

SECTION 1: Identification

Product identifiers:

Product trade name: HYPRO* 1300X35 ATBN
Company product number: X35
Other means of identification: Not Available

Recommended use of the chemical and restrictions on use:

Uses: Elastomeric modifier for thermoset resins.
Restrictions on use: None identified

Details of the supplier:

Manufacturer/Supplier: CVC Thermoset Specialties
240 W Emerling Avenue
Akron, OH 44301 United States
Telephone: +1-330-374-2501
Customer service telephone: +1-856-533-3000
Email: cts.customerservice@huntsmn.com

For further information about this SDS:

Emergency telephone number:

ChemTel (24 hours): 1-800-255-3924 (USA); +1-813-248-0585 (outside USA);
1-300-954-583 (Australia); 000-800-100-4086 (India).

SECTION 2: Hazard(s) identification

Classification of the substance or mixture:

Skin Corrosion, category 1B, H314
Skin Sensitizer, category 1, H317
Reproductive Toxicity, category 2, H361
STOT, repeated exposure, category 2, H373

Label elements:

Hazard pictogram(s):



Signal word:

Danger

Hazard statements:

H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash skin thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local, regional and international regulations.

Supplemental information: No Additional Information

Precautionary statements are listed according to the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) - Annex III. Regulations in individual countries/regions may determine which statements are required on the product label. See product label for specifics.

Other hazards: No Additional Information

See Section 11 for toxicological information.

SECTION 3: Composition/information on ingredients

Mixture:

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>Weight%</u>
0068683-29-4	ATBN Polymer	85-<95
0000140-31-8	2-Piperazin-1-ylethylamine (AEP)	5-<10

Notes: 2-Piperazin-1-ylethylamine <7%.

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, non-hazardous, and/or present at amounts below reportable limits.

SECTION 4: First-aid measures

Description of first aid measures:

General: If irritation or other symptoms occur or persist from any route of exposure, remove the affected individual from the area: see a physician/get medical attention.

Eye contact: Immediately flush eyes with plenty of clean water for an extended time, not less than fifteen (15) minutes. Flush longer if there is any indication of residual chemical in the eye. Ensure adequate flushing of the eyes by separating the eyelids with fingers and roll eyes in a circular motion. Get medical attention immediately.

Skin contact: Immediately remove contaminated clothing and shoes. Wash the affected area with plenty of soap and water until no evidence of the chemical remains (at least 15-20 minutes). Launder clothing before reuse. Get medical attention immediately.

Inhalation: If affected, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a POISON CENTER or doctor/physician if you feel unwell.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse out the mouth with water. Get medical attention immediately.

Protection of first aid responders: Wear proper personal protective clothing and equipment.

Most important symptoms and effects, both acute and delayed: Burns, Eye redness and pain, Irritation. Preexisting sensitization, skin and/or respiratory disorders or diseases may be aggravated. See section 11 for additional information.

Indication of any immediate medical attention and special treatment needed, if necessary: Treat symptomatically.

SECTION 5: Fire-fighting measures

Extinguishing media:

Suitable: Use water spray, ABC dry chemical, foam or carbon dioxide. Water or foam may cause frothing. Use water to keep fire-exposed containers cool. Water spray may be used to flush spills away from exposures.

Unsuitable: None known.

Special hazards arising From the chemical:

Unusual fire/explosion hazards: Product is not considered a fire hazard, but will burn if ignited. Hot vapor or mists may be susceptible to spontaneous combustion when mixed with air. Ignition temperatures decrease with increasing vapor volume and vapor/air contact time and are influenced by pressure changes. Therefore, ignition may occur below published ignition temperatures. Use of this product in processes involving elevated-temperatures, vacuum if subject to sudden ingress of air, sudden escape of vapor or mist, etc., must be thoroughly evaluated to assure safe operation. Run off water from firefighting may have corrosive effects. Closed container may rupture (due to build up in pressure) when exposed to extreme heat.

Hazardous combustion products: Irritating or toxic substances may be emitted upon burning, combustion or decomposition. See section 10 (Hazardous decomposition products) for additional information.

