



SAFETY DATA SHEET

Revision date 10-Jan-2020

Version 13

Supersedes Date: 26-Sep-2019

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name SYNTHETIC ENAMEL HARDENER
Product Code FS-5132.C01
UN/ID no UN1263
Recommended Use Paint, Coatings

Details of the supplier of the safety data sheet

See section 16 for more information

5 STAR XTREME
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Emergency telephone number Chemtrec: 800-424-9300

Section 2: HAZARDS IDENTIFICATION

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR

Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Respiratory sensitization	Category 1
Skin sensitization	Category 1
Carcinogenicity	Category 1B
Reproductive toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2
Aspiration toxicity	Category 1
Flammable liquids	Category 2

Label elements



Signal word

DANGER

HAZARD STATEMENTS

Highly flammable liquid and vapor

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 cancer

Suspected of damaging fertility or the unborn child

May be fatal if swallowed and enters airways

May cause respiratory irritation

May cause drowsiness or dizziness

May cause damage to the following organs through prolonged or repeated exposure: Nervous System

Ears

PREVENTION

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Wash face, hands and any exposed skin thoroughly after handling. In case of inadequate ventilation wear respiratory protection. Contaminated work clothing should not be allowed out of the workplace. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ ventilating/ lighting/ equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

RESPONSE

IF exposed or concerned: Get medical advice/attention.

Eyes

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.

Skin

If skin irritation or rash occurs: Get medical advice/attention. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. Wash contaminated clothing before reuse.

Inhalation

If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

Fire

In case of fire: Use CO₂, dry chemical, or foam for extinction.

STORAGE

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

DISPOSAL

Dispose of contents/containers in accordance with local regulations.

OTHER HAZARDS

Not applicable.

UNKNOWN ACUTE TOXICITY

.0001% of the mixture consists of ingredient(s) of unknown toxicity.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	weight-%
Isophoronediiisocyanate, Homopolymer	53880-05-0	15 - 40 *
Toluene	108-88-3	15 - 40 *
Xylenes	1330-20-7	10 - 30 *
Ethylbenzene	100-41-4	3 - 7 *
n-Butyl acetate	123-86-4	3 - 7 *
Solvent naphtha, petroleum, light aromatic	64742-95-6	3 - 7 *
1,2,4-Trimethylbenzene	95-63-6	3 - 7 *
Isophorone diisocyanate	4098-71-9	0.1 - 1 *
Cumene	98-82-8	0.1 - 1 *

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

Section 4: FIRST AID MEASURES

First Aid Measures

General advice

IF exposed or concerned: Get medical advice/attention

Eye contact

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

Skin Contact

If skin irritation or rash occurs: Get medical advice/attention Wash contaminated clothing before reuse IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower

Inhalation

If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician IF INHALED: Remove person to fresh air and keep comfortable for breathing

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician Do NOT induce vomiting

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.

Section 5: FIRE FIGHTING MEASURES

Flammable properties	Flammable liquid.
flash point	39 °F / 4 °C
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Autoignition temperature	No information available
Explosion data	
Sensitivity to Mechanical Impact	No information available.
Sensitivity to Static Discharge	No information available.

Suitable extinguishing media

Dry chemical, CO₂, water spray or alcohol-resistant foam.

Not to be used for safety reasons: Strong water jet

Hazardous combustion products Carbon monoxide. Carbon dioxide (CO₂).

Specific hazards arising from the chemical

Burning produces heavy smoke. Fire may produce irritating and/or toxic gases. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation. May cause sensitization by skin contact.

Special protective equipment for fire-fighters

Wear self-contained breathing apparatus and protective suit. Cool containers with flooding quantities of water until well after fire is out. Do not allow run-off from fire-fighting to enter drains or water courses.

Section 6: ACCIDENTAL RELEASE MEASURES**Personal precautions**

Avoid breathing vapors or mists. Remove all sources of ignition. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Take precautionary measures against static discharges.

Environmental precautions

Do not allow into any sewer, on the ground or into any body of water. If the product contaminates lakes, rivers or sewage, inform appropriate authorities in accordance with local regulations. Prevent further leakage or spillage if safe to do so. Local authorities should be advised if significant spillages cannot be contained.

