAGE

7.1 Precautions for safe handling.

Advice on safe handling

Ensure adequate ventilation
Protect from light

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice
Avoid breathing vapours, mist or gas
Wash hands before breaks and at the end of workday
Regular cleaning of equipment, work area and clothing is recommended
When using do not eat, drink or smoke
Contaminated work clothing should not be allowed out of the workplace

7.2 Conditions for safe storage, including any incompatibilities.

Technical measures and storage conditions

Keep container tightly closed in a dry and well-ventilated place
Protect from light
Store locked up

7.3 Specific end uses

Exposure scenario

No information available.

Risk Management Methods (RMM)

The information required is contained in this Material Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Exposure Limits

Chemical Name	Ireland	Norway	Poland	Portugal	Switzerland
Isobornyl Acrylate 25 - 39					S+
2-hydroxy-3-phenoxypropyl 10 - 24					S+
2-Hydroxyethyl methacrylate 5 - 9		TWA 2 ppm TWA 11 mg/m ³ A+ STEL 4 ppm STEL 16.5 mg/m ³			S+
2-(2-ethoxyethoxy)ethyl acrylate 5 - 9					S+
Silica, amorphous 1 - <3	TWA 6 mg/m ³ TWA 2.4 mg/m ³ STEL 18 mg/m ³ STEL 7.2 mg/m ³	TWA 1.5 mg/m ³ STEL 1.5 mg/m ³			SS-C** TWA 4 mg/m ³
Acrylic acid 1 - <3	TWA 2 ppm TWA 6 mg/m ³ STEL 6 ppm STEL 18 mg/m ³	TWA 10 ppm TWA 30 mg/m ³ STEL 15 ppm STEL 45 mg/m ³	TWA 10 mg/m ³ STEL 29.5 mg/m ³	TWA 2 ppm C(A4) P*	SS-C** TWA 10 ppm TWA 30 mg/m ³ STEL 10 ppm STEL 30 mg/m ³
3-trimethoxysilylpropylmethacrylate 1 - <3					S+

Chemical Name	Germany	The Netherlands	Austria	Italy	Spain
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Silica, amorphous 1 - <3	AGW 4 mg/m ³		TWA 4 mg/m ³		
Acrylic acid 1 - <3	AGW 10 ppm AGW 30 mg/m ³				TWA 2 ppm TWA 6 mg/m ³ S*

Derived No Effect Level (DNEL)

No information available.

Predicted No Effect Concentration (PNEC)

No information available.

8.2 Exposure controls**Occupational exposure controls****Engineering Measures**

Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

Hygiene Measures

When using do not eat, drink or smoke, Wash hands before eating, drinking or smoking, Avoid contact with skin, eyes or clothing.

Personal protective equipment**General Information**

Use personal protective equipment in good condition.

Respiratory protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hand Protection

Nitrile rubber, Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Eye/face protection

Safety glasses with side-shields, If splashes are likely to occur, wear:, Goggles.

Skin and body protection

Long sleeved clothing, Apron, Impervious gloves.

Environmental Exposure Controls

Do not allow material to contaminate ground water system.

Section 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

Physical state	liquid (gel)	Odour	Characteristic
Appearance	transparent	Odour threshold	No information available
Colour	colourless		
Property	Values	Remarks • Method	
pH		No information available	
Melting point / freezing point		No information available	
Boiling point / boiling range		No information available	
Flash point	101 °C / 213 °F		
Evaporation rate		No information available	
Flammability (solid, gas)		No information available	
Flammability Limit in Air			

Upper flammability limit		No information available
Lower flammability limit		No information available
Vapour pressure		No information available
Vapour density		No information available
Specific Gravity		No information available
Water Solubility	Practically insoluble	
Solubility in other solvents		No information available
Partition coefficient: n-octanol/water		No information available
Autoignition temperature		No information available
Decomposition temperature		No information available
Dynamic viscosity	14,000 cP	
Kinematic viscosity		No information available
Explosive properties	No information available	
Oxidising properties	No information available	
9.2 Other Information		
Softening point		No information available
Molecular weight		No information available
VOC Content (%)		No information available
Density		No information available
Bulk density		No information available

Section 10: Stability and reactivity

10.1 Reactivity

Reactivity

None under normal use conditions.