Special protective equipment and precautions for fire-fighters: Wear self-contained breathing apparatus (SCBA) equipped with a full facepiece and operated in a pressure-demand mode (or other positive pressure mode) and approved protective clothing. Personnel without suitable respiratory protection must leave the area to prevent significant exposure to hazardous gases from combustion, burning or decomposition. In an enclosed or poorly ventilated area, wear SCBA during cleanup immediately after a fire as well as during the attack phase of firefighting operations.

See section 9 for additional information.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures: See Section 8 for recommendations on the use of personal protective equipment. If spilled in an enclosed area, ventilate. Eliminate ignition sources. Personal Protective Equipment must be worn.

Environmental precautions: Do not flush liquid into public sewer, water systems or surface waters.

Methods and materials for containment and cleaning up: Contain by diking with sand, earth or other non-combustible material. Wear proper personal protective clothing and equipment. Absorb spill with an inert material. Place into labeled, closed container; store in safe location to await disposal. Change contaminated clothing and launder before reuse. CAUTION: Spilled liquid and dried film are slippery. Use care to avoid falls.

SECTION 7: Handling and storage

Precautions for safe handling: As with any chemical product, use good laboratory/workplace procedures. Do not cut, puncture, or weld on or near the container. Do not get in eyes, on skin or clothing. Do not breathe dust, vapor, aerosol, mist or gas. Do not ingest, taste, or swallow. Wash thoroughly after handling this product. Always wash up before eating, smoking or using the facilities. Use under well-ventilated conditions. Wash contaminated clothing before reuse. Provide eyewash fountains and safety showers in the work area.

Conditions for safe storage, including any incompatibilities: Store cool and dry, under well-ventilated conditions. Store this material away from incompatible substances (see section 10). Do not store in open, unlabeled or mislabeled containers. Keep container closed when not in use. Do not reuse empty container without commercial cleaning or reconditioning. Empty container contains residual product which may exhibit hazards of product. Store product where temperatures are below 122°F (50°C).

SECTION 8: Exposure controls / personal protection**Control parameters:****Occupational exposure limits (OEL):**

<u>Chemical Name</u>	<u>ACGIH - TWA/Ceiling</u>	<u>ACGIH - STEL</u>		
ATBN Polymer	N/E			
2-Piperazin-1-ylethylamine (AEP)	N/E			
<u>Chemical Name</u>	<u>Australia</u>	<u>New Zealand</u>	<u>Korea</u>	<u>Indonesia</u>
ATBN Polymer	N/E	N/E	N/E	N/E
2-Piperazin-1-ylethylamine (AEP)	N/E	N/E	N/E	N/E
<u>Chemical Name</u>	<u>Japan ISHL</u>	<u>Japan JSOH</u>	<u>Taiwan</u>	<u>Malaysia</u>
ATBN Polymer	N/E	N/E	N/E	N/E
2-Piperazin-1-ylethylamine (AEP)	N/E	N/E	N/E	N/E
<u>Chemical Name</u>	<u>Philippines</u>	<u>Singapore</u>		
ATBN Polymer	N/E	N/E		
2-Piperazin-1-ylethylamine (AEP)	N/E	N/E		

Chemical Name**Philippines****Singapore**

N/E=Not established (no exposure limits established for the listed substances for listed country/region/organization).

Exposure controls:

Appropriate engineering controls: Always provide effective general and, when necessary, local exhaust ventilation to draw spray, aerosol, fume, mist and vapor away from workers to prevent routine inhalation. Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the SDS.

Individual protection measures, such as personal protective equipment:

Eye/face protection: Wear safety glasses with side shields (or goggles) and a face shield.

Skin and body protection: Wear chemical resistant (impervious) gloves. Wear chemical resistant protective clothing. Use good laboratory/workplace procedures including personal protective clothing: labcoat, safety glasses and protective gloves.

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment. Wear an approved respirator (e.g., an organic vapor respirator, a full face air purifying respirator for organic vapors, or a self-contained breathing apparatus) whenever exposure to aerosol, mist, spray, fume or vapor exceed the applicable exposure limit(s) of any chemical substance listed in this SDS.