Methods for containment

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Dispose of waste product or used containers according to local regulations. Clean with detergents. Avoid solvent cleaners. Take up mechanically, placing in appropriate containers for disposal. Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

Section 7: HANDLING AND STORAGE**General advice**

Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be exposed to any process in which this product is used. Examination of lung function should be carried out on a regular basis on persons spraying this product. This product contains isocyanates. Isocyanates are known to be strong sensitizers. Persons already sensitized to diisocyanates may develop allergic reactions when using this product.

Advice on safe handling

Prevent the creation of flammable or explosive concentrations of vapor in air and avoid vapor concentration higher than the occupational exposure limits. Operators should wear anti-static footwear and clothing and floors should be of the conducting type. Use personal protection recommended in Section 8. Never use pressure to empty container. Comply with the health and safety at work laws. Prevent product from entering drains. Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Use only with adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray. Use only in well-ventilated areas. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. All equipment used when handling the product must be grounded.

General Hygiene Considerations

When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Avoid contact with skin, eyes or clothing.

Storage Conditions

Keep/store only in original container. Store in accordance with local regulations. Keep unauthorized personnel away. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Keep container tightly closed in a dry and well-ventilated place. Keep tightly closed in a dry and cool place.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Exposure Limits

If S* appears in the OEL table, it indicates this chemical contains a skin notation.

Chemical Name	ACGIH TLV	Alberta	British Columbia	Ontario TWA	Quebec	OSHA PEL
Toluene 108-88-3	TWA: 20 ppm	TWA: 50 ppm TWA: 188 mg/m ³ S*	TWA: 20 ppm Adverse reproductive effect	TWA: 20 ppm	TWA: 50 ppm TWA: 188 mg/m ³ S*	TWA: 200 ppm Ceiling: 300 ppm
Xylenes 1330-20-7	STEL: 150 ppm TWA: 100 ppm	TWA: 100 ppm TWA: 434 mg/m ³ STEL: 150 ppm STEL: 651 mg/m ³	TWA: 100 ppm STEL: 150 ppm	TWA: 100 ppm STEL: 150 ppm	TWA: 100 ppm TWA: 434 mg/m ³ STEL: 150 ppm STEL: 651 mg/m ³	TWA: 100 ppm TWA: 435 mg/m ³
Ethylbenzene 100-41-4	TWA: 20 ppm	TWA: 100 ppm TWA: 434 mg/m ³ STEL: 125 ppm STEL: 543 mg/m ³	TWA: 20 ppm	TWA: 20 ppm	TWA: 100 ppm TWA: 434 mg/m ³ STEL: 125 ppm STEL: 543 mg/m ³	TWA: 100 ppm TWA: 435 mg/m ³
n-Butyl acetate 123-86-4	STEL: 150 ppm TWA: 50 ppm	TWA: 150 ppm TWA: 713 mg/m ³ STEL: 200 ppm STEL: 950 mg/m ³	TWA: 20 ppm	TWA: 150 ppm STEL: 200 ppm	TWA: 150 ppm TWA: 713 mg/m ³ STEL: 200 ppm STEL: 950 mg/m ³	TWA: 150 ppm TWA: 710 mg/m ³
1,2,4-Trimethylbenzene 95-63-6	TWA: 25 ppm	TWA: 25 ppm TWA: 123 mg/m ³	TWA: 25 ppm	TWA: 25 ppm	TWA: 25 ppm TWA: 123 mg/m ³	
Isophorone diisocyanate 4098-71-9	TWA: 0.005 ppm	TWA: 0.005 ppm TWA: 0.05 mg/m ³	TWA: 0.005 ppm Ceiling: 0.01 ppm Sensitizer	TWA: 0.005 ppm CEV: 0.02 ppm	TWA: 0.005 ppm TWA: 0.045 mg/m ³	
Cumene 98-82-8	TWA: 50 ppm	TWA: 50 ppm TWA: 246 mg/m ³	TWA: 25 ppm STEL: 75 ppm	TWA: 50 ppm	TWA: 50 ppm TWA: 246 mg/m ³	TWA: 50 ppm TWA: 245 mg/m ³ S*

Engineering Controls

Ensure adequate ventilation, especially in confined areas. Provide local exhaust ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapor in all cases. In such circumstances they should wear a compressed air-fed respirator during the spraying process and until such time as the particulates and solvent vapor concentration has fallen below the exposure limits. Dry sanding, flame cutting and/or welding of the dry paint film may give rise to dust and/or hazardous fumes. Under cool dry conditions, it is possible for the isocyanate to remain unreacted in the paint film for up to 30 hours after application. If dry flatting is unavoidable air fed respiratory protective equipment should be used.