10.2 Chemical stability

Stability

Stable under normal conditions

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

10.3 Possibility of Hazardous Reactions

Hazardous polymerisation

None under normal processing.

Hazardous Reactions

None under normal processing.

10.4 Conditions to avoid

Protect from light, Heat, flames and sparks.

10.5 Incompatible materials

Amines, Oxygen scavengers, Strong oxidising agents, Strong acids, Strong bases, Thiosulfates.

10.6 Hazardous Decomposition Products

None under normal use conditions.

Section 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product Information

Product does not present an acute toxicity hazard based on known or supplied information.

Inhalation	There is no data for this product.
Eye contact	There is no data for this product.
Skin Contact	There is no data for this product.
Ingestion	There is no data for this product.

Unknown acute toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity.

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

ATEmix (oral)	5,773.00 mg/kg
ATEmix (dermal)	5,548.00 mg/kg
ATEmix (inhalation-dust/mist)	40.50 mg/l
ATEmix (inhalation-vapour)	297.00 mg/l

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Isobornyl Acrylate	= 4890 mg/kg (Rat)	> 5 g/kg (Rabbit)	
2-Hydroxyethyl methacrylate	= 5050 mg/kg (Rat)	> 3000 mg/kg (Rabbit)	
2-(2-ethoxyethoxy)ethyl acrylate		LD50 > 1,000 mg/kg (Rabbit)	
Silica, amorphous	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 2.2 mg/L (Rat) 1 h
Acrylic acid	= 193 mg/kg (Rat) = 33500 µg/kg (Rat)	= 280 µL/kg (Rabbit) = 295 mg/kg (Rabbit)	= 5300 mg/m ³ (Rat) 2 h
3-trimethoxysilylpropylmethacrylate	> 5000 mg/kg (Rat)		
tert-Butyl Perbenzoate	= 4838 mg/kg (Rat)	= 3,817 mg/kg (Rabbit)	
2,2-Dimethoxy-1,2-diphenyl ethanone	>2000 mg/kg (Rat)		
Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)-		> 2,000 mg/kg (Rat)	

Skin corrosion/irritation

No information available.

Serious eye damage/eye irritation

No information available.

Sensitisation

May cause sensitisation of susceptible persons.

Mutagenic effects

No information available.

Carcinogenic effects

Reproductive toxicity

No information available.

Target Organ Effects Respiratory system, EYES, Skin.

Aspiration hazard

No information available.

Section 12: Ecological information

12.1 Toxicity**Ecotoxicity**

Harmful to aquatic life with long lasting effects

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Acute aquatic toxicity**Product Information**

Environmental product testing for acute and chronic aquatic effects determined classification to be Category 3

Component Information

Chemical Name	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates	Toxicity to algae
Isobornyl Acrylate	LC50 = 1.8 mg/L 96 h (Danio rerio)	EC 50 = 1.1 mg/L 48 h (Daphnia magna)	ErC 50 = 2.7 mg/L 96 h (Pseudokirchneriella subcapitata)
2-Hydroxyethyl methacrylate	LC50 = 227 mg/L 96 h (Pimephales promelas)	EC50 > 380 mg/l 48 h (Daphnia magna)	-
Silica, amorphous	LC50 5000 mg/L 96 h (Brachydanio rerio)	EC50 7600 mg/L 48 h (Ceriodaphnia dubia)	EC50 440 mg/L 72 h (Pseudokirchneriella subcapitata)
Acrylic acid	LC50 = 222 mg/L 96 h (Brachydanio rerio)	EC50 = 95 mg/L 48 h	EC50 0.04 mg/L 72 h (Desmodesmus subspicatus)
3-trimethoxysilylpropylmethacrylate	LC50 > 1024,00 mg/l 96 h (Brachydanio rerio)	EC50 > 876,00 mg/l 48 h (Daphnia magna)	EC50 > 536,00 mg/l 72 h (Scenedesmus subspicatus)
tert-Butyl Perbenzoate	LC50 1.6 mg/l 96 h (Brachydanio rerio)	EC50 11 mg/L 48 h (Daphnia magna)	EC50 1.3 mg/l 72 h (Pseudokirchneriella subcapitata)
Diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide	LC50 10 mg/l 48 h (Oryzias latipes)	-	-
2,2-Dimethoxy-1,2-diphenyl ethanone	LC50 6 mg/L 96 h (Lepomis macrochirus)	EC50 26 mg/L 48 h (Daphnia magna)	EC50 0.17 mg/L 72 h
Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)-	LC50 > 0.09 mg/l 96 h (Brachydanio rerio)	EC50 > 1.175 mg/l 48 h (Daphnia magna)	EC50 > 0.26 mg/L 72 h (Scenedesmus sp.)