Further information: Eyewash fountains and safety showers are recommended in the work area.

SECTION 9: Physical and chemical properties

Form:	Viscous liquid	pH:	Not Available
Appearance:	Caramel	Relative density:	0.98
Odor:	Slight amine	Partition coefficient (n-octanol/water):	Not Available
Odor threshold:	Not Available	% Volatile by weight:	7 %
Solubility in water:	Negligible	VOC:	Not Available
Evaporation rate:	Not Available	Boiling point °C:	Not Available
Vapor pressure:	Not Available	Boiling point °F:	Not Available
Vapor density:	Not Available	Flash point:	150 °C (302 °F) Estimated
Viscosity:	500,000 cP @ 80°F (27°C)	Auto-ignition temperature:	Not Available
Melting point/Freezing point:	Not Available	Flammability (solid, gas):	Not Applicable (liquid)
Oxidizing properties:	Not oxidizing	Flammability or explosive limits:	LFL/LEL: Not Available
Explosive properties:	Not explosive		UFL/UEL: Not Available
Decomposition temperature:	Not Available	Surface tension:	

Other information: Amounts specified are typical and do not represent a specification.

SECTION 10: Stability and reactivity

Reactivity: None known.

Chemical stability: This product is stable.

Possibility of hazardous reactions: Hazardous polymerization will not occur.

Conditions to avoid: Excessive heat and ignition sources.

Incompatible materials: Avoid contact with strong oxidizing agents and reducing agents. Depending on the amount and specific materials involved, contact can result in intense heat, boiling, flame development, explosion or toxic gas generation.

Hazardous decomposition products: Carbon monoxide, carbon dioxide, and oxides of nitrogen.

SECTION 11: Toxicological information

Information on likely routes of exposure:

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General: Caution must be exercised through the prudent use of protective equipment and handling procedures to minimize exposure. Little, if any, vapor can be produced from these polymers at room temperature. Health effects are particularly evident when product is heated.

Eyes: Causes serious eye damage.

Skin: Causes skin burns. May cause allergic skin reaction.

Inhalation: Exposure to vapors or mists may cause severe irritation and burns of the nose, throat and respiratory tract. May cause respiratory difficulties, central nervous system symptoms, and irritation to the eyes, nose, and throat.

Ingestion: Ingestion may cause severe irritation and burns of the mouth, throat and digestive tract.

Acute toxicity information: Not classified (based on available data, the classification criteria are not met). No toxicity studies have been conducted on this product. ATEmix (oral): >5000 mg/kg. ATEmix (dermal): >5000 mg/kg. ATEmix (inhal.): >5 mg/L, 4 hours (aerosol).

<u>Chemical Name</u>	<u>Inhalation LC50</u>	<u>Species</u>	<u>Oral LD50</u>	<u>Species</u>	<u>Dermal LD50</u>	<u>Species</u>
ATBN Polymer	N/E	N/E	>15.4 g/kg	Rat/ adult	>3 g/kg	Rabbit/ adult
2-Piperazin-1-ylethylamine (AEP)	8 hours, saturated vapor-no mortalities	Rat/ adult	2097 mg/kg	Rat/ adult male	866 mg/kg	Rabbit/ adult

Skin corrosion/irritation: Causes severe skin burns - Category 1B.

<u>Chemical Name</u>	<u>Skin irritation</u>	<u>Species</u>
ATBN Polymer	Moderate irritant	Rabbit/ adult
2-Piperazin-1-ylethylamine (AEP)	Corrosive	Rabbit/ adult

Serious eye damage/irritation: Causes serious eye damage - Category 1.

<u>Chemical Name</u>	<u>Eye irritation</u>	<u>Species</u>
ATBN Polymer	Slight irritant	Rabbit/ adult
2-Piperazin-1-ylethylamine (AEP)	Severe irritant	Rabbit/ adult

Respiratory or skin sensitization: Skin sensitization - Category 1. SIMILAR PRODUCT (1300X16): This product is classified as a strong sensitizer to guinea pig skin (OECD Guideline 406).