Personal Protective Equipment

Eye/face protection

Tight sealing safety goggles.

Hand Protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed. Gloves should be replaced regularly and if there is any sign of damage to the glove material. Always ensure that gloves are free from defects and that they are stored and used correctly. The performance or effectiveness of the glove may be reduced by physical / chemical damage and poor maintenance. Wear protective gloves.

Skin and body protection

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Wear suitable protective clothing. Personnel should wear anti-static clothing made of natural fiber or of high temperature resistant synthetic fiber.

Respiratory protection

In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators

Thermal Protection

No information available

Environmental exposure controls

Do not allow into any sewer, on the ground or into any body of water. Local authorities should be advised if significant spillages cannot be contained.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	liquid
Appearance	No information available
Odor	Solvent
Color	clear
Odor Threshold	No information available
pH value	No information available
Melting point/freezing point	No information available
Boiling point / boiling range	111 °C / 232 °F
flash point	4 °C / 39 °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
Vapor Pressure	No information available
vapor density	No information available
Density (lbs per US gallon)	7.84
specific gravity	.94
Solubility(ies)	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

Other information

Section 10: STABILITY AND REACTIVITY

Stability	Stable under normal conditions.
Incompatible materials	Strong oxidizing agents.
Conditions to avoid	Heat, flames and sparks.
Hazardous Decomposition Products	Carbon monoxide. Carbon dioxide (CO ₂).
Possibility of Hazardous Reactions	None under normal processing.
Hazardous polymerization	None under normal processing.

Section 11: TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Eye contact

Causes serious eye irritation

Skin Contact

Causes skin irritation

May cause an allergic skin reaction

Ingestion

May be fatal if swallowed and enters airways

Inhalation

May cause respiratory irritation

May cause allergy or asthma symptoms or breathing difficulties if inhaled

May cause drowsiness or dizziness

Numerical measures of toxicity - Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
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Isophoronediiisocyanate, Homopolymer 53880-05-0	-	-	-
Toluene 108-88-3	= 2600 mg/kg (Rat)	= 12000 mg/kg (Rabbit)	= 12.5 mg/L (Rat) 4 h
Xylenes 1330-20-7	= 3500 mg/kg (Rat)	> 1700 mg/kg (Rabbit) > 4350 mg/kg (Rabbit)	= 5000 ppm (Rat) 4 h = 29.08 mg/L (Rat) 4 h
Ethylbenzene 100-41-4	= 3500 mg/kg (Rat)	= 15400 mg/kg (Rabbit)	= 17.4 mg/L (Rat) 4 h
n-Butyl acetate 123-86-4	= 10768 mg/kg (Rat)	> 17600 mg/kg (Rabbit)	= 390 ppm (Rat) 4 h
Solvent naphtha, petroleum, light aromatic 64742-95-6	= 8400 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	= 3400 ppm (Rat) 4 h
1,2,4-Trimethylbenzene 95-63-6	= 3280 mg/kg (Rat)	> 3160 mg/kg (Rabbit)	= 18 g/m ³ (Rat) 4 h
Isophorone diisocyanate 4098-71-9	= 1097 mg/kg (Rat)	1060 - 4780 mg/kg (Rabbit)	= 0.135 mg/L (Rat) 4 h
Cumene 98-82-8	= 1400 mg/kg (Rat)	= 12300 µL/kg (Rabbit)	> 3577 ppm (Rat) 6 h = 39000 mg/m ³ (Rat) 4 h

Numerical measures of toxicity - Product Information

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

ATEmix (dermal)	5572 Mg/kg
ATEmix (inhalation-dust/mist)	5.3 mg/l
ATEmix (inhalation-vapor)	39 mg/l

UNKNOWN ACUTE TOXICITY .0001% of the mixture consists of ingredient(s) of unknown toxicity.

