AkzoNobel

SAFETY DATA SHEET

F70-A HARDENER

Section 1. Identification

: F70-A HARDENER GHS product identifier

SDS code : 21070100D

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

Identified uses

Professional use Industrial use

Uses advised against

All other uses

Product use : Two component coating for interior use.

Supplier's details

MAPAERO SAS

10, Avenue de la Rijole CS30098

09103 PAMIERS Cedex

France

Emergency telephone

number (with hours of

operation)

: +33 (0)5 34 01 34 01

+33 (0)5 61 60 23 30

Section 2. Hazards identification

OSHA/HCS status

: This material is considered hazardous by the OSHA Hazard Communication Standard

(29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION - Category 1C SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1

GERM CELL MUTAGENICITY - Category 2 TOXIC TO REPRODUCTION - Category 1B

GHS label elements

Hazard pictograms









Signal word

: Danger

F70-A HARDENER

Section 2. Hazards identification

Hazard statements

: Flammable liquid and vapor.

Harmful if swallowed.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May damage fertility or the unborn child.

Precautionary statements

Prevention

btain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, sparks and hot surfaces. No smoking. Use explosion-proof electrical, ventilating or lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Keep container tightly closed. Avoid breathing vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

Response

exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor. Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

Storage

: Store locked up. Store in a well-ventilated place. Keep cool.

Disposal

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified

: None known.

Section 3. Composition/information on ingredients

Substan	nce/mixture	:	Mixture

Ingredient name	%	CAS number
itroethane	≥25 - ≤50	79-24-3
bis-[4-(2,3-epoxipropoxi)phenyl]propane	≥25 - ≤50	1675-54-3
1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with 2-(chloromethyl) oxirane	≥10 - ≤25	30499-70-8

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

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

Section 4. First aid measures

Description of necessary first aid measures

Eye contact

: Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Section 4. First aid measures

Inhalation

: Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact

: Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

: Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eve contact : Causes serious eye damage.

Inhalation : No known significant effects or critical hazards.

Skin contact : Causes severe burns. May cause an allergic skin reaction.

Ingestion : Harmful if swallowed.

Over-exposure signs/symptoms

Eye contact

: Adverse symptoms may include the following:

pain watering redness

Inhalation

: Adverse symptoms may include the following:

reduced fetal weight increase in fetal deaths skeletal malformations

Skin contact

: Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur reduced fetal weight increase in fetal deaths skeletal malformations

Ingestion

: Adverse symptoms may include the following:

stomach pains reduced fetal weight increase in fetal deaths skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician

: In case of inhalation of decomposition products in a fire, symptoms may be delayed.

The exposed person may need to be kept under medical surveillance for 48 hours.

F70-A HARDENER

Section 4. First aid measures

Specific treatments

- : No specific treatment.
- Protection of first-aiders
- : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

media

media

Suitable extinguishing

: Use dry chemical, CO2, water spray (fog) or foam.

Unsuitable extinguishing

: Do not use water jet.

Specific hazards arising

from the chemical

: Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Hazardous thermal decomposition products : Decomposition products may include the following materials:

carbon dioxide carbon monoxide nitrogen oxides

halogenated compounds

Special protective actions for fire-fighters

: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".

Environmental precautions

: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill

: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Ingredient name	Exposure limits
itroethane	ACGIH TLV (United States, 1/2022). TWA: 307 mg/m³ 8 hours. TWA: 100 ppm 8 hours. NIOSH REL (United States, 10/2020). TWA: 310 mg/m³ 10 hours. TWA: 100 ppm 10 hours. OSHA PEL (United States, 5/2018). TWA: 310 mg/m³ 8 hours. TWA: 100 ppm 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 310 mg/m³ 8 hours. TWA: 100 ppm 8 hours.
bis-[4-(2,3-epoxipropoxi)phenyl]propane	None.

F70-A HARDENER Section 8. Exposure controls/personal protection (chloromethyl)oxirane Appropriate engineering : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any controls recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment. : Emissions from ventilation or work process equipment should be checked to ensure **Environmental exposure** they comply with the requirements of environmental protection legislation. In some controls cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. Individual protection measures Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/ or face shield. If inhalation hazards exist, a full-face respirator may be required instead. Skin protection : Chemical-resistant, impervious gloves complying with an approved standard should be Hand protection worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. : Personal protective equipment for the body should be selected based on the task being **Body protection** performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-

static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state

: Liquid.

Color

: Colorless.

Odor

На

: Characteristic.

Odor threshold

: Not available.

: Not available. [DIN EN 1262]

F70-A HARDENER

Section 9. Physical and chemical properties and safety characteristics

Melting point/freezing point

Not available.

Boiling point, initial boiling

: Not available.

point, and boiling range

Flash point

: Closed cup: 34°C (93.2°F) [Pensky-Martens]

Flammability

: Not available.

Lower and upper explosion

: Not available.

limit/flammability limit

Vapor pressu

ıre			
	_	_	-

Vapor Pressure at 20		sure at 20°C	,	apor pres	sure at 50°C	
Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
Troethane	20.9	2.8				

Relative vapor density

: Not available.

Density

: 1.108 g/cm3 [DIN EN ISO 2811-1]

Solubility(ies)

Media cold water

Not soluble [OESO (TG 105)]

Partition coefficient: n-

: Not applicable.

Result

octanol/water

Auto-ignition temperature

Auto-ignition temperature .		The second secon		
Ingredient name	°C	°F	Method	
nitroethane	414	777.2		

Decomposition temperature : Not available.