<u>Chemical Name</u>	<u>Skin sensitisation</u>	<u>Species</u>
ATBN Polymer	Strong sensitizer	Guinea Pig/ adult
2-Piperazin-1-ylethylamine (AEP)	Sensitizer	Guinea Pig/ adult

Carcinogenicity: Not classified (no relevant information found).

Germ cell mutagenicity: Not classified (no relevant information found). 2-PIPERAZIN-1-YLETHYLAMINE: No mutagenic activity was observed in the Ames test, mouse lymphoma (in-vitro) or in-vivo micronucleus test (mice) assays. Positive mutagenic effects have been observed in Sister Chromatid exchange in-vitro testing.

Reproductive toxicity: Suspected of damaging fertility or the unborn child - Category 2. 2-PIPERAZIN-1-YLETHYLAMINE: Animal studies indicated a NOAEL (no-observed-adverse-effect-level) for maternal toxicity of 75 mg/kg/day and for fetal toxicity of 75 mg/kg/day (rabbits).

Specific target organ toxicity (STOT) - single exposure: Not classified (based on available data, the classification criteria are not met).

Specific target organ toxicity (STOT) - repeated exposure: May cause damage to organs through prolonged or repeated exposure - Category 2. 2-PIPERAZIN-1-YLETHYLAMINE: Repeated and prolonged exposure may result in adverse respiratory effects.

Aspiration hazard: Not classified (based on available data, the classification criteria are not met).

Other toxicity information: No additional information available.

SECTION 12: Ecological information

Ecotoxicity: No ecological testing has been conducted on this product. ATBN POLYMER: Note: These results are typical for this family of polymers.

<u>Chemical Name</u>	<u>Species</u>	<u>Acute</u>	<u>Acute</u>	<u>Chronic</u>
ATBN Polymer	Fish	N/E	N/E	N/E
ATBN Polymer	Invertebrates	EC50 >1000 mg/L (48 hours) (OECD 202)	N/E	N/E
ATBN Polymer	Algae	EC50 >1000 mg/L (72 hours) (OECD 201)	N/E	N/E
2-Piperazin-1-ylethylamine (AEP)	Fish	LC50 2190 mg/L (96 hours)	LC50 >100 mg/L(96 hours)	N/E
2-Piperazin-1-ylethylamine (AEP)	Invertebrates	EC50 58 mg/L (48 hours)	N/E	N/E
2-Piperazin-1-ylethylamine (AEP)	Algae	EC50 >1000 mg/L (72 hours)	N/E	N/E

Persistence and degradability:

<u>Chemical Name</u>	<u>Biodegradation</u>
ATBN Polymer	Not readily biodegradable
2-Piperazin-1-ylethylamine (AEP)	Not readily biodegradable (OECD 301F)

Bioaccumulative potential:

<u>Chemical Name</u>	<u>Bioconcentration Factor (BCF)</u>	<u>Log Kow</u>
ATBN Polymer	N/E	N/E
2-Piperazin-1-ylethylamine (AEP)	N/E	-1.48

Mobility in soil:

<u>Chemical Name</u>	<u>Mobility in soil (Koc/Kow)</u>
ATBN Polymer	N/E
2-Piperazin-1-ylethylamine (AEP)	37,000 (estimated)

Other adverse effects: No additional information available.

SECTION 13: Disposal considerations

Dispose of unused contents (incineration) in accordance with national and local regulations. Dispose of container in accordance with national and local regulations. Ensure the use of properly authorized waste management companies, where appropriate.

See Section 8 for recommendations on the use of personal protective equipment.

SECTION 14: Transport information

The information below is provided to assist in documentation. It may supplement the information on the package. The package in your possession may carry a different version of the label depending on the date of manufacture. Depending on inner packaging quantities and packaging instructions, it may be subject to specific regulatory exceptions.

UN number: UN2735

UN proper shipping name:

Amines, liquid, corrosive, n.o.s. (contains N-Aminoethylpiperazine)

Transport hazard class(es):

U.S. DOT hazard class: 8

Canada TDG hazard class: 8

Europe ADR/RID hazard class: 8

IMDG Code (ocean) hazard class: 8

ICAO/IATA (air) hazard class: 8

A "N/A" listing for the hazard class indicates the product is not regulated for transport by that regulation.