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

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethylbenzene 100-41-4	A3	Group 2B		X
Cumene 98-82-8		Group 2B	Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen.

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans.

NTP (National Toxicology Program)

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen.

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present.

Skin corrosion/irritation Causes skin irritation

Serious eye damage/eye irritation Causes serious eye irritation

Skin sensitization May cause an allergic skin reaction

Respiratory sensitization May cause allergy or asthma symptoms or breathing difficulties if inhaled

Germ cell mutagenicity Not applicable

Carcinogenicity May cause cancer

Reproductive Toxicity Suspected of damaging fertility or the unborn child

Specific target organ toxicity (single exposure) May cause drowsiness or dizziness May cause respiratory irritation

Specific target organ toxicity (repeated exposure)

May cause damage to the following organs through prolonged or repeated exposure: Nervous System Ears

Aspiration hazard May be fatal if swallowed and enters airways

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Environmental precautions

Prevent product from entering drains.

Persistence and degradability

No information available

Bioaccumulation

No information available

Mobility

No information available

Other adverse effects

No information available

Section 13: DISPOSAL CONSIDERATIONS**Waste from residues/unused products**

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

Contaminated packaging

Improper disposal or reuse of this container may be dangerous and illegal.

Section 14: TRANSPORT INFORMATION

	<u>TDG</u>	<u>IMDG</u>	<u>IATA</u>
UN/ID no	UN1263	UN1263	UN1263
Proper shipping name	Paint	Paint	Paint
Hazard Class	3	3	3
Packing Group	II	II	II
Environmental hazard			
Special Provisions		163, 367 EmS-No F-E, S-E	A3, A72, A192

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No information available

The supplier may apply one of the following exceptions: Combustible Liquid (49 CFR 173.150(f)); Consumer Commodity (49 CFR 173.150(c), ICAO/IATA SP A112); Limited Quantity (49 CFR 173.150(b), ICAO Part 3 Chapter 4, IATA 2.7, IMDG Chapter 3.4); Viscous Liquid (49 CFR 173.121(b), IMDG 2.3.2.2, IATA 3.3.3.1.1, ICAO 3.2.2, ADR 2.2.3.1.5); Does Not Sustain Combustion (49 CFR 173.120(a), IATA 3.3.1.3, ICAO 3.1.3, IMDG 2.3.1.3, ADR 2.2.3.1.1 Note 1); or others as allowed under hazardous materials/dangerous goods regulations.

Section 15: REGULATORY INFORMATION**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

All components are listed or exempt from listing

DSL - Canadian Domestic Substances List

All components are listed or exempt from listing

Chemical Name	Canada - NPRI (National Pollutant Release Inventory)
Toluene	Part 1, Group A Substance; Part 5, Individual Substances
Xylenes	Part 1, Group A Substance; Part 5, Isomer Groups (total of all isomers of Xylene, including m-Xylene, CAS 108-38-3, o-Xylene, CAS 95-47-6, and p-Xylene, CAS 106-42-3)
Ethylbenzene	Part 1, Group A Substance
n-Butyl acetate	Part 5, Individual Substances
Solvent naphtha, petroleum, light aromatic	Part 5, Other Groups and Mixtures
1,2,4-Trimethylbenzene	Part 1, Group A Substance; Part 5, Individual Substances
Isophorone diisocyanate	Part 1, Group A Substance
Cumene	Part 1, Group A Substance

Section 16: OTHER INFORMATION**HMIS****Health hazards** 3*

* = Chronic Health Hazard

Flammability 3**Physical hazards** 0**Personal Protection** X

Prepared By

Regulatory Department

Revision date

10-Jan-2020

Revision Note

No information available

Disclaimer

The information on this Safety Data Sheet (SDS) is based on the present state of our knowledge, current national legislation and guidelines. As the specific conditions of use of the product are outside the supplier's knowledge and control the user is responsible for ensuring that the requirements of relevant legislation are complied with. This SDS should not be construed as any guarantee of the technical performance or suitability for particular applications. **UNLESS SUPPLIER AGREES OTHERWISE IN WRITING, SUPPLIER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AND DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR FREEDOM FROM PATENT INFRINGEMENT. SUPPLIER WILL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

End of Safety Data Sheet