Viscosity

: Kinematic (room temperature): 9 mm²/s (9 cSt) [DIN EN ISO 3219] Kinematic (40°C (104°F)): 20 mm²/s (20 cSt) [DIN EN ISO 3219]

Particle characteristics

Median particle size

: Not applicable.

Percentage of particles

: 0

with aerodynamic diameter

≤ 10 um

Section 10. Stability and reactivity

Reactivity

: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability

: The product is stable.

Possibility of hazardous reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Incompatible materials

Conditions to avoid

Reactive or incompatible with the following materials:

oxidizing materials

Hazardous decomposition products

: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
itroethane	LD50 Intraperitoneal	Mouse	310 mg/kg	-
	LD50 Oral	Mouse	860 mg/kg	-
	LD50 Oral	Rat	1100 mg/kg	-
bis-[4-(2,3-epoxipropoxi) phenyl]propane	LD50 Dermal	Rabbit	20 g/kg	-
	LD50 Intraperitoneal	Mouse	4 g/kg	-
12	LD50 Intraperitoneal	Rat	2200 mg/kg	1 -
	LD50 Oral	Mouse	15600 mg/kg	-
	LD50 Oral	Rabbit	1980 mg/kg	-
La constant de la con	LD50 Oral	Rat	11300 uL/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
//s-[4-(2,3-epoxipropoxi) phenyl]propane	Eyes - Severe irritant	Rabbit	-	24 hours 2	-
prientylpropano	Skin - Mild irritant	Rabbit	-	500 mg	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
ss-[4-(2,3-epoxipropoxi) phenyl]propane	-	3	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely

: Not available.

routes of exposure

Potential acute health effects

Eye contact

: Causes serious eye damage.

Inhalation

: No known significant effects or critical hazards.

Skin contact

: Causes severe burns. May cause an allergic skin reaction.

Ingestion

: Harmful if swallowed.

Section 11. Toxicological information

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact

: Adverse symptoms may include the following:

pain watering redness

Inhalation

: Adverse symptoms may include the following:

reduced fetal weight increase in fetal deaths skeletal malformations

Skin contact

: Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur reduced fetal weight increase in fetal deaths skeletal malformations

Ingestion

: Adverse symptoms may include the following:

stomach pains reduced fetal weight increase in fetal deaths skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate

: Not available.

effects

Potential delayed effects

: Not available.

Long term exposure

Potential immediate

: Not available.

effects

Potential delayed effects

: Not available.

Potential chronic health effects

Not available.

General

: Once sensitized, a severe allergic reaction may occur when subsequently exposed to

very low levels.

Carcinogenicity

: No known significant effects or critical hazards.

Mutagenicity

: Suspected of causing genetic defects.

Reproductive toxicity

: May damage fertility or the unborn child.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/ kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/ l)
S2/21070100D-TRA_HARD_F70	1176.5 500	N/A N/A	N/A N/A	25.9 11	N/A N/A

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential	
ntroethane	0.18	-	low	

Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

The information provided in section 14 is based on a bulk package shipment via ground transport in North America. All shippers are responsible for ensuring the proper transportation classification and package/container requirements are followed for the relevant mode of transport.

	DOT Classification	IMDG	IATA
UN number	UN3469	UN3469	UN3469
UN proper shipping name	PAINT, FLAMMABLE, CORROSIVE	PAINT, FLAMMABLE, CORROSIVE	PAINT, FLAMMABLE CORROSIVE
Transport hazard class(es)	3 (8)	3 (8)	3 (8)
Packing group	III	III	III

F70-A HARDENER Section 14. Transport information No. Environmental Marine Pollutant(s): Yes. The environmentally is-[4-(2,3-epoxipropoxi)phenyl] hazardous substance mark is hazards propane, 1,3-Propanediol, not required. 2-ethyl-2-(hydroxymethyl)-, polymer with 2-(chloromethyl) oxirane Additional information IMDG : Emergency schedules F-E, S-C The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. IMDG Code Segregation group Not applicable IATA : The environmentally hazardous substance mark may appear if required by other transportation regulations. Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage. Transport in bulk according : Not available. to IMO instruments Section 15. Regulatory information U.S. Federal regulations : United States inventory All components are active or exempted. (TSCA 8b): State regulations : The following components are listed: NITROETHANE Massachusetts : None of the components are listed. **New York** : The following components are listed: NITROETHANE **New Jersey** : The following components are listed: ETHANE, NITRO-Pennsylvania California Prop. 65 Inventory list : All components are listed or exempted. Canada Section 16. Other information Procedure used to derive the classification Justification Classification On basis of test data FLAMMABLE LIQUIDS - Category 3 Calculation method ACUTE TOXICITY (oral) - Category 4 Calculation method SKIN CORROSION - Category 1C Calculation method

Calculation method

Calculation method

Calculation method

History

: 6 June 2023 Date of printing Date of issue/ Date of

GERM CELL MUTAGENICITY - Category 2

TOXIC TO REPRODUCTION - Category 1B

SERIOUS EYE DAMAGE - Category 1

SKIN SENSITIZATION - Category 1

revision

: 6 June 2023

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Section 16. Other information

Date of previous issue

: 5 May 2023

Version

: 4

Unique ID

.

Key to abbreviations

: ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

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)

N/A = Not available
SGG = Segregation Group
UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

FOR PROFESSIONAL USE ONLY

IMPORTANT NOTE The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advice given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

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