Packing group: III

Environmental hazards:

Marine pollutant: Not Applicable

Hazardous substance (USA): Not Applicable

Special precautions for user: Not Applicable

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

Chemical Name

2-Piperazin-1-ylethylamine (AEP)

Category

Category Z

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question:

Japan regulations:**Japan Industrial Safety and Health Law:****Chemical name**

No subject chemicals

Category**Japan Fire Service Law:****Chemical name**

2-Piperazin-1-ylethylamine (AEP)

Category

Group 4 - Flammable liquids

Japan Poisonous and Deleterious Substances:**Chemical name**

No subject chemicals

Category**Threshold****Japan Prevention of Marine Pollution and Disaster:****Chemical name**

2-Piperazin-1-ylethylamine (AEP)

Category

Noxious Category Z

Japan Chemical Substances Control Law:**Chemical name**

No subject chemicals

Category**Notes****Korean regulations:****Korea Industrial Safety and Health Act:****Chemical name**

No subject chemicals

Category**Threshold****Korea Act on Registration and Evaluation of Chemical Substances (K-REACH) - Substances subject to registration:**

No subject chemicals

Korea Chemical Control Act (CCA):**Chemical name**

No subject chemicals

Category**Code****Threshold****Korea Safety Control of Dangerous Substances Act (MPSS):****Chemical name**

No subject chemicals

Class**Threshold****Korea Waste Control Act: Waste disposal methods must comply with local and national laws.****Chemical name**

No subject chemicals

Notes

Other regulations: No Additional Information

Chemical inventories:**Regulation****Status**

Australian Inventory of Chemical Substances (AICS):

Y

Canadian Domestic Substances List (DSL):

Y

Canadian Non-Domestic Substances List (NDSL):

N

China Inventory of Existing Chemical Substances (IECSC):

Y

European EC Inventory (EINECS, ELINCS, NLP):

Y

Japan Existing and New Chemical Substances (ENCS):

Y

Japan Industrial Safety and Health Law (ISHL):

N

Korean Existing and Evaluated Chemical Substances (KECL):

Y

New Zealand Inventory of Chemicals (NZIoC):

Y

Philippines Inventory of Chemicals and Chemical Substances (PICCS):

N

Taiwan Inventory of Existing Chemicals:

Y

U.S. Toxic Substances Control Act (TSCA) (Active):

Y

A "Y" listing indicates all intentionally added components are either listed or are otherwise compliant with the regulation. A "N" listing indicates that for one or more components: 1) there is no listing on the public inventory (or is not on the ACTIVE inventory for U.S. TSCA); 2) no information is available; or 3) the component has not been reviewed. A "Y" for New Zealand may mean that a qualified group standard may exist for the components in this product.

Chemical inventory notes: New Zealand: One or more components may be covered by a group standard.

Europe REACH (EC) 1907/2006: This product is considered a polymer under Regulation (EC) 1907/2006 and is exempt from

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the requirement for registration. Applicable monomers/other reactants are registered, exempt or otherwise compliant. REACH is only relevant to substances either manufactured or imported into the EU. Huntsman Corporation has met its obligations under the REACH regulation. REACH information regarding this product is provided for informational purposes only. Each Legal Entity may have differing REACH obligations, depending on their place in the supply chain. For material manufactured outside of the EU, the importer of record must understand and meet their specific obligations under the regulation.

SECTION 16: Other information

Legend:

* : Trademark owned by Huntsman Corporation.

ACGIH: American Conference of Governmental Industrial Hygienists

N/A: Not Applicable

N/E: None Established

STEL: Short Term Exposure Limit

TWA: Time Weighted Average (exposure for 8-hour workday)

Users Responsibility/Disclaimer of Liability:

The information set forth herein is based on our current knowledge, and is intended to describe the product solely with respect to health, safety and the environment. As such, it must not be interpreted as a guarantee of any specific property of the product. As a result, the customer shall be solely responsible for deciding whether said information is suitable and beneficial.

Safety Data Sheet Preparer:

Product Compliance Department