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

Chemical Name	log Pow
Isobornyl Acrylate	4.21
2-Hydroxyethyl methacrylate	0.47
Acrylic acid	0.46
tert-Butyl Perbenzoate	3

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Other adverse effects.

None

Section 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods**Waste from residues / unused products**

Should not be released into the environment, Dispose of in accordance with local regulations.

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal, Dispose of as hazardous waste in compliance with local and national regulations.

Other Information

According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: Transport information

IMDG/IMO

14.1 UN/ID no	Not regulated
14.2 Proper shipping name	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing Group	Not regulated
14.5 Marine pollutant	Not applicable
14.6 Special Provisions	None
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	

No information available

ADR/RID

14.1 UN/ID no	Not regulated
14.2 Proper shipping name	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing Group	Not regulated
14.5 Fish and tree	Not applicable
14.6 Special Provisions	None

ICAO/IATA

14.1 UN/ID no	Not regulated
14.2 Proper shipping name	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing Group	Not regulated
14.5 Fish and tree	Not applicable
14.6 Special Provisions	None

Section 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**WGK Classification**

Water endangering class = 1 (self classification)

International Inventories

AICS	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECI	Complies
PICCS	Not listed
NZIoC	Not listed
ECSI	Complies
TSCA	Complies

Legend:

AICS - Australian Inventory of Chemical Substances

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
NZIoC - New Zealand Inventory of Chemicals
TCSI - Taiwan Chemical Substance Inventory
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

15.2 Chemical Safety Assessment

No information available

Section 16: OTHER INFORMATION

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

H224 - Extremely flammable liquid and vapour
 H304 - May be fatal if swallowed and enters airways
 H315 - Causes skin irritation
 H336 - May cause drowsiness or dizziness
 H361d - Suspected of damaging the unborn child
 H373 - May cause damage to organs through prolonged or repeated exposure if inhaled
 H332 - Harmful if inhaled
 H317 - May cause an allergic skin reaction
 H341 - Suspected of causing genetic defects if inhaled
 H350 - May cause cancer if swallowed
 H335 - May cause respiratory irritation
 H412 - Harmful to aquatic life with long lasting effects
 H302 - Harmful if swallowed
 H319 - Causes serious eye irritation
 H413 - May cause long lasting harmful effects to aquatic life
 H400 - Very toxic to aquatic life
 H410 - Very toxic to aquatic life with long lasting effects
 H411 - Toxic to aquatic life with long lasting effects
 H242 - Heating may cause a fire
 H312 - Harmful in contact with skin
 H320 - Causes eye irritation
 H331 - Toxic if inhaled
 H340 - May cause genetic defects if inhaled
 H220 - Extremely flammable gas
 H361f - Suspected of damaging fertility
 H226 - Flammable liquid and vapour
 H314 - Causes severe skin burns and eye damage
 H228 - Flammable solid

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA:	time weighted average	STEL:	Short term exposure limit
Ceiling:	Maximum limit value:	S*	Skin designation

Revision Date 2017-08-16

Revision Note Not applicable.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

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